

INPACT 2016

*International Psychological Applications
Conference and Trends*

30 April - 2 May
Lisbon,
PORTUGAL

PROCEEDINGS

Edited by:
Clara Pracana
Michael Wang



Edited by:

Prof. Clara Pracana

Full and Training member of the Portuguese Association of Psychoanalysis and Psychoanalytic
Psychotherapy, Portugal

&

Prof. Michael Wang

Emeritus Professor of Clinical Psychology, University of Leicester, United Kingdom

Published in Lisbon, Portugal, by W.I.A.R.S.

www.wiars.org

Copyright © 2016 World Institute for Advanced Research and Science

All rights are reserved. Permission is granted for personal and educational use only.

Commercial copying, hiring and lending is prohibited. The whole or part of this publication material cannot be reproduced, reprinted, translated, stored or transmitted, in any form or means, without the written permission of the publisher. The publisher and authors have taken care that the information and recommendations contained herein are accurate and compatible with the generally accepted standards at the time of publication.

The individual essays remain the intellectual properties of the contributors.

ISBN: 978-989-99389-6-0

BRIEF CONTENTS

Foreword	v
Organizing and Scientific Committee	vii
Sponsor and Media Partner	x
Keynote Lecture	xi
Special Talks	xii
Invited Talk	xxii
Index of Contents	xxiii
Author Index	

FOREWORD

Dear Participants,

We are delighted to welcome you to the International Psychological Applications Conference and Trends (InPACT) 2016, taking place in Lisbon, Portugal, from 30 of April to 2 of May, 2016.

Psychology, nowadays, offers a large range of scientific fields where it can be applied. The goal of understanding individuals and groups (mental functions and behavioral standpoints), from this academic and practical scientific discipline, is aimed ultimately to benefit society.

This International Conference seeks to provide some answers and explore the several areas within the Psychology field, new developments in studies and proposals for future scientific projects. The goal is to offer a worldwide connection between psychologists, researchers and lecturers, from a wide range of academic fields, interested in exploring and giving their contribution in psychological issues. The conference is a forum that connects and brings together academics, scholars, practitioners and others interested in a field that is fertile in new perspectives, ideas and knowledge. There is an extensive variety of contributors and presenters, which can supplement the view of the human essence and behavior, showing the impact of their different personal, academic and cultural experiences. This is, certainly, one of the reasons there are nationalities and cultures represented, inspiring multi-disciplinary collaborative links, fomenting intellectual encounter and development.

InPACT 2016 received 332 submissions, from 37 different countries, reviewed by a double-blind process. Submissions were prepared to take form of Oral Presentations, Posters, Virtual Presentations and Workshops. It was accepted for presentation in the conference 96 submissions (29% acceptance rate). The conference also includes:

- A keynote presentation from Prof. Dr. Richard Bentall (Institute of Psychology, Health & Society of the University of Liverpool, United Kingdom);
- Three Special Talks, one from Emeritus Professor Carlos Amaral Dias (University of Coimbra, Director of Instituto Superior Miguel Torga, Vice-President of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy, Private practitioner of psychiatry and psychoanalysis, Portugal) and Prof. Clara Pracana (Full and Training member of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy, Portugal), another from Emeritus Professor Michael Wang (University of Leicester, United Kingdom), and a third one from Dr.^a Conceição Almeida (Founder of the Portuguese Association of Psychoanalysis and Psychoanalytical Psychotherapy, and Vice-President of the Board. Member of the Teaching Committee, Portugal);
- An Invited Talk from Dr. Ana Vasconcelos (SAMS – Serviços de Assistência Médico-Social do Sindicato dos Bancários de Sul e Ilhas, founding member of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy, and member of NPA - Neuropsychanalysis Association, Portugal).

Thus, we would like to express our gratitude to all our invitees.

This volume is composed by the abstracts of the International Psychological Applications Conference and Trends (InPACT 2016), organized by the World Institute for Advanced Research and Science (W.I.A.R.S.). This conference addresses different categories inside Applied Psychology area and papers fit broadly into one of the named themes and sub-themes. To develop the conference program six main broad-ranging categories had been chosen, which also cover different interest areas:

- In **CLINICAL PSYCHOLOGY**: Emotions and related psychological processes; Assessment; Psychotherapy and counseling; Addictive behaviors; Eating disorders; Personality disorders; Quality of life and mental health; Communication within relationships; Services of mental health; and Psychopathology.
- In **EDUCATIONAL PSYCHOLOGY**: Language and cognitive processes; School environment and childhood disorders; Parenting and parenting related processes; Learning and technology; Psychology in schools; Intelligence and creativity; Motivation in classroom; Perspectives on teaching; Assessment and evaluation; and Individual differences in learning.

- In **SOCIAL PSYCHOLOGY**: Cross-cultural dimensions of mental disorders; Employment issues and training; Organizational psychology; Psychology in politics and international issues; Social factors in adolescence and its development; Social anxiety and self-esteem; Immigration and social policy; Self-efficacy and identity development; Parenting and social support; and Addiction and stigmatization.
- In **LEGAL PSYCHOLOGY**: Violence and trauma; Mass-media and aggression; Intra-familial violence; Juvenile delinquency; Aggressive behavior in childhood; Internet offending; Working with crime perpetrators; Forensic psychology; Violent risk assessment; and Law enforcement and stress.
- In **COGNITIVE AND EXPERIMENTAL PSYCHOLOGY**: Perception, memory and attention; Decision making and problem-solving; Concept formation, reasoning and judgment; Language processing; Learning skills and education; Cognitive Neuroscience; Computer analogies and information processing (Artificial Intelligence and computer simulations); Social and cultural factors in the cognitive approach; Experimental methods, research and statistics; and Biopsychology.
- In **PSYCHOANALYSIS AND PSYCHOANALYTICAL PSYCHOTHERAPY**: Psychoanalysis and psychology; The unconscious; The Oedipus complex; Psychoanalysis of children; Pathological mourning; Addictive personalities; Borderline organizations; Narcissistic personalities; Anxiety and phobias; Psychosis; Neuropsychoanalysis.

The proceedings contain the results of the research and developments conducted by authors who focused on what they are passionate about: to promote growth in research methods intimately related to Psychology and its applications. It includes an extensive variety of contributors and presenters by sharing their different personal, academic and cultural experiences.

Authors will be invited to publish extended contributions for a book to be published by inScience Press.

We would like to express thanks to all the authors and participants, the members of the academic scientific committee, partners and, of course, to the organizing and administration team for making and putting this conference together.

Hoping to continue the collaboration in the future.

Prof. Clara Pracana

*Full and Training member of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy, Portugal
Conference and Program Co-Chair*

Prof. Michael Wang

*Emeritus Professor of Clinical Psychology, University of Leicester, United Kingdom
Conference and Program Co-Chair*

SCIENTIFIC COMMITTEE

Conference and Program Co-Chairs

Prof. Clara Pracana

Full and Training member of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy, Portugal

Prof. Michael Wang

Emeritus Professor of Clinical Psychology, University of Leicester, United Kingdom

International Scientific Committee

Abdulqawi Salim Alzubaidi, Sultan Qaboos University, Oman

Abraham A. Argun, Argun Affiliated Psychological Services, USA

Acácia Santos, São Francisco University, Brazil

Adilia Silva, Independent Researcher/Clinician, South Africa

Adriana Baban, Babes-Bolyai University, Romania

Adriane Roso, Universidade Federal de Santa Maria – UFSM, Brazil

Alessio Avenanti, Università di Bologna, Italy

Ali Kemal Tekin, Sultan Qaboos University, Oman

Alois Ghergut, University Alexandru Ioan Cuza from Iasi, Romania

André Francisco Pilon, University of São Paulo, Brazil

Andrea Guazzini, University of Florence, Italy

Andreja Bubic, University of Split, Croatia

Anna Alexandrova-Karamanova, Institute for Population and Human Studies – BAS, Bulgaria

Antonio Aiello, University of Pisa, Italy

Assunta Marano, Themis Research Centre; University of Aquila, Italy

Atmane Ikhlef, Qatar University, Qatar

Aukse Endriulaitiene, Vytautas Magnus University, Lithuania

Aurora Adina Colomeischi, Stefan cel Mare University, Romania

Avo-Rein Tereping, Tallinn University, Estonia

Ayse Karanci, Middle East Technical University, Turkey

Ayse Esra Aslan, Istanbul University, Turkey

Beata Kunat, University of Białystok, Poland

Binnur Yesilyaprak, Ankara University, Turkey

Brij Mohan, Louisiana State University, USA

Cecilia Cheng, University of Hong Kong, Hong Kong

Chris McVittie, Queen Margaret University, United Kingdom

Claire Metz, University of Strasbourg, France

Claudio Sica, University of Firenze, Italy

David Aparisi, Universidad de Alicante, Spain

Deborah Wooldridge, Bowling Green State University, USA

Diego Lasio, University of Cagliari, Italy

Dweep Chand Singh, Aibhas, Amity University Uttar Pradesh, Noida, India

Eda Kargi, East Mediterranean University, Cyprus

Edith Galy, Aix-Marseille University, France

Edwiges Silveiras, University of São Paulo, Brazil

Edwin Herazo, Human Behavioral Research Institute, Colombia

Elena Levchenko, Perm State University, Russia

- Eleni Petkari**, Middlesex University Dubai, United Arab Emirates
- Emel Kuruoglu**, Dokuz Eylul University, Turkey
- Emerson Rasera**, Federal University of Uberlandia, Brazil
- Eva Hofmann**, University of Vienna, Austria
- Eva Sollarova**, Constantine The Philosopher University, Slovakia
- Ewa Mortberg**, Stockholm University, Sweden
- Fabio Madeddu**, University of Milan – Bicocca, Italy
- Fotios Anagnostopoulos**, Panteion University of Social & Political Sciences, Greece
- Gianluca Serafini**, Sapienza, University of Rome, Italy
- Gilberto Safra**, University of São Paulo, Brazil
- Gordana Jovanovic**, University of Belgrade, Serbia
- Greta Defeyter**, Northumbria University, United Kingdom
- Grzegorz Pochwatko**, Polish Academy of Sciences, Poland
- Gustavo Martineli Massola**, University of São Paulo, Brazil
- Helena Klimusová**, Masaryk University, Czech Republic
- Henry Grubb**, University of Dubuque, USA
- Hossein Kareshki**, Ferdowsi University of Mashhad, Iran
- Igor Menezes**, Federal University of Bahia, Brazil
- Isabella Corradini**, Themis Research Centre, Italy
- Isabella McMurray**, University of Bedfordshire, United Kingdom
- J. Martin Ramirez**, Universidad Nebrija and Stanford University, Spain
- Jakob Pietschnig**, University of Vienna, Austria
- Janina Uszynska-Jarmoc**, University of Bialystok, Poland
- Jesus de La Fuente Arias**, University of Almeria, Spain
- Joanne Dickson**, University of Liverpool, United Kingdom
- Kamlesh Singh**, Indian Institute of Technology Delhi, India
- Katherine Makarec**, William Paterson University, USA
- Kathleen Tait**, Macquarie University, Australia
- Laura Vilela E. Souza**, Universidade de São Paulo, Brazil
- Lawrence T. Lam**, The University of Technology Sydney, Australia
- Lenka Kollerová**, Academy of Sciences of the Czech Republic, Czech Republic
- Lilly Both**, University of New Brunswick in Saint John, Canada
- Lisa Best**, University of New Brunswick, Canada
- Loreta Buksnyte-Marmiene**, Vytautas Magnus University, Lithuania
- Luciana Kind**, Pontifical Catholic University of Minas Gerais, Brazil
- Luisa Puddu**, University of Florence, Italy
- Lynda Hyland**, Middlesex University Dubai, United Arab Emirates
- Marcello Nonnis**, University of Cagliari, Italy
- Marcelo F. Costa**, University of São Paulo, Brazil
- Marco Vassallo**, Council For Agricultural Research and Economics (CREA), Italy
- Margit Höfler**, University of Graz, Austria
- Martin Eisemann**, Tromsø University, Norway
- Mary Ivers**, All Hallows College, Ireland
- Michael Zeiler**, Ludwig Boltzmann Institute Health Promotion Research, Austria
- Mohammad Hakami**, Islamic Azad University-Karaj Branch, Iran
- Naved Iqbal**, Jamia Millia Islamia, India
- Neala Ambrosi-Randic**, Juraj Dobrila University of Pula, Croatia
- Nuria Carriedo**, UNED. Universidad Nacional de Educación a Distancia, Spain
- Olga Deyneka**, St. Petersburg State University, Russia

Olga Orosova, Pavol Jozef Šafárik University
in Košice, Slovakia

Omar Rahman, University of South Florida,
USA

Ortrun Reidick, O&P Consult GmbH,
Germany

Otilia Clipa, Stefan cel Mare University,
Romania

Ovidiu Gavrilovici, University Alexandru Ioan
Cuza, Romania

Paolo Valerio, Naples University Federico II,
Italy

Patricia Roberts, University of Bedfordshire,
United Kingdom

Patrizia Meringolo, Università degli Studi di
Firenze, Italy

Plamen Dimitrov, The Bulgarian Psychological
Society, Bulgaria

Rivka Tuval-Mashiach, Bar-Ilan University,
Israel

Ronald Hambleton, University of
Massachusetts, USA

Rosalba Raffagnino, Florence University, Italy

Sharo (Shahrokh) Shafaie, Southeast Missouri
State University, USA

Shulamith Kreitler, Tel-Aviv University,
Israel

Silvia Cimino, Sapienza University of Rome,
Italy

Suppiah Nachiappan, Sultan Idris Education
University, Malaysia

Suzie Savvidou, The University of Sheffield,
Greece

Sylvia Kwok, City University of Hong Kong,
China

Tali Heiman, The Open University of Israel,
Israel

Torun Lindholm, Stockholm University,
Sweden

Victor Martinelli, University of Malta, Malta

Vittore Perruci, Università della Valle d'Aosta,
Italy

Wouter Vanderplasschen, Ghent University,
Belgium

Yonghui Wang, Shaanxi Normal University,
China

Zoe Bablekou, Aristotle University of
Thessaloniki, Greece

Zvjezdan Penezic, University of Zadar, Croatia

SPONSOR AND MEDIA PARTNER

Sponsor:



<http://www.wiars.org>

Media Partner:



<https://whova.com/>

KEYNOTE LECTURE

THE NEW PSYCHOLOGICAL UNDERSTANDING OF PSYCHOSIS

Professor Dr. Richard Bentall

Institute of Psychology, Health & Society, University of Liverpool (United Kingdom)

Abstract

Psychotic disorders are characterised by hallucinations, delusions and related phenomena, with patients typically receiving diagnoses of schizophrenia, schizoaffective disorder or bipolar disorder. Throughout most of the history of psychiatry, these disorders have been seen as genetically-determined brain diseases. However, this approach has not produced breakthroughs in treatment or benefits to patients. Findings in the last twenty years have challenged many of the assumptions of the standard psychiatric model and have led to a new psychological conception of severe mental illness. It is now recognised that psychotic experiences occur much more commonly in the community than previously thought, supporting the idea of a continuum between psychosis and normal functioning. It has also become recognised that diagnoses such as schizophrenia and bipolar disorder are unlikely to be discrete, separable conditions. The inherited risk of psychotic disorders is less than previously supposed, does not recognise diagnostic boundaries (psychiatric disorders do not 'breed true' in families) and, at the molecular level, is massively polygenic (many genes, each with a small effect). By contrast, recent evidence points to the role of many social risk factors including economic disadvantage in childhood, childhood trauma, exposure to urban environments, migration and victimization in adulthood. Some of these effects are, to a degree, symptom-specific. For example, childhood sexual abuse seems to be particularly toxic for hallucinations. These findings point to a new conception of psychosis, in which particular types of adverse events affect particular cognitive and affective processes, leading to specific symptoms. Symptoms co-occur, leading to syndromes, not because they are the result of common biological causes, but because each symptom of psychosis can play a causal role in provoking other symptoms. By targeting the underlying psychological processes, new approaches to treatment become possible.

Brief Biography

Richard Bentall is Professor of Clinical Psychology at Liverpool University and has previously held chairs at Manchester University and Bangor University. He graduated with a BSc and then a PhD in experimental psychology at the University College of North Wales (now Bangor University) and then completed his clinical training at Liverpool University. He also holds an MA in philosophy applied to health care awarded by University College Swansea (now Swansea University). His research interests have mainly focused on psychosis. He has studied the cognitive and emotional mechanisms involved in psychotic symptoms such as hallucinations, paranoid delusions and manic states, using methods ranging from psychological experiments, and experience sampling to functional magnetic resonance imaging. Most recently, his research has focused on why social risk factors (for example childhood adversities such as poverty, abuse, and bullying) provoke the cognitive and emotional changes that lead to these symptoms. In collaboration with colleagues at Manchester and elsewhere he has also conducted large scale randomized controlled trials of psychological interventions for people diagnosed with schizophrenia, bipolar disorder and prodromal psychosis. He has published over 200 peer-review papers and a number of books including *Madness explained: Psychosis and human nature* (Penguin, 2003) and *Doctoring the mind: Why psychiatric treatments fail* (Penguin, 2009).

SPECIAL TALKS

50 YEARS OF PROFESSIONAL CLINICAL PSYCHOLOGY IN THE UNITED KINGDOM

Prof. Michael Wang

Emeritus Professor of Clinical Psychology, University of Leicester (United Kingdom)

Abstract

2015 marked the 50th anniversary of the Division of Clinical Psychology of the British Psychological Society. As a former Chair of the Division, Prof. Wang will reflect on the achievements and regrets of the profession over the past half century. He will discuss British clinical psychology's unique origins, ethos, similarities and differences as compared to applied psychology in the rest of Europe. He will describe the rise and decline of psychoanalysis in the UK, in the context of Freud making London his home in his later years at the beginning of the 20th century; the development of behaviour therapy in 1960s London; its subsequent evolution into CBT; and how these events have shaped the profession of clinical psychology. Another critical determinant of the unique character of British clinical psychology was the creation of the British National Health Service (NHS) in 1948 and the way in which this institution not only supported but spawned British clinical psychology. He will also describe the current debate as to whether the generic British Psychological Society is a helpful umbrella organisation for clinical psychologists or whether the profession now needs to part company with its ubiquitous parent.

Brief Biography

Prof. Michael Wang, BSc(Hons), MSc(Clin.Psy), PhD, C. Psychol., FBPsS, is Emeritus Professor of Clinical Psychology in the Clinical Psychology Unit, Centre for Medicine, University of Leicester, and former Director of the National Health Service-funded Doctoral Postgraduate Clinical Psychology Training Course (2005-2014). He is a former Chair of the Division of Clinical Psychology of the British Psychological Society. Prof. Wang is also a full practitioner member of the BPS Division of Neuropsychology and a member of the BPS Division of Health Psychology. He has worked as a clinical psychologist for more than 35 years. Prior to his appointment in Leicester he was Director of the 6-year, integrated Doctoral Clinical Psychology Training Course at the University of Hull. Throughout his academic career he has maintained an Honorary Consultant role in the NHS, treating patients with anxiety disorders, depression and obsessional compulsive disorder. He has more than 20 years' experience of examining patients with traumatic brain injury for the UK courts. He obtained his three degrees from the University of Manchester: following graduating with a BSc in Psychology in 1978 he began his professional postgraduate training in Clinical Psychology in the Faculty of Medicine. Subsequently he completed a research PhD in 1990 which investigated learning and memory in alcoholics. Over recent years Prof Wang has gained an international reputation for his research on cognitive and memory function during general anaesthesia. In 2004 he organized the 6th International Symposium on Memory and Awareness in Anaesthesia and Intensive Care (in Hull) – the foremost international forum for clinical research in this particular field. He has held appointments on a number of prominent committees in the British Psychological Society including the professional accrediting body for clinical psychology training, and a committee that is in the process of determining national standards for competence in the use of neuropsychological tests. He has served as an expert advisor on a NICE (UK) Committee in relation to the monitoring of depth of anaesthesia and also as an expert member of the Royal College of Anaesthesia's National Audit Project 5 (a national audit of anaesthetic awareness reports). In 1999 he was made Fellow of the British Psychological Society and is also a Fellow of the Royal Society of Medicine. In 2015 he was awarded the Humphry Davy Medal by the Royal College of Anaesthetists for his contribution to the understanding of accidental awareness during general anaesthesia. Prof. Wang has published more than 60 papers in peer-reviewed journals, and numerous book chapters. He has been an invited speaker at international conferences on more than 30 occasions. In collaboration with colleagues he has won more than £1.2 million in research funding. He has supervised more than 40 doctoral research projects over the past 25 years. He has been a regular contributor and session chair at recent InPACT conferences, and recently joined the conference team as a co-organiser.

THE DISILLUSIONED HOLLOW AND THE UNATTACHMENT OF ONE'S SELF

Dr.^a Conceição Almeida

Psychologist, Full Psychoanalyst, Founder of the Portuguese Association of Psychoanalysis and Psychoanalytical Psychotherapy (AP) (Portugal)

Abstract

Violence and terror as ideal, thought from the psychoanalytical vertex of the link theories, the psychic emptiness and its pathogens identifications. Articulation of the concepts of: empathy, incapacity of feeling and thinking suffering, attack on the link of knowledge, emptiness controlled and proto identifications. The subject of this presentation focuses on the contribution of psychoanalysis to the prevention of individuals on the verge of a psychic collapse through the resolution of the impasse and the appeal to the link of knowledge.

Keywords: *disillusioned emptiness, dissociation, freezing of failure, behaving intention.*

Context

In this work, I will address the issue as a psychoanalyst and especially as a citizen. I will also take into consideration the different psychoanalytical theories, addressing the concepts of untying and the emergence of cruelty in the human being.

I have challenged myself into reading several historical and political religious works about Islamism, from which resulted greater perplexity at the complexity of the phenomenon of training and recruiting Western and Asian young terrorists. Hannah Arendt* analyzes in her book "The Human Condition", how the trivialization of evil can be justified by an ideal of holy war that takes place in the ideal of terror and death anonymity, as an impossible abyss. Something both terrifying and rational.

Elizabeth Roudinesco† points out that psychoanalysis is incompatible with the collusion with Evil, which through a conduct of naivety or even fear has not been asserted as such. Notwithstanding, we can't place psychoanalysis on the altar of super-object or hyper-structure.

In my research, I came across the autobiography of a radical Islamist named Maajid Nawaz, who published his personal testimony "Radical: My Journey Out Of Islamist Extremism"‡. This book gripped me as a psychological research, through the confirmation that identity is not an unalterable essence or an illusory fiction. It is rather a historical, evolutionary category that continuously defines itself in the different relational and situational experiences.

The extension of his work is impossible to summarize in this brief communication. In my research, subjective as it was, I've selected some experiences, circumstances and facts that in the course of the narrative I've related to the concept of 'selected fact' by Bion, the 'link' and also the 'vertex' that leads us to understanding the greater evil of humanity, which is nothing but the problem of misunderstandings of communication, which brings the patient to adapt a particular vertex of perception, taken as an absolute truth and therefore unthinkable and unquestionable.

Let us then take a look at an excerpt from his story.

Maajid Nawaz, was born in 1978 in Essex, Britain, where he grew and lived until 1999.

He belongs to the third generation of Pakistanis who come to reside in Britain. influenced by British culture, after the Indo Pakistan war of separation in 1947.

His family settles in Southend, a small town in Essex, with few Asian immigrants. They were traditional Muslims, conservative, far from being extremist or fundamentalist, the stereotype of the migrant worker, determined to give better opportunities for academic and cultural training to their offspring, who, in his particular case, turned out to acquire university education. Throughout his biography, he refers to his childhood as a happy time, being well integrated into school, sociable, with close friends, friendly and recognized, with good school results. He attended scouts and football teams. His mother is described as caring, with literary tastes, educating the children liberally and being close.

*Arendt, Hannah (2001). A condição humana. Lisboa: Relógio D'Água

†Roudinesco, Elisabeth (2008). Our dark side. Cambridge: Polity Press.

‡Nawaz Maajid (2015). Radical. Lisboa: Texto Ed..

His father, an electrical engineer, worked at an oil company in Libya to provide the family a comfortable life, allowing the children to attend good universities.

Maajid, estimates that his father was a man of good character, socially interventionist and moved by the ideals of human rights. His father created the first laborers' union at the company in Libya.

These childhood experiences bring us to a sustainable family, where interpersonal bonds constitute objet relationships emotionally significant, permanent, empathic and protective.

The first developmental difficulties occur in pre-adolescence, when he begins to become the subject of stigmatizing and racist experiences related to his skin color. The de-realization occurs with shock and loss of both childhood innocence and fantasies of a good and fair world.

He states: "When a child sees the world, he does not see his own face, he only sees everything else that surrounds him and thinks that the others do not see his face either", and also "Everything changed for me and forever.". He is 13 years old. In the transition from family to social, he ceases to be recognized and protected, and enters an emotional turmoil within an identity void.

At this time, the first cases of AIDS are occurring. The illness is excessively magnified in the public opinion and is allegedly attributed to Africans who have been infected by monkeys. Since he was not of the white race, he is derided and humiliated, and dubbed as "poz".

In high school he is forbidden to play football, a very important activity amongst the English teenagers which validated the recognition of the most capable, where he was once included. When he tries to integrate himself back, he is often subjected to physical and verbal abuse.

He recalls phrases that were carved in his memory, such as: "This game is not for Pakis", "You have sex with monkeys", "Get lost, do not speak or touch us, you're disgusting", and "Motherfucker Paki, go back to your country."

His parents devalue these incidents and always reinforce that he just has to take pride in being Paki. He does not accept or understand their advice, considers it to be confusing and unfair. He stops communicating with his family, and begins a parallel life with a secret Self, within which he will organize an internal hateful and retaliatory object. Being a teenager, in an eager search for an identity feeling, along with the normal reactivation of inherent conflicts, he soon find pretexts to develop omnipotent ideas in a closed logic of "all or nothing".

He joins other teenagers whose value and meaning of life is to respond to violence with violence, living in the moment, accompanied by hip-hop music and acting impulsively, organizing as a gang and taking the first steps to start the predictable catastrophic idyll.

At this time, the gang of skinheads and the National Front far-right party are on the rise as a defense of markedly racist political power, of exclusion and repatriation of migrants.

Without any protection from the police or the community institutions, a new generation of South Asian, youth, racist, united by a common identity, emerges. The Islam*.

Concomitantly, in Bosnia, the atrocities against Muslims make it a fertile ground for the politicization of Islam, which will lead to Islamism.

Religious leaders and imams with important politicizing functions arrive from the Middle East to the periphery of the main European capitals and to universities to start training young people. The Islamist racist ideology is replaced by organized cells scattered throughout the Middle East and post colonial South Asia, being more appealing and powerful than the ideals of Arab socialism. It is funded and armed.

Maajid reports, amongst many, an episode in which his group escapes an attack by armed skinheads, because he and his group used the backpack that they were carrying with personal belongings, to bluff, claiming to be a backpack trapped with bombs. "If you try anything with us, I blow up the backpack. If we have to die to stop you, it is what we will do ". To conquer respect by the threat of death through his own death, was the alarm signal for the hypothetical almighty courage to sacrifice everything and in this way recover what he felt as inferiority, shame, and lost dignity.

He joined an Islamic terrorist organization, "Hiz abu-Tahir", the "Freedom Party", where he comes to play a leading role in training, recruitment and dissemination of the preach of hate to the West, in some universities in Britain and then in Denmark. Later he goes to Pakistan where he creates cells and leaves behind him a wide trail of fundamentalist adherents.

He states that he has never participated in military training, nor came to be recruited for bombing activities or direct war.

As a psychoanalyst I can only question and raise question marks. What led Maajid to decide at 13 years old to join the Islamist fundamentalist religious belief, whose ultimate goal is immortality by death, and invokes nothing but the fanatic thought?

*Ballen, Ken (2012). *Terroristas apaixonados*. Lisboa: Casa das Letras. (Terrorists in Love: True life Stories of Islamic Radicals. London: Free Press)

Was it the shock before the social reality in which the childhood disappointment is not contained nor elaborated, projected in a void associated with an excessive dissociation, with an elimination of binding memories and family heritage?

In full identity confusion, with the absence of the father who was emigrated in Libya, he was left permeable to new messianic leaders to whom he makes a thoughtless adherence directing normal aggressiveness, to a state of force and destructive violence on the rise, within a false autonomy.

The whole process starts at 13 years old, a period at which can occur huge personality changes even when life was relatively calm in the previous years. These changes test the ability to contain the emotional turmoil of this phase.

In the case of Maajid, the internal objects were severely challenged and the external influences had a strong influence in the sense of destructiveness, and in which the consistency turned to be validated by his peers who professed Islam. It was easy to replace thought by action, with mechanisms of excessive projection.

He describes himself later as a "pseudo-mature" with an apparent "good head". The political religious training became self-protective. He used his own intelligence as a defense against true thinking and in order not to be disturbed by emotional reality. Amaral Dias* describes this adherence to the thought of violence and terror as a twilight disturbing state in which the God Prometheus, defender of humanity, marries the monster Frankenstein and so, imagines to order chaos.

Bion† in his Theory of Thinking explains to us that thinking is never guaranteed and often gets lost. He considers the fanatic thought as the greatest contemporary pathology. If Fanos means temple, the fanatic is what belongs to this temple, in a false statement on a final hypothesis of intransigence to transformative experiences. Amaral Dias‡ conceptualizes the fanatic thought as the dealer thought of denial and negative capacity.

But since this work is about change and transformation, we turn now to a brief summary of what happened to Maajid.

In 2001 he travels to Egypt still as a member of the "Liberation Party" to participate actively in the recruitment of young Islamists. The movement is forbidden and turns clandestine.

In 2002 he is arrested by the State Security police. He spends four years captive in the prison of Mazrah Tora, amongst criminals, Sadat's assassins, liberals, Arab socialists and other political prisoners. In this long and difficult period he is subjected to a new political and social education. The conversations and the experiences with others, along with the readings, were crucial to overcome his fanatical loyalty to the Islamic ideology. He reassesses everything he believed in.

Donald Winnicott§ taught us that the reunion with one's self, able to bring about change, often occurs in periods of solitude, such as the vespers of new meetings, in a difficult and catastrophic process in which new ways of seeing reality were exhibited.

Maajid realizes how his commitment to a fanatical religion led him gradually to lose touch with the enlightened sciences, with the History of ideas, with the cogitation and with the reflection upon the value of life and humanity. He states: "it is much easier to do cruel and selfish things in the illusion of a spirit of justice, whether religious or political. I crushed the dreams of those I loved, to pursue an elusive caliphate. Islamism is a religion at the service of a hateful ideology. "

Bion** points out that the attack on the bond of knowledge (K) is closely linked to issues concerning the falsehoods and unconscious and conscious lies, considering that to know or to be aware of the truth is the path for the subject to become. Love without truth is no more than a passion and truth without love is nothing but cruelty.

This catastrophic change occurs as a mental puzzle, on an emotional level in which he returns to the denied memories of childhood, mostly, to the always sensible mother's advice, as well as the rewarding experiences that he lived with the family left behind.

He continuously wonders how it was possible to compromise his very existence, due to a belief founded on such massive crimes. He refers have he lived nearly a "borrowed identity", fearless, under constant psychic tension in which the important thing was to act in an expansionary task, in fatal union with an ideal that blinded him.

The omnipotent rawness is stronger than life. Hanna Arendt defines this state of mind as something both terrifying and rational, in which the subject ceases to have emotions towards the outside world and towards himself. The Self is depleted or absent, as if it were to become an inauthentic personality, shallow, but yet not to be considered depersonalization or stupidity. It is a machine of

*Dias, Carlos Amaral (2009). *Carne e lugar (Flesh and Place)*. Lisboa: Almedina

†Zimerman, David (1995). *Bion: Da Teoria à Prática (From the Theory to Practice)*. Porto Alegre: Artes Médicas.

‡Dias, Carlos Amaral, *ibid.*

§Dias, E. O. (2003). *Winnicott's Theory of the Maturational Processes, Imago*

**Zimerman, D. *ibid.*

genocide, devoid of any reflection. Terror as an ideal is the meaning of life, to which adds the fact that so many believe in fraud with foundation, which leads them not to question themselves nor the circumstances, nor the innocent victims they would cause. True ignorance without perplexity.

The changes were taking consistency through reflection, from thought, from political and social knowledge, until he rebuilt his whole personality, piece by piece, from the inside out. He describes it as the most painful and difficult process because it was like the continuous peeling of an onion where every layer, leaves the following exposed, waiting to be peeled.

In 2006 he was released as a conscientious objector and became protected by the International Amnesty.

He returns to Britain where he's reunited with his family and concludes his studies in law. In London, in 2008, he organizes the Quilliam Foundation with a group of friends. It was the first anti-extremism center of the activist world to defend religious freedom, equality, human rights and democracy. He was a consultant for the English government and was invited to international conferences in universities in Pakistan and in the US Senate.

He was invited by the CBS program 60 Minutes, at the BBC Newsnight and spoke at a TED conference.

He is regularly interviewed by journalists from around the world. His work is published in the London Times, The Daily Beast, The Wall Street Journal, Dawn Pakistan, The Independent, The Telegraph, The Guardian, among others.

In October 2015 he published a new book with Sam Harris, entitled "Islam and the Future of Tolerance: A Dialogue" (Harvard University Press).

The story of Maajid Nawaz created in me a good feeling, although in a strange way, of how the human being can, by thinking, stop being prisoner and stop being held at the mercy of evacuation and retaliation of his bad inner objects.

Bibliography

- Amaral Dias, C. (2005). Freud para além de Freud (Freud Beyond Freud), Vol. II. Lisboa: Climepsi.
- Amaral Dias, C. (2009). Carne e lugar (Flesh and Place). Lisboa: Almedina.
- Amaral Dias, C. (2010). Teoria das transformações (Theory of Transformations). Lisboa: Almedina.
- Amaral Dias, C. (2015). O obscuro fio do desejo. (The Obscure Thread of Desire). Edited by Clara Pracana. Lisboa: Fim de Século.
- Arendt, H. (2001). A Condição humana (Human Condition). Lisboa: Relógio D'Água.
- Arendt, H. (2006). Entre o passado e o futuro (Between Past and Future). Lisboa: Relógio D'Água.
- Arendt, H. (2014). As origens do totalitarismo (The Origins of Totalitarianism). Lisboa: D. Quixote.
- Baller, K. (2012). Terroristas Apaixonados (Terrorists in Love: True Life Stories of Islamic Radicals). Lisboa: Casa das Letras.
- Chuster, A. and Trachtenberg, R. (2009). The Seven Capital Envy. Artmed
- Dias, E. O. (2003). Winnicott's Theory of the Maturation Processes. Rio: Imago.
- Nawaz, M. (2015). Radical (Radical: My Journey out of Islamist Extremism). Lisboa: Texto Ed.
- Newman, A. (2003). Non-Compliance in Winnicott's Words: A Companion to the Writings and Work of D. W. Winnicott. Rio: Imago.
- Roudinesco, E. (2008). Our dark side. Cambridge: Polity Press.
- Symington, J. & e N. (1999). O pensamento clínico de Wilfred Bion (The Clinical Thinking of Wilfred Bion). Lisboa: Climepsi.
- Zimerman, D. (1995). Bion: Da Teoria à prática (From Theory to Practice). Porto Alegre: Artes Médicas.
- Zimerman, D. (2010). The Four Links. Artmed

Brief Biography

Dr.^a Conceição Almeida is a Psychologist, Full Psychoanalyst, Founder of the Portuguese Association of Psychoanalysis and Psychoanalytical Psychotherapy (AP), where she works as teacher, trainer and supervisor, and she is also the Vice-President of the Board and Member of the Teaching Committee.

ABOUT TRAUMA. A PSYCHOANALYTICAL PERSPECTIVE

Emeritus Professor Carlos Amaral Dias¹, & Prof. Clara Pracana²

¹*University of Coimbra, Director of Instituto Superior Miguel Torga and Vice-President of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy (Portugal)*

²*Full and Training member of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy (Portugal)*

Abstract

The construction of a psychical space from the first weeks on is gradually done on the basis of the dialectics of the presence/absence of the mother, or should we say, the mother-function.

These first interactions allow for the elaboration of the traumatic factors. Mental life gradually builds up and gives way to the organization of primitive and crucial concepts. These concepts hold the quality of the 'negative realization' which allowed for their creation. The object of our communication will be the relationship between the object and its negativity.

Keywords: *trauma, work of the negative, symbolization, Freud, Bion, Green.*

1. Freud's theory of trauma

Trauma is no doubt one of the most crucial concepts in psychoanalysis. In *An outline of psychoanalysis* (1937, Standard Edition, vol. 23), one of his last works, Freud wrote that infantile traumata give rise to repressions and subsequent neurotic illnesses. No one seems to escape that fate, especially, as he points out, the 'civilized man'.

Freud's dealings with trauma had come a long way. He kept writing about trauma even after giving up his theory of seduction. Already on January 11th, 1893, he had addressed the Wiener Medizinische Press on the subject of the pathogenesis of hysterical symptoms and had pointed out the preponderance of the traumatic factor among the causes of hysteria. We know he had been heavily influenced by Charcot, with whom he had worked in Paris between 1885-86.

Freud starts this communication by stressing the joint work with Breuer on the issue of hysteria and the case of Anna O., Breuer's patient. We can read the revised communication by Freud, published as *On the psychical mechanism of hysterical phenomena: A lecture* (SE, vol. 3, pp. 27-39). In this seminal work that immediately precedes his perhaps best known *The neuro-psychoses of defence* (1894), Freud writes:

For no one doubts any longer today that even in the case of the major mechanical trauma in traumatic hysteria what produces the result is not the mechanical factor but the affect of fright, the *psychical* trauma (p. 31, italics in the original). The observation and treatment of hysterical patients carried out by Freud and Breuer from the late 80s on, had lead Freud to come to several conclusions. One of his first observations is the following:

A single precipitating cause is often not enough to fixate a symptom; but if this same symptom appears several times accompanied by a particular affect, it becomes fixated and chronic (p. 32).

Referring to a patient treated by hypnosis, Freud observes that if a symptom presented by the patient consists in pain, when inquired under hypnosis as to its origin, she would produce a series of memories. Eliciting a vivid memory in the patient, making her put the accompanying affect into words had this result: the pain emerges very markedly over and over again, and the symptom, in its chronic character, disappears. Thus Freud notes:

It could only be supposed that the psychical trauma does in fact continue to operate in the subject and maintains the hysterical phenomenon, and that it comes to an end as soon as the patient speaks about it. (...) The memory concerned is quite unusually strong and has retained the whole of its affect (...) perhaps [for] ten or twenty years (...). The question now arises (...) how it is that these memories have been not subject to the processes of wearing away and *forgetting* (p.35-36, our italics).

At this point, Freud states his thesis about what would later become known under the name of the principle of constancy: if an individual experiences a psychical impression, the sum of excitation in his nervous system increases. The tendency is to diminish this sum of excitation "in order to preserve his health" (*ibid*, p.36).

It is clear that Freud is already hinting here at what he would elaborate twenty seven years later as his concept of the death instinct in connection with the Nirvana principle. (Cf. *Beyond the pleasure principle*, 1920, SE, vol.18). He proceeds to explain how the psychical mechanism operates, noting that the more intense the trauma, the greater should be the *adequate* reaction. But the most adequate reaction "is always a deed", he writes. Freud's sense of humour comes to the fore here and he quotes an English writer as having wittily remarked that "the man who first flung a word of abuse at his enemy instead of a spear was the founder of civilization". This first neurotic, if we may say so, had used words as substitutes for deeds. "Accordingly", Freud writes, "alongside the adequate reaction there is one that is less adequate. If, however, there is no reaction *whatsoever* to a psychical trauma, the memory of it retains the affect which it originally had" (pp.36-37).

Freud gives an example: if someone who has been insulted cannot retaliate by a blow or a word of abuse, the memory of the event and the affect which was originally present may come back:

Thus, if for any reason there can be no reaction to a psychical trauma, it retains its original affect, and when someone cannot get rid of the increase in stimulation by 'abreacting' it, we have the possibility of the event in question remaining a psychical trauma (p.37, commas in the original).

According to Freud, sometimes a healthy psyche has other methods to deal with the affect of a psychical trauma, even if the motor reaction or the use of the spoken word is not possible - namely by "working it over associatively and by producing contrasting ideas" (p.37). He further notes that in hysterical patients this mechanism is absent. As he puts it, in those individuals there is nothing but impressions which have not lost their affect and the memory remains vivid: "hysterical patients suffer from incompletely abreacted psychical traumas" (p.38).

As we mentioned, Freud's paper to be published the following year (1894) would be about neuro-psychoses. He coins the terms 'defence', 'conversion', 'splitting' and 'flight into psychosis', touches on the nature of the unconscious and mentions the ideas and affects incompatible with the ego. We now know he already had in mind the *princeps* psychical mechanism: repression. These two concepts, trauma and repression, would eventually become closely associated.

In 1920 Freud publishes *Beyond the pleasure principle*. We have grown so accustomed to reading Freud's texts that we may miss how startling this title was. In fact, the reaction to this work was quite intense among his followers. Freud was referring to some force operating in our minds, a force that could override what he had thought of for so many years as being our main guide since birth: the pleasure/unpleasure principle, the "lighthouse" of the mind, as one of us called it elsewhere (Amaral Dias, 2005). Until then, for Freud, human behaviour was based on the search for pleasure. Not only pleasure in the hedonistic sense, but the search for behaviour that could help to reduce the excessive weight due to emotional tension. In this book, Freud gives abundant examples of daily behaviour which could, in his view, be explained by two concepts: one is the *death instinct* and the other is *coercion to repeat*.*

Dreams about traumatic war events made him ask himself: why do people repeat the suffering and pain in the dreams, instead of trying to escape them as the pleasure/unpleasure principle would make us believe they would? The death instinct, according to Freud, coerces the individual to repeat over and over again a behaviour that is anything but pleasant. The death instinct would correspond within the psychic system to the search (should we say 'longing'?) for a stage prior to any painful experience, in a way that may allow for escaping from that painful experience.

But then, if we want to delete from our minds the memory of a painful experience, why do we go on and on repeating it? These two paths seem to be antagonistic. That was Freud's genius, to demonstrate that this paradox was not a real paradox. As he says,

The dreams [of patients suffering from traumatic war neuroses] are endeavouring to master the stimulus retrospectively, by developing the anxiety whose *omission* was the cause of the traumatic neurosis" (p.32, our italics).

What Freud is telling us is this: it is because the right amount of anxiety did not take place when the traumatic incident happened, that the situation is repeated, over and over again, as if *in search of that adequate emotional reaction* Freud had written about in 1893.

The manifestations of a compulsion to repeat (which we have described as occurring in the early activities of infantile mental life as well as among the events of psycho-analytical treatment) exhibit to a high degree an instinctual character and, when they act in opposition to the pleasure principle, give the appearance of some 'daemonic' force at work (p.35).

This daemonic force is no other than the death drive. Anxiety is the anticipation of a dangerous situation and repetition is no more no less than an attempt to produce the needed anxiety, so as to elaborate the psychical experience and allow for the ego to mobilize more adaptive defences.

*The German word *Wiederholungszwang* is usually translated by compulsion to repeat but we believe a more accurate translation would be coercion to repeat.

Freud establishes thus the close association between repression and the coercion to repeat, stating that the repetition of the experience aims at a production of the anxiety needed for the psychological elaboration of the event. The events, ideas and affects that are repressed into the unconscious Id and which we don't remember consciously, seem to cluster under the coercion to repeat.

2. Post-Freud: Wilfred Bion and André Green on trauma and the work of the negative

Wilfred Bion (1897-1979) accentuated the significance of the endo-psychical mechanism that allows for the elaboration of frustration and the capacity to think. This is the nucleus of his theory of thinking: the psyche has to accept and elaborate frustration rather than to simply evacuate it. This is a necessary condition for being able to create what he calls the *apparatus for thinking*, i.e., the capacity to have thoughts. His concept of thought is the following:

I shall limit the term "thought" to the mating of a pre-conception with a frustration (Bion 1967, p.111, commas in the original).

For Bion, thoughts exist prior to this capacity. The capacity to think thoughts that already exist depends on the *tolerance to frustration*, which is made possible by a maternal function: the reverie. The role of the container is to allow for learning from experience. The mother can be, however, unable to accept the projective identifications of the infant, which may bring disturbances in the learning process. Or else, there can be "complications arising through the existence of an extremely understanding mother" (Bion 1991, p.62). This kind of mother (we mean by 'mother' the function, not the person) does not allow for the progressive acquisition of tolerance of frustration, learning from experience and building the capacity of thinking.

Whereas Bion emphasizes the internal apparatus, for André Green (1927-2012), the most prevalent mechanism is the perception of the object by the subject - and not so much the way the psyche works:

An important criticism can be made of Freud's theories in the measure that they underestimate the influence of the Other (...). It is impossible today to put forward a theory of the experience of time without recognizing the time of the Other (the object, the parental imago) (Green 2005, p.180).

But let's not rush in concluding that Green was an object-relation theorist or an intersubjectivist. As he wrote,

The solution to the problem is not to be found either on the side of drive alone, or on the side of the object alone, but rather that it is the drive-object couple that should constantly be kept in mind at all stages (ibid, p.65).

Green's concept of the ego is of a "sort of interface between excitations related to the experiences of the internal world (affects, representations) and those coming from the external world (sensations, perceptions), where the importance of everything related to the object must be given particular emphasis" (ibid, p.102). The ego is also capable of *reflexive self-observation*, of establishing processes of judgement and of deciding what to do with these excitations.

As Green sees it, trauma does not consist only or essentially in its original occurrence but in its retrospective recollection. He insists that the recollection of trauma can be more traumatic than the initial event.

As we had already mentioned, the ego deals with traumatic events or recollections by resorting to several kinds of defences: repression, negation, disavowal, splitting, etc. Green proposes to group them under and the heading of *the work of the negative* (ibid, p.175).

Green's concept of the work of the negative was, indeed, the work of a lifetime. In his book *The work of the negative* that was published in English in 1999 - in France it had been published in 1993 - he starts by inquiring about the word *negative* proper and its derivatives, used by Hegel and later by Lacan. For Hegel, negativity was a property of consciousness: "The moment in the process of development in which positive determinations are suppressed represents a really creative work. It destroys and preserves in one and the same movement", we can read in the *Dictionary of philosophy* by Russ (in Green, 1999, p.vii). As Weller, Green's English translator, puts it, the negative is characterized by the logic of the shadow. In fact, there's no logic at all, at least in Aristotelian terms.

One of us (Amaral Dias, 1999, pp.14-15 and 24), remarked that for Freud (see, for instance, *The interpretation of dreams*) the main issue was negative communication, more of what is missing, than of what is told: the logic of the desire instead of the Aristotelian logic. This negative communication is exclusive to psychoanalysis as a scientific discipline. What Freud tells us is that the capability to structure the negative is essential to the construction of the psyche. The subject gives structure to the absence.

When Lacan analysed the famous text by Freud about the game played by his grandson, Fort-Da (Lacan, *Ecrits*, 1954) he made use of the Hegelian notion in, as Green puts it, a *remake* of the Freudian interpretation,

(...) giving an account of the combined effects of childhood, the status of absence, the emergence of self-conscious, alienation from one's own production (sound, signifier and sign), the conflict between various aspects of the psyche in their relation to language and the subject's relationship to death (Green, 1999, p.2).

However, one does not need to know Hegel in order to understand the notion of the negative. We all, as psychoanalysts and psychotherapists, are permanently confronted with its manifestations in our patients and within ourselves. Green's purpose was to enlighten those manifestations for us. And what are they? Denial, repression, dream work, mourning, disavowal, foreclosure, identification, sublimation.

Green makes a distinction between two basic kinds of negativity: the potentially creative and constitutive and the destructive. In other words, the former is the negative as a rejection of what is incompatible with the ego (as is repression) - a normal mechanism of the human psyche. The latter is connected to the death drive and may lead to the destruction of object relations and/or the annihilation of the ego itself.

For André Green, trauma can originate either from the lack or the excessive presence of the object. The perception of the object is not something purely physical. It is also the capability to turn the object into a *mental* object. That is, the object must be reduced to its minimum positivity in order to be at its maximum in terms of negativity. Green emphasizes this point when he writes about neurosis in comparison with non-neurotic states. He makes clear that the problem of the distance of the object in borderline organisations is about a minimal distance versus a zero distance. Green even writes about an *excessively present object*, meaning too much positivity.

The consequence of this excess of positivity is what appears later as a difficulty to create a mental space. This is different from Bion who accentuates the trait that develops the concept. The concept itself becomes a mental space. In other words, the cloud of concepts makes for the mental space.

For Green, on the other hand, what seems to be the most important is the object. The notion of mental space results from the relation with the object. Meaning, the capability of an object to become a *thinkable* object. This is connected to another issue: the saturated and unsaturated part of the pre-conception that Bion speaks of. For Bion, the capability of the unsaturated part to function depends on the creation of a space in the pre-conceptual apparatus that allows for the creation of the negative.

This mental space results from the non-transformation of the saturated area of the pre-conception, as if there was a hyper-presence of the saturated parts. We can link this idea with Green's argument that an excess of the object may be more harmful for mental health than its lack.

Bion doesn't go that far explicitly (except, perhaps, when he refers to the "too understanding mother", cf. above), but we believe he might have. His theory about frustration points in that direction. Melanie Klein had already spoken about the way gratifying experiences help to modify frustration. For Bion, as we have seen, the psyche has to accept and elaborate frustration rather than to simply evacuate it. Freud had already described in 1925 (*Inhibition, Symptoms and Anxiety*), the creation of the object relation based on a child's successive gratifying experiences.

But what is a gratifying experience? Is it something that saturates the pre-conception? If the pre-conception demands an object to become a conception and the object is *always* there, what happens? There is no space for the creation of the non-object. In other words, saturation predominates.

According to Bion, the creation of the concept is not possible without frustration. Balancing between the capability to modify and metabolise the frustration and not being able to, the mind develops and creates conceptions and concepts. *Sufficient* frustration is determinant to the development of thinking. The quantum of frustration, its perception by the subject and the way s(he) manages to transform it, are of the outmost importance. It's a question of too much or too little and in this sense we can connect Bion's thinking to Green's 'excessive presence of the object.'

We can go a little further expanding this line of reasoning and using Green's concept of *thirdness*: a triangle whose vertices would be Freud, Bion and Green. In this F-B-G triangle, the hyper-presence of the object would correspond to a hyper-saturated area in which transformation would not be possible in Bion's terms. This, we argue, may constitute a definition of trauma.

As we have seen, Freud's theory of trauma was based on the incapacity of the immature ego to deal with early events (internal or external), either for constitutional reasons or due to accidental factors (Freud, 1937, p.220). This definition of trauma is present in *Beyond the Pleasure Principle*. But where does repetition come from? It comes from trauma. A trauma that did not bring the adequate amount of anxiety. When does trauma take place? When the situation did not result in the production of adequate anxiety e.g., the adequate affect. And this, we argue, brings on the traumatic repetition. It is as if there was an excessive stimulus for the ego to deal with. Freud goes a bit further. He asks: why do we repeat? We keep repeating because in the original situation there was no production of adequate emotion.

Trauma is an event or situation that cannot be elaborated, either in terms of thoughts or of affects. We may call it *stupidity*, in the sense that the subject remains inhibited, that is, was incapable of

either producing the adequate affect or giving it a name. We use the word stupidity in its original meaning. The word derives from the Latin *stūpeo*, which means being immobile, unable to deal with the circumstances. The metaphor is quite appropriate, since stupidity means "a poor ability to understand or to profit from experience" (Advanced English Dictionary and Thesaurus, online version).

Repetition, we argue, can be thus seen as a search for a new situation when the subject will be able to produce that adequate quota of affect. The quota and its adequacy depend no doubt on each individual and on the period of his life.

When Green speaks of psychic death, a desertification of the mind, an inability to associate or fantasize - he calls this the *internalization of the negative* - we believe he is speaking of a more extreme case of stupidity, an internalized pattern that comes from childhood. The mother that is absent (in the mind, the 'dead mother') does not allow for the creation of negativity in the constitutive sense. The same happens with the hyper-present mother. In other words, we need to kill the primordial object in order to grow a thinking mind. But you cannot kill either an object who is already dead or an object which has never left.

When we read Bion, we come to understand that the creation of the negative implies that the pre-conceptual apparatus is already functioning. In order to produce a concept the mind needs not only pre-conceptions but also their modification by frustration. These pre-conceptions have to be rooted in the experience of the object's presence but also of its absence. It is this alternation between presence and absence that allows the child to access the symbolic realm.

3. Conclusion

To sum up, we can say that as far as trauma is concerned, Freud, Bion and Green all agree on one point which is: more decisive than the event itself is how the psyche deals with it in terms of emotional response. When, as Freud (1920, p.31) points out, due to the immaturity of the ego or the lack of preparation for anxiety, the subject cannot deal with the situation, the emotional response may be not adequate and coercion to repeat will follow, if not right away, then years or even decades after the 'real' event had taken place.

References

- Amaral Dias, C. (1999). O Negativo ou o retorno a Freud. Lisboa: Fim de Século.
Amaral Dias, C. (2005). *Risco e repetição*. *Análise Psicológica*, 1 (XXIII), pp. 5-10.
Bion, W. (1965/1991). *Transformations*. London: Karnac.
Bion, W. (1967/2007). *Second thoughts*. London: Karnac.
Freud, S. (1893/2001). On the psychical mechanism of hysterical phenomena: A lecture. *SE*, vol. 3. London: Hogarth Press.
Freud, S. (1894/2001). The neuropsychoses of defense. *SE*, vol. 3. London: Hogarth Press.
Freud, S. (1920/2001). Beyond the pleasure principle. *SE*, vol. 18. London: Hogarth Press.
Freud, S. (1925/2001). Inhibitions, symptoms and anxiety (*SE*, vol. 20). London: Hogarth Press.
Freud, S. (1937/2001). An outline of psychoanalysis. *SE*, vol. 23. London: Hogarth Press.
Green, A. (1999). *The work of the negative*. London: Free Association Books.
Green, A. (2005). *Key ideas for contemporary psychoanalysis*. Hove: Routledge.
Green, A. (2012) *Illusions and disillusion of psychoanalytic work*. London: Karnac
Pracana, C. (2014). *Evil and the death drive in the work of André Green* (in print).

Brief Biography

Emeritus Professor Carlos Amaral Dias, BSc(Hons), MD, PhD, C. Psychol., FBPsS, University of Coimbra, Director of Instituto Superior Miguel Torga and Vice-President of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy. Private practitioner of psychiatry and psychoanalysis, regular contributions with several prestigious journals and newspapers, and also radio and television.

Prof. Clara Pracana, MBA, Msc, PhD, Full and Training member of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy, Graduated in Economy, MBA UNL/Wharton School, Msc in Psychology, PhD in Psychoanalysis Psychoanalyst, lecturer, author, coach.

INVITED TALK

NEUROPSYCHOANALYSIS, WHAT IS IT GOOD FOR? HOW NEUROPSYCHOANALYSIS CAN FOLLOW EVIDENCE-BASED PRACTICE TARGETS

Dr. Ana Vasconcelos

Psychiatrist in SAMS - Serviços de Assistência Médico-Social do Sindicato dos Bancários de Sul e Ilhas, founding member of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy, and member of Neuropsychanalysis Association (Portugal)

Abstract

My presentation aims to survey the possible convergence points between neuroscience and psychoanalysis under the banner of Evidence-Based clinic in mental health. By deepening the exchange interfaces between the two disciplines, we can better understand how the brain works and how human psychism operates.

Brief Biography

Ana Vasconcelos was born in Lisbon, and graduated in Medicine in 1977. She specialized in Child and Adolescence Psychiatry in Paris, and was admitted into the Portuguese Medical Bar association in 1984, in the pedopsychiatry specialty. Since then she has worked as a child and adolescence psychiatrist in SAMS – Serviços de Assistência Médico-Social do Sindicato dos Bancários de Sul e Ilhas. She holds a master degree in Psychopathology and Psychology from the Instituto Superior de Psicologia Aplicada, Lisbon. She participated on the first CEJ (Center for Judiciary Studies) course of family mediation. She is a founding member of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy and a member of NPA (Neuropsychanalysis Association).

INDEX OF CONTENTS

ORAL PRESENTATIONS

Social Psychology

- A longitudinal investigation of organizational resources, emotional dissonance, need satisfaction and thwarting, and psychological health** 3
Tiphaine Huyghebaert, Evelyne Fouquereau, Philippe Colombat, Fadi-Joseph Lahiani & Nicolas Gillet
- Organizational identity and behavioural strategies of a technical university graduates in the process of choosing a company for a job placement** 5
Liubov Kotlyarova, Dmitrii Kobzev & Ekaterina Sysoeva
- Leader's creativity and innovation: state of the art** 10
Elisabete Ramos & Catarina Brandão
- Psychologists as futurists: applying 'Futures Techniques' to create convincing narratives for the future of major projects** 15
David R. Stevens
- The exercise of leadership in the feminine: the state of the art** 16
Ana Dória & Catarina Brandão
- The Portuguese retro-fus version: family unpredictability and future perspective** 21
Teresa Sousa Machado, José Pacheco Miguel, José Tomás da Silva & Pedro Tiago Pereira
- The welcome and integration contract of Luxembourg: satisfaction with the quality of services according to non-EU immigrants** 26
Angela Odero, Chrysoula Karathanasi & Michèle Baumann
- Attachment to parents and romantic attachment: are there different implications for life satisfaction and hope?** 31
Cátia Dias-da-Costa, Teresa Sousa Machado & José Tomás da Silva
- Self-stigma in mental health: planning effective programs for teenagers** 36
Nicolina Bosco, Andrea Guazzini, Elisa Guidi, Susanna Giaccherini & Patrizia Meringolo
- Professional identity of adolescents with different types of attachment to mother** 40
Tatiana Konshina
- Relationship with parents and peers of adolescents with different attachment types to parents** 45
Tatiana Sadovnikova
- Attitudes of students to political extremism: the case of the countries of the Eurasian union** 50
Olga Deyneka
- Personality and political ideology in Canada** 55
Derek Gaudet, Kathryn Flood & Lisa Best
- Post-traumatic stress responses among refugees following xenophobic attacks in Durban, South Africa** 60
Gail Womersley, Amir Shroufi, Nathalie Severy & Gilles Van Cutsem
- Factors that contribute to work satisfaction of master students and graduates** 65
Chrysoula Karathanasi, Angela Odero & Michèle Baumann

Educational Psychology

The importance of creativity in the museum immersive experience of the adult visitor <i>Colette Dufresne-Tassé</i>	70
Executive functions and operative reasoning in the SET Game® solution <i>Sandreilane Cano da Silva & Lino de Macedo</i>	75
A qualitative follow-up study of the families feeling safe: protective behaviours programme <i>Isabella McMurray & Patricia Roberts</i>	80
Parental proficiency in internet use for child-rearing purposes in Spain and Portugal <i>Sandra Santos, Nuno Gago, Arminda Suárez & María José Rodrigo</i>	85
Analysis of supervision records among the preschool practicum teachers through hermeneutic method <i>Suppiah Nachiappan & Seri Zaitum Jusoh</i>	90
A comparative study of effect of formal musical training on academic performance and emotional intelligence among children <i>Vidhya Shenoy & Vaishnavi Verma</i>	95
The relation between Filipino adolescents' school belongingness and autonomy: mediation through perception of role fulfillment <i>Madelene Sta. Maria & Shayne Polias</i>	100
Academic self-efficacy in transitions to high school <i>Simona Hoskovcová & Lenka Krejčová</i>	105

Cognitive and Experimental Psychology

Extenuating circumstances and moral judgment: a life-span perspective <i>Sandra Lepeltier, Veronique Salvano-Pardieu & Roger Fontaine</i>	110
Age-related differences in short-term memory, executive functions and problem solving in middle and late adulthood <i>Sara Mičič & Karin Bakracevic Vukman</i>	112
Different streams in time river: relationship between top-down and bottom-up temporal object-based attention <i>Jingjing Zhao, Qi Chen, Mengge Tan & Yonghui Wang</i>	117
REM sleep improves defensive flexibility <i>Ingegerd Carlsson, Jan Samuelsson & Per Davidson</i>	122
Adolescents' emotions and risk-taking in sports <i>Quentin Verneau, Valérie Pennequin & Guillaume Martinet</i>	127
Development of cognitive trainers for sports <i>Daniel Gopher</i>	132
Use of heuristic and analytic systems of reasoning during adolescence: effect of differential emotion state <i>Elodie Tricard, Valérie Pennequin & Célia Maintenant</i>	136
Auditory-visual speech perception in bipolar disorder <i>Doğu Erdener & Arzu Yordamlı</i>	137
The validity status of digit ratio (2D:4D) as a retrospective marker of prenatal androgen action <i>Martin Voracek & Ulrich S. Tran</i>	142

Clinical Psychology

Body dissatisfaction: effects of gender, exercise, personality, and disordered eating <i>Leanne Davis, Cecile Proctor, Scott Lilly & Lisa A. Best</i>	143
Cognitive functions of patients undergoing cardiac surgery <i>Daria Eremina</i>	148
How do I say “sad?” building a depression-lexicon for psychologist in a pocket <i>Roann Munoz Ramos, Paula Glenda Ferrer-Cheng, Jó Ágila Bitsch & Stephan Michael Jonas</i>	152
Psychometric differences between men and women of different ethnic and marital status, in handling pain <i>Abraham A. Argun</i>	157
Mental health inventory: study of construct validity with Portuguese samples with and without psychopathology <i>Ana Margarida Santos & Rosa Ferreira Novo</i>	162
Cooperation of forensic in-patients at the assessment process comparing to other psychiatric in-patients <i>Anica Prosnik Domjan</i>	167
The motivation for health: what is it and how to assess it? <i>Shulamith Kreitler</i>	172
Cognitive behavioral treatment of anxiety in children and young adults with developmental disabilities <i>Omar Rahman & Adam Lewin</i>	177
The dyadic association among affect, negative life events, and marital adjustment <i>Elçin Sakmar & Hürol Fışiloğlu</i>	178
The predictors of depressive symptoms: the role of anger and difficulties in emotion regulation <i>Başak Bahtiyar & Tülin Gençöz</i>	183
The role of coping in the prediction of forgiveness: contributions beyond personality <i>Samantha A. Fowler & Lilly E. Both</i>	188
General practitioner’s management of parent patients with depression in Australia: what about their children? <i>Cheryl Cornelius</i>	193
Sociotherapeutic interventions for post-Haiyan community integration and cohesion <i>Gail Tan Ilagan</i>	198
Smartphone overuse: implications on quality of face to face communication <i>Abdul Mujeeb Khan & Hazwanie Binti Kosnin</i>	202
A study of vulnerabilities associated with excessive internet use in adolescence <i>Clémentine Galan, Servane Barrault, Marie Grall-Bronnec, Nicolas Ballon & Robert Courtois</i>	207
Self-construction through self-starvation: a Foucauldian narrative analysis of memoirs of women who self-starve <i>Erica S. Freeman</i>	212
 <u>Legal Psychology</u>	
“How can bystander intervention change?”: an online qualitative study in Italy and Brazil <i>Elisa Guidi, Belinda Piltcher Haber Mandelbaum, Nicolina Bosco, Andrea Guazzini & Patrizia Meringolo</i>	216

Analysis of counselling processes during mandatory psychosocial counselling <i>Gabrijela Ratkajec Gašević & Martina Čarija</i>	221
“Living together” prevention workshops on radicalization in prison setting <i>Carlos Velandia-Coustol, Charlotte Joly, Elhassania Baria, Cécile Martinelli, Philippe Castel & Marie Françoise Lacassagne</i>	226

Psychoanalysis and Psychoanalytical Psychotherapy

The Jack’s island: psychic sanctuaries and their effects on the dynamics of the analytical relationship <i>Cláudia Carneiro</i>	231
---	-----

POSTERS

Educational Psychology

Life values and creativity in future psychologists and managers <i>LeonorAlmeida, Sara Ibérico Nogueira, Alexandra Nogueira & Joana Costa</i>	239
Contributions of psychology in education and practice of professional nutrition <i>Marta Fuentes-Rojas</i>	241
Evaluation of the quality of web resources for parents <i>Arminda Suárez, Sonia Byrne & María-José Rodrigo</i>	244
Stress in life transitions during the basic education: evolution and changes associated with sex/age <i>Cynthia Cassoni, Marta Regina Gonçalves Correia-Zanini, Edna Maria Marturano & Anne Marie Fontaine</i>	245
Effectiveness of teacher training on professional development and attitudes of public elementary school teacher <i>Elenita M. Tiamzon, Jose Roberto Alegre & Lourdes Abiog</i>	248
Clinical and educational applications of LIVEIA: an immersive visualization environment <i>Liane Gabora</i>	251
Self-control as a mediator between normative beliefs and alcohol use/ cigarette smoking initiation among adolescents <i>Marianna Berinšterová & Oga Orosová</i>	254
Evaluation Spanish online program “positive parent” <i>Arminda Suárez, Juan-Antonio Rodríguez & María-José Rodrigo</i>	257

Social Psychology

Communication skills and friendship of the youth in Japan <i>Koshi Makino</i>	258
"Normality" at a library in the Republic of Kazakhstan <i>Yoriko Sano & Norihiro Kuroishi</i>	261
Factors related to the parental burden of childrearing in Japan <i>Mizuka Ohtaka</i>	264
Psychological factors related to emigration plans among university students <i>Marta Kulanová, Olga Orosová, Rafael Mikolajczyk, Janina Petkeviciene, Andrea Lukács & Michal Miovsky</i>	267

Importance of psychoanalysis for solving the problem of economic security of a personality in Russia <i>Olga Medyanik</i>	270
Examining women’s autonomy-supportive vs. controlling interpersonal styles toward their spouses with regard to eating regulation: are they associated with women’s own eating goals and to men’s relationship quality and well-being? <i>Noémie Carbonneau & Marina Milyavskaya</i>	273
The impact of dwelling’s functionality on home attachment <i>Sofya Reznichenko, Sofya Nartova-Bochaver, Natalya Dmitrieva, Aleksandra Bochaver & Ekaterina Braginets</i>	276
Intragroup status and psychological safety of school students in the educational environment <i>Galina Kozhukhar & Ekaterina Gozhaya</i>	279
Work related stress perception in public and private sector: a comparative study <i>Isabella Corradini & Assunta Marano</i>	282
 <u>Cognitive and Experimental Psychology</u>	
“Normality” at a social comparison in the United States <i>Norihiro Kuroishi & Yoriko Sano</i>	284
Exploring the association between outcome-intent based moral judgment and psychopathological traits during developmental age <i>Elettra Pezzica, Raffaella Belotti, Roberto Mordacci & Anna Ogliari</i>	287
The role of surprise enhancement in predictions <i>Catarina Amado, Petra Hermann, Petra Kovács, Mareike Grotheer, Zoltán Vidnyánszky & Gyula Kovács</i>	290
Death-related stroop cues increase materialistic choices in decision making <i>Antonio A. Álvarez & Lara Rodríguez-González</i>	293
Describing data using pictures: the use of visual inscriptions in science <i>Lisa A. Best, Claire Goggin, Diane N. Buhay, Linda T. Caissie, Montgomery Boone & Derek J. Gaudet</i>	296
Multitasking in the military: a glance at cognitive consequences and potential solution <i>Lobna Chérif, Alexandre Marois, Katherine Labonté & François Vachon</i>	299
 <u>Clinical Psychology</u>	
Quality of life and self-attitude contribute to resilience in patients disfigured after cancer treatment <i>Anna Faustova</i>	300
Psychologist performance in the policies of HIV/AIDS: a literature review <i>Aérica Meneses & Marta Fuentes-Rojas</i>	303
Feeling MEH: psychologist in a pocket app for depression screening <i>Roann Munoz Ramos, Paula Glenda Ferrer-Cheng, Jó Ágila Bitsch & Stephan Michael Jonas</i>	306
Psychological aspects of HIV- positive pregnancy: a literature review <i>Aérica Meneses, Mariana Santos, Laíse Santos & Marta Fuentes-Rojas</i>	309
A Japanese version of the measure of food choice values: validity and reliability assessment <i>Yasuyuki Fukukawa, Wataru Onoguchi & Mieko Nakamura</i>	312
Emotion regulation functions of non-suicidal self-injury <i>Amy Kranzler, Sara Geisser, Emma MacDonald, Kara B. Fehling & Edward A. Selby</i>	315

Social support and mental health among trans and genderqueer adults in the United States <i>Samantha Pflum, Rylan Testa, Kimberly Balsam, Cara Spitalewitz & Brooke Ziegelbaum</i>	318
Descriptive normative beliefs, self-regulation and cumulation of risk behavior among Slovak university students <i>Monika Brutovská & Olga Orosová</i>	321
Childhood sexual abuse severity among sexual minority men: relationships with mental health and substance use diagnoses <i>Michael S. Boroughs & Conall O’Cleirigh</i>	324
Visualization of disaster recovery process - “recovery curve” of the 2011 Tohoku earthquake and tsunami <i>Takumi Miyamoto</i>	327
The influences of exercising on eating attitudes among Korean female adolescents <i>Michelle Chae R. Kim, Kiho Kim, Yun Hye Oh & Yoo Sook Joung</i>	330
The contribution of home attachment to mental health <i>Sofya Reznichenko, Sofya Nartova-Bochaver, Natalya Dmitrieva, Aleksandra Bochaver & Ekaterina Braginets</i>	333
The role of defense mechanisms in the psychological adaptation to rare oncological disease <i>Valentina E. Di Mattei, Letizia Carnelli, Martina Mazzetti, Martina Bernardi, Giorgia Mangili & Fabio Madeddu</i>	336

VIRTUAL PRESENTATIONS

Clinical Psychology

What is the rationale behind researching mental health of young adults of different relationship statuses? <i>Katarzyna Adamczyk & Chris Segrin</i>	341
Schizophrenia: clinical symptomatology, etiology, linguistic deficits and cognitive rehabilitation <i>Georgios Moutsinas</i>	346
Development of self-regulation skills for mothers, who bring up children with autism spectrum disorder <i>Olga Valentinovna Makarova</i>	351

Educational Psychology

Competences for intercultural education: conceptualization and empirical findings <i>Danijela S. Petrović, Blagica Zlatković, Tijana Jokić, Milica Erić, Bojana Dimitrijević & Bruno Leutwyler</i>	355
--	------------

Social Psychology

Who is more scared of dating? investigating sex differences in the dating anxiety among Polish young adults <i>Katarzyna Adamczyk</i>	360
Time perspective and tendency to abuse substances in adolescence girls <i>Maryam Shafikhani, Fatemeh Bagherian & Omid Shokri</i>	363

The value of community gardens an exploratory research in florence <i>Camilla Borsini & Patrizia Meringolo</i>	367
--	------------

Legal Psychology

Assessment and psycho-forensic intervention in custody cases: critical considerations and a proposal for a good parenting <i>Luisa Puddu & Rosalba Raffagnino</i>	372
---	------------

Cognitive and Experimental Psychology

Can reward reduce subsequent search misses? <i>Margit Höfler, Ronja Faßbender & Anja Ischebeck</i>	377
--	------------

Mood and emotional states prediction by time series methods <i>Mani Mehraei & Nimet Ilke Akcay</i>	382
--	------------

WORKSHOP PRESENTATIONS

An integrated mindfulness approach to disordered eating <i>Charlotte Thaarup-Owen</i>	389
---	------------

Meaningfulness of life and its impact on quality of life <i>Shulamith Kreitler</i>	392
--	------------

Workshop: cognitive behavioral therapy for obsessive compulsive disorder <i>Omar Rahman & Adam Lewin</i>	395
--	------------

AUTHOR INDEX



ORAL PRESENTATIONS

A LONGITUDINAL INVESTIGATION OF ORGANIZATIONAL RESOURCES, EMOTIONAL DISSONANCE, NEED SATISFACTION AND THWARTING, AND PSYCHOLOGICAL HEALTH

Tiphaine Huyghebaert^{1,2}, Evelyne Fouquereau¹, Philippe Colombat¹,
Fadi-Joseph Lahiani² & Nicolas Gillet¹

¹Département de Psychologie (E.A. 2114), Université François Rabelais de Tours (France)

²AD Conseil, Villemomble (France)

Abstract

Aims. Drawing on self-determination theory, this study explored the role of psychological need satisfaction and thwarting in explaining the influence of organizational resources and emotional dissonance on managers' engagement and lack of psychological detachment.

Procedure and participants

For this study, data was collected at two time points, over a three-month period. Convenience sampling was used and a sample of 435 French managers working in the healthcare setting completed a questionnaire survey. Participants' average age was 48.05 ($SD = 7.72$), 146 of them were women, 284 were men, and 5 did not specify their gender.

Material. Organizational resources were measured using the scale developed by Lequeurre, Gillet, Ragot, and Fouquereau (2013), while emotional dissonance was assessed with the Frankfurt Emotion Work Scale (Zapf, Vogt, Seifert, Mertini, & Isic, 1999). We measured psychological need satisfaction using the scale developed by Gillet, Rosnet, and Vallerand (2008), and we assessed need thwarting with the French version of the Psychological Need Thwarting Scale (Gillet, Fouquereau, Lequeurre, Bigot, & Mokounkolo, 2012). Finally, work engagement was evaluated using the short version of the Utrecht Work Engagement Scale (Schaufeli, Bakker, & Salanova, 2006), and lack of psychological detachment using the Recovery Experience Questionnaire (Sonnetag & Fritz, 2006). All these scales were chosen because they showed good psychometric properties in previous research.

Results. Results from a cross-lagged model (Bollen & Curan, 2004) based on structural equation modeling using AMOS revealed that organizational resources and emotional dissonance predicted both psychological need satisfaction and thwarting three months later. In turn, psychological need satisfaction influenced managers' engagement while controlling for the effects of need thwarting. Similarly, psychological need thwarting predicted managers' lack of psychological detachment while controlling for the effects of need satisfaction.

Discussion. Overall, the results of the present study show the distinct role of psychological need satisfaction and thwarting in explaining workers psychological well and ill-being, respectively. More generally, results emphasize that protecting employee's psychological health consists in offering a work environment that both reduces psychological need thwarting and enhances psychological need satisfaction, in order to reach both lower levels of ill-being and higher levels of well-being at work. Study limitations and implications for research and practice are discussed.

Keywords: *organizational resources, emotional dissonance, psychological needs, work engagement, psychological detachment.*

References

- Gillet, N., Fouquereau, E., Lequeurre, J., Bigot, L., & Mokounkolo, R. (2012c). Validation d'une échelle de frustration des besoins psychologiques au travail (EFBPT). *Psychologie du Travail et des Organisations*, 18, 328-344.
- Gillet, N., Rosnet, E., & Vallerand, R. J. (2008). Développement d'une échelle de satisfaction des besoins fondamentaux en contexte sportif. *Canadian Journal of Behavioural Science*, 40(4), 230-237.
- Lequeurre J., Gillet N., Ragot C., & Fouquereau E. (2013). Validation of a French questionnaire to measure job demands and resources. *International Review of Social Psychology*, 26(4), 93-124.

- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement, 66*(4), 701-716.
- Sonnentag, S., & Fritz, C. (2007). The Recovery Experience Questionnaire: Development and validation of a measure for assessing recuperation and unwinding from work. *Journal of Occupational Health Psychology, 12*(3), 204-221.
- Zapf, D., Vogt, C., Seifert, C., Mertini, H., & Isic, A. (1999). Emotion work as a source of stress: The concept and development of an instrument. *European Journal of Work and Organizational Psychology, 8*(3), 371-400.

ORGANIZATIONAL IDENTITY AND BEHAVIOURAL STRATEGIES OF A TECHNICAL UNIVERSITY GRADUATES IN THE PROCESS OF CHOOSING A COMPANY FOR A JOB PLACEMENT

Liubov Kotlyarova¹, Dmitrii Kobzev² & Ekaterina Sysoeva²

¹ All Russian State Legal University (Russia)

² National Research University (NRNU MEPhI) (Russia)

Abstract

The article presents the results of the empirical research of the peculiarities of the organizational identity among graduate students of the technical university and the indicated correlations between the indices of the organizational identity, motivation to educational and professional activities and behavioural strategies in the process of choosing a company for the job placement.

Keywords: *organizational identity, activity motives, behavioral strategies young engineers.*

1. Introduction

Competitiveness of any industrial area is defined by its technical, economical and organizational conditions for creation, production and distribution of high quality goods, meeting the demands of the given groups of the customers. All the varieties of the competitive factors can be narrowed to two main ones: resource and technological (Antonov et al., 2012; Turovets and others., 2011). To achieve success in the competitive race and keeping the leading positions it is necessary to non-stop increase effectiveness of these factors. But development of the resources and improvement of the technologies without high quality specialists' participation is impossible. That is why the leading experts in the human resources area single out one more factor – company human resources. (Kochan, L. Dyer, 1993; Armstrong, 2012; Maksimtsev, 2015).

Many state industrial plants are interested in the attraction to the activities at their plants of the young specialists. These specialists should be oriented to the lasting professional interaction and plan to unite with the industry their professional formation and development. (Kotlyarova, Zhutikov, 2013). The analysis of the annual reports provided by the country industrial plants, different informational sources on the human resource activities, reports of the companies chiefs' allows us to conclude that the young specialists inflow doesn't meet the demands of the plants. That is why the human resources management deals with the tasks of the human resources, on usage of the effective professional-oriented technologies, on attraction and staff recruitment.

Russian scientists dealing with the psychology of labour have conducted some research, worked out and applied different psychological methods to personnel management and proved their high effectiveness (Maklakov, 2008; Nikiforov G.S., 2010). But the massive certification of the working places started in 2012 and still being conducted presents new requirements to the technologies of staff management including the problems of attracting young specialists to the choice of the priority employer-plant and effective adaptation to the organization, the staff and the working place.

Developing of such technologies requires psychological knowledge on readiness of the modern graduates to professional activities, their personal potential and behavioural strategies in the process of choosing an employment plant for the job placement.

Analysis of the modern works in the given area has allowed us to conclude that the social identity is one of the most essential criteria of the psychological readiness and job involvement (Lipatov, 2015). According to H. Tajfel, J. Turner's theory social identity is an important regulator of person's self-consciousness and social behaviour (Tajfel, Turner, 1985). The social identity is formed by different components and is defined by belonging to different social categories and groups. Special place among them is occupied by different organizations and social institutes where resources, manpower and management are concentrated.

Precisely in the organizations or with their support people grow, study, work, overcome diseases, start all kinds of relationships, develop science and culture. We can say that within the organizational frames human activities are fulfilled and organizational identity is formed (Lipponen, 2001).

Analysis of the available scientific literature on the introduced topic allowed us to conclude that there was no research aimed at the study of the organizational identity. How is it formed and influences the students of the technical university in the process of their education (both while mastering curriculum and having work practice); their behavioural strategies in the process of choosing a company for the first job placement?

Basing on the research proving that organizational identity is one of the most essential criteria of the psychological readiness and job involvement activities, motivational regulator and behaviour have defined the objectives and tasks of the research having been conducted.

2. Research objectives

The aim of the research was to study the organizational identity peculiarities (structure and the degree of intensity) among the graduate students of a technical university and definition of the correlations between the organizational identity and behavioural strategies in the process of choosing a company for the job placement, motivation of the educational and professional activities.

To achieve the set objectives we needed to solve the following tasks.

The first task lied in the definition of the organizational identity (OI) intensity among the graduate students, pointing out of three sub-groups with the different intensity of the given index and definition of the profile structure according to three components (affective, evaluative, cognitive) in every of the group.

The second task was connected with the definition of the peculiarities of the graduates' behavioural strategies when choosing the priority plant for the job placement. The peculiarities were examined in the sub-groups divided according to the OI.

The third task was to define motivational peculiarities of the educational and professional activities in the sub-groups, pointed out according to the OI.

3. Characteristics of the selection and the research procedure

The research was conducted from 2013 to 2014 and 586 full time graduate students of a technical university took part in it. The age ranged from 21 to 23 (male=22, sd=0,83). The selection consisted of 73% males and 27% females. When forming the selection we used the randomized selection. (Nasledov, 2004)

The survey had been conducted a month before the graduation from the university. Respondents who had agreed to take part in the research were invited to the social-psychological service to be interviewed (survey and conversation) and tested. With the respondents who had agreed to communicate with the aim of the of the adaptation process research we conducted extra surveys and testing within the following year. This has allowed us to define the period of time within which young specialists find job placements and also satisfaction with the choice of the employing plant.

4. Research methods

To define the level and structure of the organizational identity we have used the authorial inventory based on the F. Mael and B. Ashfort's methods (Mael, Ashfort, 1992). When devising the inventory we adhered to the idea that organizational identity is an integral characteristic including cognitive, affective, evaluative components. The text of the inventory comprises the list of 30 statement (10 statements on each component of the OI) dealing with the estimation by the students of their identity with the organization chosen for the job placement. The respondents were suggested to estimate the degree of the agreement with the statements on the 3 scale mark (high – 2 points, medium – 1 point, low – 0 points). Then the points were summarized and the degree of the organizational identity with the company was defined (OI factor). The summarized estimation on the OI scale could be found in the range from 0 to 60 points. The range of the OI summative scale on every of the three components is from 0 to 20 points.

To define the behavioural strategies in the process of searching of the first job placement we have applied two methods. The first authorial method (consisting of the inventory and the interview) allowing to point out 3 strategies: the first – the exact plan on finding a job and active, direct interaction with the possible employer; the second – search of a recruiting company; the third - absence of the exact

plan to find the employer, search of the company via mass media and acquaintances. In the course of the interview every respondent was suggested to answer the questions dealing with his/her plans on job placement. To be more exact: if there was work experience and in what sphere; whether there was a chosen company (plant); if there was a work practice at the preferred plant; if there was thorough understanding of the plant activities; whether there was interaction with the HR service or if a preliminary testing was conducted, if a graduate became a part of the skill pool of the young specialists of the plant; if there were some extra options of the job placement; within what period it was intended to find a job and similar questions.

The second method – Rostovsky's inventory (Rostovsky, 2010) allowing to point out 10 behavioural strategies: domination, submission, compromise, leaving, rejection, conflict, forming of the barriers, economy of the personal resources, accumulation of the personal potential, approaching, over-compensation, comparison, aggression, addressing for help, anxiety, self-destruction, search for the substituting aim, rationalization, complication, simplification. Having conducted the survey in every sub-group we have defined the structure of the behavioural strategies.

To define the motivation of the educational and future professional activities we have used:

- N.V. Bordovskaya and E.P. Ilyin's inventory "Estimation of the Motives for the Professional Activities" (Ilyin E.P., 2008), this allows defining motives: self-affirmation in work; labour social importance; professional mastery; personal labour.

- inventory by A.A. Rean, V.A. Yakunin "16 Motives of the Educational Activities" (Ilyin, 2008); with the help of which we have pointed out the following motives: to get a diploma, to successfully continue education in the following years; to successfully study, to pass exams well or excellently; to always receive stipend; to acquire deep knowledge; to always be ready to the coming studies; not to neglect study of the curriculum subjects; to keep up with fellow students' learning pace; to provide successful future professional activities; to fulfill pedagogical requirements; to have teachers' respect; to be an example for the fellow students; to be respected by parents and friends; to avoid punishment for bad study; to receive intellectual satisfaction; to become a highly qualified specialist. The degree of each motive is estimated at a 10-points scale. Having conducted the research we created the educational motives profile.

- inventories by T. Aylers – "Motivation for Reaching Success" and "Motivation for Avoiding Failure", "Methods of Diagnosing Personality and Motivation for Success" and "Methods of Diagnosing Personality and Motivation for Avoiding Failures" (Encyclopedia of the Psychodiagnosis, 2010).

The combination of the used methods allowed singling out 4 types of the professional motivation, variety of 16 motivation types of the educational activities, intensity of the motivation to reaching of success and motivation to avoiding failure in the professional and educational activities. Basing on the tests we have created motivational profiles for every sub-group pointed out according to the factor indicating the degree of the organizational identity (OI) intensity.

5. Results

Let us see the results received according to the survey on the method "Organizational identity". The range of the index of the organizational identity (OI) varied from 7 to 55 points, distribution according to the index was normal. Basing on the results of the survey the selection is divided into three groups in accordance with the indices on the "organizational identity" factor.

The first group with high indices (over 40 points, expected value – 47+-6.8, conventional name – group "A"), the second one with medium indices (20 to 39 points, expected value – 28+-7.8, conventional name group "B") and the third one with low indices (up to 19 points, expected value – 13 +-5.7, conventional name group "C"). Then we calculated the distribution (in the percentage) of the groups in the selection. 36% respondents of the selection have the high level of the organizational identity (group "A"); 40% with the medium indices OI (group "B"), with the low ones OI (group "C") – 24% of the respondents.

Let us remind you that the components of the organizational identity are –cognitive, affective and evaluative. Then with every group (A, B, C) we defined the structures of the organizational identity. The precise description of the structures will be presented in a different work (due to a great amount of the provided material), that is why here we will only present the tendencies. So in the structure of the organizational identity (OI) the leading were in the "A" group – cognitive component; in "B" group – evaluative component, in "C" group – affective component.

The calculation of the time periods within which the young specialists found their job placements (the amount of days between the graduation and the first working day) are the following: group "A" – 31+-4.8 days, group "B" – 38+-6.6, group "C" – 56 +-20.2. Statistically significant differences according to this index were pointed out between the groups "A" and "C".

The evaluation of the satisfaction degree with the choice of the employer was conducted by means of an interview with the young specialists three months after the graduation. With the groups “A” and “B” the indices were high and statistically insignificant. The ones in the “C” group were low, and statistically are very different from the similar ones in the group “A”.

Let us move on to the examination of the motivational factors and behavioural strategies. In the group “A” (with the high OI indices) we have pointed out the following peculiarities. In the structure of the educational motives (the profile is based on ranking) most vivid are: to acquire deep knowledge, desire to become a highly qualified specialist, to have intellectual satisfaction with work. Low rankings coincided with the following motives: to avoid condemnation and punishment for bad studies, to always receive stipend, to be always ready for more classes.

In the motives profile of the professional activities also based on ranking, we have detected the following distribution of the motives: professional mastery, social importance of labour, self-affirmation in labour, personal labour.

Analysis of the survey results according to T. Aylers’ methods allows to conclude that the respondents from the group “A” expressed motivation to reaching success is combined with reasonably expressed motivation for avoiding failures.

While analyzing behavioural strategies we have found out that with the “A” group respondents the following strategies prevailed: active interaction with the employer, self-presentation, rationalization, accumulation of the personal potential.

Summarizing the results of the “A” group we should note the following tendencies. Students’ behaviour with high levels of organizational identity in the process of choosing an employer is defined by high organization and activeness of interaction with the future employer, desire to present their competences, aspiration to finding a job placement and start professional activities. Educational and professional motivations are aimed at professional-personal development and great success at work, acquisition of intellectual satisfaction with work. For these respondents it is important that their professional activities are socially important. The respondents of the group “A” have mentioned high satisfaction with their job placements.

Motivational profile of the “B” group (with medium OI indices) has demonstrated the following peculiarities. In the structure of the educational motives the most prominent are: to be an example for the fellow students, to pass exams well, to provide success in the future professional activities. The lowest ranks in the profile were the motives: to fulfill pedagogical requirements, to always be ready for the classes, to avoid condemnation and punishment for bad studies.

In the motives profile of the professional activities also based on ranking, we have detected the following distribution of the motives: professional mastery, self-affirmation in labour, social importance of labour, personal labour.

Analysis of the survey according to T. Aylers allows concluding that the “B” group respondents expressed motivation to reaching success is combined with a weak motivation to avoiding failures. Such a combination may lead to development of inclination to risky behaviour.

While summarizing the results of the behavioural strategies we have found out that with the “B” group respondents the following strategies prevailed: searching of the employer company with the help of the specialized centres (recruiting agencies, HR companies), domination, over-compensation, rationalization.

To sum up the group “B” results we can notice the following tendencies. The graduates’ behaviour while searching for an employer was organized and active, with some inclination to risk, aspiration for a fast job placement and starting professional activities. Educational and professional motivation are aimed at professional-personal development and providing conditions for their fast promotion. The respondents of the given group have mentioned high satisfaction with the employer’s choice.

The motivational profile in the “C” group (with low OI indices) was characterized by the following peculiarities. In the structure of the educational motives the most prominent were: avoiding of condemnation and punishment for bad studies, to receive stipend, not to lag behind the fellow students. The least prominent were – to acquire respect from parents and friends, to become a highly qualified specialist, to have intellectual satisfaction from activities. The structure of the professional motives: personal labour, self-affirmation in labour, labour social importance, professional mastery.

The results according to T. Aylers’ methods show us that the students from the given group have expressed motivation for avoiding failures and the motivation for reaching success is quite low.

The leading behavioural strategies in the “C” group: preferences of the mediate interaction with the employer (job search via mass media, acquaintances), complication, forming of the barriers, rejection of help from the reference group.

Summarizing the “C” group results we can notice the following. Low organizational identity is combined with low activity on the part of the job placement. Moreover among the students with the low OI indices we have found ineffective behavioural strategies – lack of plan on job placement, looking for vacancies via mass media, avoiding solving the problems, inclination to the complication of the situation, aspiration to avoid failures, experiencing fear of punishment. It is obvious that this group should be seen as a risk group that needs psychological consulting when choosing an employer and in the process of the job placement.

6. Summary and conclusions

The result of the research shows that a graduate’s behaviour in the process of choosing a job placement depends on the formation (degree of intensity) of organizational identity. Different intensity of the organizational identity correlates with different behavioural strategies in the process of choosing an employer. The most prepared for the job placement are the graduates with the expressed organizational identity, and the most ill prepared are the students with the weak organizational identity.

The pointed out patterns within the period of the research have allowed to create recommendations for the educational section of the university and the Centre on the Career Development of the NRNU “MEPhI” on creating organizational conditions promoting development of organizational identity among the students.

References

- Allen, N., Meyer, J.P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*. Vol. 63 (1), 1-18.
- Antonov G.D., Ivanova O.P., Tumin V.M. (2012). Management of the Organization Competitiveness. M.:INFRA-M.
- Armstrong M. (2010) Human Resources Management Practice. SPb, Piter.
- Ilyin, E.P. (2008). Motivation and Motives. – SPb.: Piter
- Kochan , T.A., Dyer, L. (1993). Managing transformational change: the role of human resource professionals. *International Journal of Human Resource Management*. 4(3), 509-590.
- Kotlyarova L.N., Zhutikov M.D. (2013). Innovational Approaches to Personnel Policy of the High-Technology Productions: Peculiarities of the Interaction with the Educational Establishments. *Social Economic and Psychological Problems and Psychological Problems of Management*. Moscow, 23-25 April 2013., 267-273
- Lipponen, J. (2001). Organizational identifications: Antecedents and consequences of identifications in a shipyard context. Helsinki.
- Lipatov S.A. (2012). The Problems of Person’s and Organization Interaction: Concepts and Directions of the Investigations. *Moscow University Bulletin. Series 14. Psychology*, 1, 85-96.
- Maklakov, A.G. (2008). Professional Psychological Selection of Personnel. Theory and Practice. SPb.:Piter
- Maksimtsev I.A. (2015) Human Resource Management. M.: Publishing House Yurait.
- Nasledov, A.D. Mathematic Methods of the Psychological Research. Analysis and Interpretation of Data. SPb.: Rech, 2004.
- Nikiforov, G.S. (2010). Psychological Provision of the Professional Activity. SPb.: Rech.
- Rostovsky, V.P., Kotlyarova, L.N. Pedagogics and Psychology. Ufa, 2010.
- Raijgorodsky, D.Y. (2010). Psychodiagnosis Encyclopedia. Personnel Psychodiagnosis. Samara: Publishing House “Barach-M”, 449-451.
- Tajfel H., Turner J.C. (1985). The Social Identity Theory of Intergroup Behavior // S.Worchel, W.G. Austin (eds). *Psychology of Intergroup Relations*. 2nd ed. Chicago: Nelson-Hall. P.7-24.
- Truss, C., Delbridge, R., Alfes, K. Shantz, A. and Soane, E. (2014). Introduction. In C. Truss, R. Delbridge, K. Aifers, A. Shantz, and E. Soan (eds.). *Employee engagement in theory and practice* (1-11). N.Y.: Routledge.
- Turovets O.G., Buchalkov M.I. and others (2011). Organization of the Production and the Plant Management. . M.:INFRA-M.

LEADER'S CREATIVITY AND INNOVATION: STATE OF THE ART

Elisabete Ramos & Catarina Brandão

Faculdade de Psicologia e Ciências da Educação, Universidade do Porto (Portugal)

Abstract

This work focuses the creativity and innovation of leaders and tries to shed some light regarding what literature presents on this subject. Creative and innovative organizations need creative leaders (Mumford, Scott, Gaddis, & Strange, 2002). However, while several studies have investigated the direct and indirect links between leadership factors and employee creativity (Mathisen, Einarsen, & Mykletun, 2012), few studies have examined the leader's creativity and its importance for promoting employee creativity. Furthermore, the literature is not clear about different aspects such as the definition of creativity and the distinction between creativity and innovation. Thus, two different points should be analyzed: how does the scientific community think and study creativity and innovation?; and how is the creative and innovation processes in the leader?

Although there's no universal definition of creativity, two aspects seem to be unanimous in the literature: creativity is about the creation of an original and useful product (Mayer, 1990). The literature presents a set of different schools of thought, each one with a specific way for understanding creativity. In a more recent point of view, creativity depends on the interaction of several factors as intellectual abilities, knowledge, styles of thought, personality, motivation and the context (Sternberg & Lubart, 1999). In an organizational perspective, it's important to study creativity and innovation together. However, the distinction between both it's not clear. Some authors look at them as different steps of a same process (e.g., Amabile, 1996), whereas for others creativity is included in the innovation process (e.g., Holman et al., 2012; Patterson, 2002). Based on the models of creative or innovation processes presented by Amabile (1997), Patterson (2002) and Holman et al. (2012), it's possible to consider that the innovation process comprises four sequential moments: problem identification; idea generation; promotion of selected idea; and idea implementation. Moreover, according to Sternberg (2007), there is a set of attitudes and competences that can facilitate the leader's creativity. However, there's few specific information about what factors can enhance or restrict this organizational actor's creativity and innovation. It is important to understand what is known regarding leaders' creative and innovation process, since its importance to the success of organizations and the well-being of its members.

Keywords: *creativity, innovation process, organizational leader.*

1. Introduction

The purpose of this study is to analyze the leader's creativity and innovation in an organizational context. Nowadays, there is a lot of competitiveness in the business market and for an organization can survive needs to have something different. If we look for the most successful Portuguese's organizations, we will find the concept of innovation in their missions or main values. Thus, innovation has been considered as a key word for the success of an organization and the well-being of its members. The literature has paid attention on this aspect and there are important results about how to improve the creativity and innovation in organizational context (e.g., Jong & Hartog, 2007; Fillis & Rentschler, 2010; Baron & Tang, 2011; Rodrigues & Veloso, 2013). However, the way how leaders think and use creativity and innovation in their work remains unknown and a subject to be researched.

The central question of this paper is: what is known regarding the leader's creative and innovation process? Furthermore, to answer this question it's important to see if there is a universal way of understanding creativity and innovation. And what is the relation between both constructs? Should we consider they are different processes or only one? In a second moment, we should also try to understand aspects such as: is creativity and innovation important in the leaders or is it enough that they have a creative and innovative team? And which are the different steps in the leader's creative and innovation processes? Which factors can enhance or restrict this organizational actor's creativity and innovation? In

this paper we will focus these questions and present some propositions that resume what the literature tells us regarding these aspects. We will also discuss the importance of considering specifically the leader's creative and innovation process. We will conclude with the research question that we will focus on the next phase of our research.

2. Creativity and innovation: the innovation process?

There isn't a universal definition of creativity; nevertheless the existing definitions in the literature present overlapping and unanimous aspects about what is creativity. For example, in Sternberg's "Handbook of Creativity" (1999), the majority of authors considered creativity as the creation of an original and useful product (Mayer, 1999). In 2005, Fillis and Rentschler presented six aspects of creativity: "person", understanding the creativity as an ability, trait or role; "place", focusing on organizational conditions that promote or restrict creativity; "product", considering the creativity outcomes; "process", understanding creativity as a cognitive activity; "practice", considering the creative ways of doing things; and "property", focusing creativity as a characteristic of a place.

According to Reiter-Palmon (2011), the study of creativity at the work place underlines two specific characteristics: the need of making a distinction between creativity and innovation; and the importance of the context, specially the role of the leader, coworkers and the organizational climate on the promotion or inhibition of creativity. There isn't consensus regarding the differences and interrelationships between creativity and innovation. For Amabile (1996), creativity is the production of new and useful ideas, and innovation is the successful implementation of the creative ideas in an organization. Hammond, Farr, Schwall, and Zhao (2011), on their part, consider that innovation at the work place is a process that includes the idea generation and implementation. For Holman et al. (2012), however, there's a difference between the idea generation in creativity and the idea generation in innovation. Specifically, they consider that creativity means the generation of original ideas and that in innovation the generated ideas may be original or not, because they only need to be new in one specific context. Thus, innovation may involve creativity and it always requires the implementation of an idea. On the other hand, creativity refers to the generation of originals, useful and new ideas. So, we see that literature on innovation at work has a broader perspective and considers innovation as a process that begins with useful ideas (Holman et al., 2012). In this sense, we can consider creativity as a part of the innovation process at work (Xerria & Bruneetoa, 2013). Hence our first proposition:

P1: The innovation process at work includes creativity in the first moments of the process and includes an idea implementation.

The literature presents different models of creative or innovation processes and the combination of creativity and innovation in one process seems to be implicit in some of them. Amabile (1997) identified the four different moments of the creative process: problem identification; preparation; response generation; and validation and communication. The innovation process, according to Patterson (2002), is also composed of four different moments: problem identification defined by one individual, group or organization; creative thinking and idea generation; contextual application and assessment of the idea; and idea implementation. At the same time, Holman et al. (2012) present a model of employee innovation with three different moments: idea generation; idea promotion; and idea implementation.

Broadly speaking, the creative or innovation process comprises three or four different moments and it starts because there is the identification of a problem. Furthermore, there is an idea generation or a creative moment, since useful and new ideas are created. Then one idea is selected and promoted (which represents the socio-political dimension of the process) and this determines if the final moment happens or not – the idea implementation phase. Following these ideas we present our second proposition:

P2: The innovation process at work includes four sequential moments: problem identification; idea generation; promotion of selected idea; and idea implementation.

3. The innovative leader

In this paper we are specifically interested in the role of the leader not only as a creativity promoter in his team, but also as an important creative and innovative organizational actor. To do so we consider leadership as a process whereby someone can influence others to internalize and to behave for a collective goal or vision (Hogg, 2010).

Leaders promote employees' innovative behavior both through their deliberate actions aiming to stimulate the idea generation and implementation as well as by their more general and daily behavior (Jong & Hartog, 2007). Acting as a model for creativity is expected to increase the possibility that followers would practice idea generation themselves (Jong & Hartog, 2007). According to Mathisen et al. (2012), when a leader himself shows creativity, he will inspire his followers and consequently creativity

will be promoted. Also Mumford et al. (2002) defended that leaders themselves need to be creative in order to promote creativity in their organizations and Sohmen (2015) explains that creative leaders develop creative organizational cultures. The leader can be considered a role model in order the followers imitate him (Shalley & Perry-Smith, 2001), thus it's important to have creative and innovative leaders in order to have creative and innovative employees. Thus, we present a third proposition:

P3: Creative leaders promote innovation in organizations.

Sternberg (2007) presents a set of different elements of a leader's creative attitude: problem redefinition; problem and idea analysis; selling their solutions; recognizing how knowledge can both help and hinder creative thinking; willingness to take sensible risks; willingness to surmount obstacles; belief in one's ability to accomplish the task at hand; willingness to tolerate ambiguity; willingness to find extrinsic rewards for the things one is intrinsically motivated to do; continuing to grow intellectually rather than to stagnate. Sternberg (2007) also identifies three important skills in the leader: selective encoding; selective comparison; selective combination.

There is scarce literature regarding which factors influence the creativity and innovation specifically in leaders. On the other hand, it's possible to find diverse results regarding the factors behind creativity and innovation in individuals in general. When we consider these results, we can identify factors that predict the both constructs – creativity and innovation (regardless creativity integrating innovation in the workplace), such as knowledge and domain skills, abilities and cognitive style and intrinsic motivation (e.g., Amabile, 1996; Patterson, 2002).

At the same time, an analysis of the different results in literature allows us to categorize them in two general types of characteristics: personal and contextual. Personal characteristics are, for example, domain and creative skills, task motivation and personality traits (Amabile, 1996). Some examples of contextual characteristics could be the complexity of work (Shalley, Zhou, & Oldham, 2004), flexible work conditions (Fillis & Rentschler, 2010), dynamic environments (Baron & Tang, 2011) and trust in interpersonal relationships (Rodrigues & Veloso, 2013). From here emerges our fourth proposition:

P4: The factors that promote or restrict creativity and innovation are organized in two general types: personal characteristics and contextual characteristics.

Leaders in their work need to take some risks and consequently they need to deal with uncertainty and ambiguity (e.g., Sternberg, 2007; Wilson, 2012). At the same time, there's a relation between the perception of risk at the work place and the investment in new ideas. As Rodrigues and Veloso stress «employees perceive less risk in relation to their hierarchical superior, which contributes to their risking more new ideas» (Rodrigues & Veloso, 2013, p. 554). According to Ainsworth and Bell (1970), a new situation can trigger fear and avoidance or approximation and exploration. This means that when facing uncertainty and ambiguity, we can adopt an exploratory or defensive mode. Those who have internal models of self as competent and able to cause a good reaction on others, will tend to exhibit an exploratory mode and explore the opportunities at the organizational context (Fonseca, Soares, & Martins, 2006). However, when faced with instability and uncertainty, our instinct is to repair it with order (Wilson, 2012). So, according to Heard, Lake, and McCluskey (2009), we can look at this as the activation of our fear system (LeDoux, 2000), which is a behavior system that identifies the danger and produces reactions for ensuring our survival. Considering the specificity of being a leader, it's reasonable to expect that the leader will often face uncertainty and instability and that this will activate his fear system and that he will have to regulate it in order to enter an exploratory mode and be creative and promote innovation (for himself and within teams and the organization).

We couldn't find any literature regarding the influence of the fear system on creativity and innovation. However, considering the constraints that organizations face nowadays (Ortega-Egea, Moreno, & Domínguez, 2014) and the demands and responsibilities assigned to leaders it seems that this is something we should pay special attention. It's possible that the innovation process is more difficult for the leader when his fear system is active. Hence, following these ideas we present our final proposition:

P5: The leader's innovation process is more difficult when his fear system is active.

4. Conclusion

Although there's no universal definition of creativity, it seems somewhat consensual that it refers to the creation of an original and useful product or idea. The distinction between creativity and innovation is sometimes ambiguous, but it can be proposed that innovation involves creativity and requires the idea implementation. On the other hand, creativity refers to the generation of originals, useful and new ideas in a specific context. Hence, we can present a process of creativity and innovation and call it "innovation process", which includes creativity in the first moments and requires an idea implementation.

It's possible to say that when a leader acts as a model of creativity and innovation, he will promote the creativity and innovation in his followers and consequently in the organization. Thus, it's important to have creative and innovative leaders for having creative and innovation employees. So, we return to the central question underneath this paper: how is the leader creative and innovation process? And how does he regulate his fear system's activation when facing uncertainty and the present organizational different constraints?

We propose that the creativity and innovation process in the leader includes four sequential phases: problem identification; idea generation; promotion of selected idea; and idea implementation. At the same time, some factors can predict his creativity and innovation, such as knowledge and domain skills, abilities and cognitive style and intrinsic motivation, a set of personal and contextual characteristics. Building in all that we have presented here our next step will be to develop a study to explore the leader's creativity and innovation process when facing his fear system's activation, trying to find data regarding our propositions. The understanding of this process is fundamental to gain a deeper knowledge of what means being a leader and how we can enhance the leader's competency to regulate his own fear system and enter an exploratory mode, that will promote his and the organization innovation capacity.

References

- Ainsworth, M., & Bell, S. (1970). Attachment, Exploration and Separation: Illustrate by the Behaviour of one-year-olds in a Strange Situation. *Child Development, 41*, 49-67.
- Amabile, T. M. (1996). A Theoretical Framework. In T. M. Amabile (Eds.), *Creativity in Context* (pp. 81-127). Oxford: Westview Press.
- Amabile, T. (1997). Entrepreneurial creativity through motivational synergy. *Journal of Creative Behavior, 31(1)*, 18-26.
- Baron, R. A., & Tang, J. (2011). The role of entrepreneurs in firm-level innovation: Joint effects of positive affect, creativity, and environmental dynamism. *Journal of Business Venturing, 26*, 49-60.
- Fillis, I., & Rentschler, R. (2005). Using creativity to achieve an entrepreneurial future for arts marketing. *International Journal of Nonprofit and Voluntary Sector Marketing, 10*, 275-287. doi: 10.1002/nvsm.26
- Fillis, I., & Rentschler, R. (2010). The Role of Creativity in Entrepreneurship. *Journal of Enterprising Culture, 18(1)*, 49-81. doi: 10.1142/S0218495810000501
- Fonseca, M., Soares, I., & Martins, C. (2006). Estilos de Vinculação, orientação para o trabalho e relações profissionais. *PSICOLOGIA, XX, 1*, 187-208.
- Hammond, M. M., Neff, N. L., Farr, J. L., Schwall, A. R., & Zhao, X. (2011). Predictors of individual-level innovation at work: A meta-analysis. *Psychology of Aesthetics, Creativity, and the Arts, 5*, 90-105. doi: 10.1037/a0018556
- Heard D., Lake, B., & McCluskey U. (2009). *Attachment Therapy with Adolescents and Adults: Theory and Practice Post Bowlby*. Londres: Karnac Books Ltd.
- Hogg, M. A. (2010). Leadership. In J. M. Levine & M. A. Hogg (Eds) *Encyclopedia of group processes and intergroup relations* (pp.55-57). Thousand Oaks, Ca: Sage.
- Holman, D., Totterdell, P., Axtell, C., Stride, C., Port, R., Svensson, R., & Zibarras, L. (2012). Job Design and the Employee Innovation Process: The Mediating Role of Learning Strategies. *Journal of Business and Psychology, 27*, 177-191. doi:10.1007/s10869-011-9242-5
- Jong, J. P. J., & Hartog, D. N. D. (2007). How leaders influence employees' innovative behavior. *European Journal of Innovation Management, 10(1)*, 41-64. doi: 10.1108/14601060710720546
- LeDoux, J. (2000). *O Cérebro Emocional: As Misteriosas Estruturas da Vida Emocional*. Portugal: Editora Pergaminho.
- Mathisen, G. E., Einarsen, S., & Mykletum, R. (2012). Creative leaders promote creative organizations. *International Journal of Manpower, 33(4)*, 367-382. doi: 10.1108/01437721211243741
- Mayer, R. E. (1999). Fifty Years of Creativity Research. In R. J. Sternberg (Eds.), *Handbook of Creativity* (pp. 449-460). Cambridge, UK: Cambridge University Press.
- Mumford, M. D., Scott, G. M., Gaddis, B., & Strange, J. M. (2002). Leading creative people: Orchestrating expertise and relationships. *The Leadership Quarterly, 13(6)*, 705-750.
- Ortega-Egea, M. T., Moreno, A. R., & Domínguez, M. C. H. (2014). Determinants of innovative behavior of employees: evidence from Spanish firms. *Employee Relations, 36(6)*, 606 - 621. doi:10.1108/ER-07-2013-0081
- Patterson, F. (2002). Great minds don't think alike? Person level predictors of innovation at work. *International Review of Industrial and Organizational Psychology, 17*, 115-144.

- Reiter-Palmon, R. (2011). Introduction to Special Issue: The Psychology of Creativity and Innovation in the Workplace. *Psychology of Aesthetics, Creativity, and the Arts*, 5(1), 1-2. doi: 10.1037/a0018586
- Rodrigues, A. F. C., & Veloso, A. L. O. M. (2013). Organizational Trust, Risk and Creativity. *Review of Business Management*, 15(49), 545-561. doi: 10.7819/rbgn.v15i49.1334
- Shalley, C.E., & Perry-Smith, J.E. (2001). Effects of Social-Psychological Factors on Creative Performance: The Role of Informational and Controlling Expected Evaluation and Modeling Experience. *Organizational Behavior and Human Decision Processes*, 84(1), 1-22.
- Shalley, C., Zhou, J., & Oldham, G. (2004). The effects of personal and contextual characteristics on creativity: Where should we go from here? *Journal of Management*, 30(6), 933-958.
- Sohmen, V. S. (2015). Reflections on Creative Leadership. *International Journal of Global Business*, 8(1), 1-14.
- Sternberg, R. J. (2007). A Systems Model of Leadership. *American Psychologist*, 62(1), 34-42. doi: 10.1037/0003-066X.62.1.34
- Sternberg R. J., & T. I. Lubart (1999). The Concept of Creativity: Prospects and paradigms. In R. J. Sternberg (Eds.), *Handbook of Creativity* (pp. 3-15). Cambridge, UK: Cambridge University Press.
- Wilson, S. (2012). Why the health service needs creative leaders. *British Journal of Healthcare Management*, 18(9), 480-481.
- Xerria, M. J., & Brunetto, Y. (2013). Fostering innovative behaviour: the importance of employee commitment and organisational citizenship behaviour. *The International Journal of Human Resource Management*, 24(16), 3163-3177.

PSYCHOLOGISTS AS FUTURISTS: APPLYING 'FUTURES TECHNIQUES' TO CREATE CONVINCING NARRATIVES FOR THE FUTURE OF MAJOR PROJECTS

Dr. David R Stevens

Director, All About Change Pty Ltd (Australia)

Abstract

Dr. David Stevens is generally regarded as one of the world's leading collaborative decision making workshop facilitators (www.profstevens.com). He has been cited in Barons and Marquis International Who's Who on numerous occasions for his work in group problem solving and participatory decision making, as well as the IBC Cambridge's 2000 outstanding scientists of the 20th Century. He is listed in the Asia Top 500 Leaders for the year 2000. At the Inpact 2015 conference in Slovenia he successfully delivered a paper on 'Collaborative Decision Making on Complex, Major Projects: Some Facilitation Techniques'.

The framework and theoretical basis for his workshop facilitation techniques are derived from his specialisation as a registered Organisational Psychologist within the Australian Psychological Society. He was an Adjunct Professor at the College of Engineering at the University of Western Sydney for 11 years. However he considers himself to be a 'pracademic' with significant academic qualifications blended with decades of practitioner psychologist experience carried out on a global basis. He has worked on major projects worldwide, having carried out over 1000 workshops in a multitude of industries including hospitals, airports, railways, highways, retail and commercial buildings.

In his oral presentation he explores further facilitation techniques and processes; this time in the context of "futures" techniques.

Dr Stevens has facilitated scenario planning workshops on catastrophic power outages in Melbourne and Brisbane (Australia). He has also carried out a considerable number of other scenario planning exercises on various Mass Transit Railway Corporation projects in Hong Kong.

In the first instance Dr Stevens discusses the ways in which scenario planning exercises have been traditionally approached. Initially a particular topic, theme or industry was selected. Usually a time horizon is set (for example twenty years into the future). The more orthodox approach would then be to have four scenario planning exercises which follow a particular methodology. Normally the workshop would be broken into four groups where there would be a 'business as usual' straight line extrapolation of what is happening now, for twenty years. Then there would be a 'worst case' (pessimistic) scenario over the same period of time. Then another group would be focussing on a 'best case' (optimistic) scenario; and finally a 'wildcard' scenario would be introduced.

The 'wildcard' scenario could be anything; but would be particular to an industry. For example if considering an energy related project, it might be "bringing fusion power to reality in fifteen years" as the wildcard.

Stevens will be describing a 'futures ready' hybrid. This takes the outcomes of all four scenarios which would normally be constructed as a timeline of specific dates, populated with specific events. But he borrows from risk assessment methodology and indicates what the probability of these events would be and what would be the impact of those events, on a qualitative basis.

There would then be a combining of all four scenarios, based on the events, whether they are wildcard, pessimistic, optimistic or business as usual scenarios. If they have a high probability of occurrence or even a medium probability of occurrence with high impact they would be included in the amalgamation of all four scenarios.

From this then a single 'fused' narrative for the future can be created, rather than four competing narratives (which is the norm).

The reason for doing this is that the future is never always, optimistic or pessimistic or a straight line extrapolation (and perhaps wildcards still do occur!). But even when wildcard events occur, they are surrounded by some optimistic and some pessimistic and some straight line extrapolation events.

The techniques used to build the various scenarios are quite simple to accommodate. Stevens will briefly explain an eclectic approach which uses future webs/wheels, backcasting, the impact matrix, imaging, and so on. Futures workshop attendees are trained in situ to have a new, simple skills base in their manipulation (or exploitation) of the future of their major project to all stake holders' benefits.

Some futures ready hybrid examples will be presented at the oral presentation.

Keywords: *scenario planning, futures ready hybrid, eclectic approach.*

THE EXERCISE OF LEADERSHIP IN THE FEMININE: THE STATE OF THE ART

Ana Dória & Catarina Brandão

Faculty of Psychology and Education Sciences, University of Porto (Portugal)

Abstract

The presence of women in today's workforce, particularly in leadership positions, renders fundamental to deepen our knowledge regarding the exercise of women in organizations. This paper focuses on the exercise of women in positions of leadership, reflecting and discussing about different approaches found in the literature, identifying the main conceptual and methodological options underlying these studies, as well as limitations and dimensions that must be considered in order to deepen our knowledge regarding this subject. Literature on female leadership accompanies the growth in the number of women in positions of leadership with a myriad of studies that seek to reflect on the flagrant inequalities of gender. However, literature is still scarce in terms of the experience of female leadership and the challenges inherent to the path for and practice of female leaders. In order to understand the way literature has been addressing this subject we will explore two major metaphors regarding female leadership in organizations: the labyrinth metaphor, and the dyad agents of change /cogs in the machine – the first, referring to the sinuous and complex path women have to take in order to find themselves in stable positions of leadership; the latter, to the assumption that female leaders may either help their female subordinates careers or hinder them. We will also focus the methods that authors have been using to research the phenomenon of female leadership. Future studies should consider specific organizational process to understand how these are experienced by women. They also ought to try to be more comprehensive and adopt mixed method designs, which may represent an optimal compromise, allowing, in one hand, to advance with the systematization of results and, in the other, the comprehension, in depth, of the reality of female leaders.

Keywords: female leadership, gender, challenges, mixed methodology.

1. Introduction

In the 21st century we would expect that men and women shared an equal statue in western society, especially when it comes to representation and power within the workforce. However, nowadays, women are still frequently employed in lower levels services and clerical occupations, of small evolutionary potential (Valentine, 2001). Moreover, women also face gender discrimination, sexual harassment and are also confronted with slower career advancement as well as lower wages (Maume, 2011), comparing to their male counterparts. Consequently, these circumstances corrode the authority and position of women in many organizations, which, in turn, leads them to set lower expectations and to think less of themselves (Downes, Hemmasi & Eshghi; Valentine, 2001). This scenery becomes especially salient if we consider that, although women constitute a considerable portion of the workforce of the western hemisphere, they are under-represented in leadership positions (Nogueira, 2006). The presence of women in work sectors still seems to be frugal, particularly in those prominently masculine, such as positions of authority which require decision making skills and that are associated with more conventional styles of leadership (Macedo & Koning, 2009). Even when women are better prepared than men, and even though the male leadership style is starting to be considered less appealing, for not fitting the needs of modern organizations (especially in terms of the significance given to relationships between leaders and subordinates), women still struggle to ascend to high-level jobs (Gomes & Moller, 2010; Nogueira, 2006).

In this paper we will focus the literature regarding the female presence in the workplace, specifically when occupying leadership positions. We start by presenting the main approaches to this subject. We next focus on the main methodological approaches to female leadership and propose a way to study how women experience important organizational process, particularly, performance management and appraisal, an extremely masculinized process.

2. A Portrait of female leaders

The face of the female leader has changed throughout times, accompanying the need for richer and more integrated approaches, that exploit in depth the status of women in leadership positions, with

the aim of creating a more matured and complete depiction of leadership in the feminine (e.g., Eagly & Carli, 2003; Vinkenburgh, van Engen, Eagly, & Johannesen-Schmidt, 2011).

The way leadership is addressed has shifted from a mere cataloguing into task-oriented or interpersonally oriented, in which female leaders are perceived as more concerned with maintaining interpersonal relationships by tending to others' morale and wellbeing, to a more detailed and comprehensive exploration of how women act as leaders and of how they influence their subordinates (Eagly, Johannesen-Schmidt, & van Egen, 2003). In this sense, studies show that women are viewed as somewhat more transformational leaders (e.g. van der Kam, Janssen, van der Vegt, & Stoker, 2014; Trinidad & Normore, 2004), that manifest themselves as inspirational role models, that foster good human relationships, developing their subordinates' skills and motivating them to go beyond the line of job descriptions (Cundiff & Stockdale, 2013). This type of leadership is defined as «the process of influencing major changes in the attitudes, beliefs, and values of subordinates to a point where the goals of an organization and the vision of the leader are internalized and subordinates achieve performances beyond expectations» (Gomes, 2013, p.42-43). In sum, a transformational leader collaborates with employees to identify the needed change, creating a vision to guide the change through inspiration (Gomes, 2013). Hence, the characteristics intrinsic to this style allude to the interpersonal style of communication expressed by women, in which the maintenance of interactions and control over the situations plays an important role, and might explain why they appear to be and are viewed, as studies show, as possessing more transformational qualities (Merchant, 2012).

Nevertheless, this does not mean that women only exhibit leadership styles associated with feminine characteristics, and one must consider that leadership does not grow, only, at the heart of interpersonal relations; it develops in a social context, highly integrated, that influences and shapes it, where these relations, in turn, are materialized as organic systems, and influenced by multiple dynamics (Goethals, Sorenson, & Burns, 2004). In view of that, female leaders express themselves in multiple settings and are extremely influenced by situational factors (Moller & Gomes, 2010), which may lead them to adopt stances that might be considered of the male realm –, for example, offering rewards in exchange for compliance or rewarding their subordinates for meeting objectives and punishing them for failing to meet them (Merchant, 2012) – if a certain situation thus oblige, for women are perfectly able to demonstrate values related to the male organizational model.

3. Being a female leader in a male dominated world

In "The Bell Jar" (1949), Sylvia Plath tells the story of Esther Greenwood, a young woman who studies at a renowned university and is doing an internship in New York City. This autobiographical work addresses several themes, from mental illness to feminine sexuality, but also the differences between men and women in relation to their career choices. In the 1950's it was expected that women would solely be wives and mothers, who devoted their efforts and energy into the care of their husbands and children, instead of pursuing their own dreams, being that future forecasts for their careers were frankly minute and limited to positions of secretariat, without great prospects for evolution.

Sixty-five years have passed since the publication of the book, and society has changed dramatically and women enjoy now a statute largely different from that which they held in the past century. However, literature on the matter tells us a different story: women still face, to this day, several challenges when trying to achieve and succeed in positions of leadership, due to the special features associated with their gender, being expected to adapt to models of leadership traditionally male and held to different standards than men, having to be more cautious in the workplace, in an attempt to act in accordance with what is expected of them (Merchant, 2012). These barriers, based on gender discrimination, put female leaders in series disadvantage, hindering not only their access to management positions, but also undermining their contribution to the organizations as effective leaders (Merchant, 2012). For this reason, women feel, with frequency, little recognition for their efforts and achievement (Valentine, 2001).

In fact, women frequently feel they must behave and act like the men do, in order to be recognized as valuable members of the organization and as successful leaders. Some female leaders go even the extra length and display conducts in line with gender discrimination, as showed by authors Philipp Cohen and Matt Huffman (2007). In their research they found that women in positions of leadership can either be agents of change – when they try to make the workplace less antagonistic to their female subordinates and reward their hard work (Srivastava & Sherman, 2015) – or cogs in the machine. The latter, refers to the female leader that has no effect on the careers of their female counterparts, and may even resort to mechanisms of discrimination, such as preserving or widening the gender wage gap (idem). Underlined to this scenario, there's a belief that men are more competent than women: as matter of fact, some of these women were chosen for leadership positions because of their identification with the

male organizational speech (Maume, 2011). Thus, in seeking to emulate the ambition, motivation and work habits of men, they alienate themselves from “feminine issues” (idem), demonstrating their competence through a superb performance in relation to their fellow men, with the aim to win trust of their male subordinates and superiors (Cohen & Huffman, 2007). In addition, these women might feel threatened by their female subordinates, especially if they feel that they were chosen to be leaders not because they deserve it, but because of some sort of convenience, this leads them to deem their female employees as less valuable, and likely underserving of a raise or promotion (Srivastava & Sherman, 2015).

Undeniably, female leaders face great challenges and obstacles in their ascension to higher positions and when they do it is usually in sectors of the economy traditionally occupied by women, restating that, comparing to men, there are blatant difference regarding opportunities to rise in the hierarchy, wages and perceived efficiency (Maume, 2011; Nogueira, 2006). As a matter of fact women are still seen as having less potential for management, tend to be evaluated less favourably, receive less support from their peers, are excluded from important networks, and receive greater scrutiny and criticism even when performing exactly the same leadership roles as men (Elsesser & Lever, 2011; 2015).

In this sense, Alice Eagly and Linda Carli (2007) note the path to leadership is clearly more challenging for women, than it is for man, and that those challenges can be seen, metaphorically, as a labyrinth that women must cross to conquer power and authority and exercise it effectively. These obstacles are «a series of complexities, detours, dead ends, and unusual paths» (Ho, 2015, p. 86). In other words, if women aspire to reach top level positions, they must understand that the existing routes are filled with unexpected and expected twists and turns (Carli, 2007), like gender discrimination, household responsibilities, lack of social capital (Ho, 2015), and because labyrinths have a feasible route to the centre, goals are attainable (Eagly & Carli, 2007). Evidently, it is possible for women to reach the centre of the labyrinth and those who do, enjoy higher wages, greater respect and more authority (Eagly & Carli, 2007). Nonetheless, it is crucial to stress that women generally have to exert more effort and navigate more carefully to overcome obstacles, having to be more patient because they seldom find themselves on the fast lane to success (Eagly & Carli, 2009). Ultimately, the dimension of the woman in the work world, with particular attention to women in leadership positions, continues to gain ground and to be studied in greater depth. The notion that women are still in disadvantage, despite having proved that the differences between men and women are obsolete, in terms of the ability to build and lead teams, do raise serious questions that deserve our attention.

4. Most common methodologies employed in female leadership research

In a study conducted by Lowe and Gardner (2000) findings showed that 64% of leadership studies employed a questionnaire-based method of collecting data. Years later the scenery is similar and the quantitative paradigm continues to monopolize research in this field, with research resorting to self-report questionnaire as the method of election, in experimental and cross-sectional designs, as well as longitudinal (Antonakis, et al., 2004; Bryman, 2011). Hence, much of what is currently understood about leadership has been developed primarily through quantitative, statistical approaches (Stentz, Clark & Matkin, 2012). The dominance of this instrument and other quantitative methods is, certainly, a reflection of the broader epistemological orientation of countless leadership researchers, and exemplifies the rigid commitment to a natural science model of the research process and to positivism optic, in particular. However, this predilection has significant consequences, for it has implications for the evaluation of research (Bryman, 2011). Naturally, the study of female leadership follows the dominant trend, although it is more prone to multiple methods of research, since it is a subject that still requires extensive study, given the information exposed so far about the condition of female leaders nowadays. Consequently, a large part of the studies on female leadership focus on perceptions (both of leaders and subordinates) of the degree of efficiency and type of leadership practiced, concluding that there are, indeed, gender differences (of small magnitude) and that these are highly dependent on contextual factors, such as organizational culture, the constitution of the teams, or even self-awareness of gender (Eagly & Carli, 2003). As a result, there’s a lack of paradigms that seek to comprehend the true nature of female leadership, an absence of interpretative and naturalistic approaches that explore the dynamics of leadership and women in their work contexts, through their own voices, in an attempt to make sense, or interpret events in terms of the meanings that they carry. To better understand these issues integrated and global alternatives must emerge, if one wants to depict, in depth, the condition of women in the leadership picture.

5. Looking to the future

Throughout this exposition we can conclude that female leadership is a complex and, sometimes, controversial subject, that, in recent years, has gained considerable attention and has, also, matured to

what concerns the manner in which it is perceived, studied and reflected upon. As aforementioned, there's a scarcity of investment in the deepening of the comprehension of female leaders' personal narratives. This stems, in part, from the positivism tradition that dominates the study of leadership and that constrains the manner in which science is conceptualized, for it is limited in terms of theory building and relies too much on operationalizing, ignoring meanings and contexts, and attempting to reduce phenomena to universal principle (Antonakis et al., 2011). Therefore, qualitative approaches are vital, as a method that contextualizes the observer in the world, consisting of a set of practices and interpretative materials that make this world liveable (Cassel & Symon, 2004; Flick, 2009).

However, one mustn't assume that one type of design is better and more complete than the other. Although the latter doesn't take into account that viewpoints and practices in the field are different because of the different subjective perspectives (Flick, 2009), it allows researchers to analyse/explore cause-effect relationships among several variables and test theoretical models (Creswell, 2003). Ergo, future investigations could gain from including not only qualitative methodologies, which provide access to the reality of female leaders, but also quantitative methods that permit the systematization of the results. Thus, we propose mixed methods designs as a solution to address the existing gaps in the literature regarding the trials that female leaders face in the route to leadership, as seen through the metaphor of the "labyrinth". And to understand how women struggle to maintain their position and be perceived as good as men, in the same circumstance, once in leadership positions. This type of investigation provides the possibility of capturing the best of quantitative and qualitative approaches (Creswell, 2003): by combining these two approaches, the strengths of each approach can be maximized, as the weaknesses are minimized, developing a more complex and complementary understanding of female leadership and increasing the validity of results, by using one form to build the outcomes of the other, while examining contextualized interpretations of reality, accessing multi-level perspectives, and cultural influences (Stentz, Clark, & Matkin, 2012).

For example, in relation to the abovementioned issue of the labyrinth to leadership, quantitative analysis may shed some light into the most predominant obstacles. On the other hand, the qualitative approach will show how these obstacle impacts the work and personal lives of female leaders, resulting in a broader picture of the labyrinth manifest and how one might intervene to minimize the hurdles women have to jump. Similarly, little is known regarding the way in which female leaders deal with organizational and performance appraisal politics, a highly masculinized context (Davey, 2008) and regarding how they live the pressures to be more like their male colleagues. One might want to generalize the perceptions of female leaders regarding appraisal politics, to a population, and simultaneously develop a detailed view of the meaning of living the political dimension of organizational life and performance appraisal. In this case, a mixed approach possible offers an integrative explanation. For these reasons, and others of the sort, such as the prevalence of bigoted behaviours against women (e.g., Anderson, et. al, 2015), it is crucial to study the narratives and personal accounts of women in leadership positions. By analysing their path, but also the challenges they faced and still face, we'll be capable to understand how they view themselves and how others perspective them. This can be achieved with mixed methodology investigations, instead of solely relying on quantitative methods, assuring, thus, a global portrayal of who is the female leader, with the ultimate aim of weakening the pervasiveness of sex discrimination.

In order to contribute to the scientific literature regarding female leaders we plan to conduct in the near future an explorative study regarding the way how women experience a particularly highly organizational context already mentioned above – the performance management and appraisal system – and how they relate to their female subordinates in that context, exploring how the dyad cogs in the machine and agents of change might manifest itself in terms of the difference between the evaluation of men and women, by female leaders. By focusing this process through female perspectives and narratives we hope to offer some insights regarding the challenges that women face in today's organizations and present some propositions that could be further explored in future quantitative or mixed method studies.

References

- Anderson, A. J., Ahmad, A. S., King, E. B., Lindsey, A. P., Feyre, R. P., Ragone, S., & Kim, S. (2015). The effectiveness of three strategies to reduce the influence of bias in evaluations of female leaders. *Journal of Applied Social Psychology*. doi: 10.1111/jasp.12317
- Antonakis, J., Schriesheim, C. A., Donovan, J. A., Gopalakrishna-Pillai, K., Pellegrini, E. K., & Rossomme, J. L. (2004). Methods for studying leadership. In J. Antonakis, A. T. Cianciolo, & R. J. Sternberg (Eds.). *The nature of leadership*, (pp. 48-70). Thousand Oaks: Sage Publications.
- Bryman, A. (Ed.). (2011). *The SAGE handbook of leadership*. Sage Publications.
- Cassel, C.M. and Symon, G. (2004). *Essential guide to qualitative methods in organizational research*. London: Sage Publications. doi: <http://dx.doi.org/10.4135/9781446280119>
- Cohen, P. N., & Huffman, M. L. (2007). Working for the woman? Female managers and the gender wage gap. *American Sociological Review*, 72(5), 681-704. doi: 10.1177/000312240707200502

- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: Sage. doi: <http://dx.doi.org/10.1590/S1415-6552003000100015>
- Cundiff, N., & Stockdale, M. (2011). Discrimination Against Women Leaders. In Paludi, M. & Coates, B. (Eds). *Women as transformational leaders from grassroots to global interests* (pp. 177-179). Santa Barbara, CA: Praeger. doi: [10.1177/0734371x0002000204](https://doi.org/10.1177/0734371x0002000204).
- Downes, M., Hemmasi, M., & Eshghi, G. (2014). When A Perceived Glass Ceiling Impacts Organizational Commitment And Turnover Intent: The Mediating Role Of Distributive Justice. *Journal Of Diversity Management (JDM)*, 9(2), 131-146.
- Davey, K. M. (2008). Women's Accounts of Organizational Politics as a Gendering Process. *Gender, Work & Organization*, 15, 650–671. doi: [10.1111/j.1468-0432.2008.00420.x](https://doi.org/10.1111/j.1468-0432.2008.00420.x)
- Eagly, A. H., & Carli, L. L. (2007). Women and the labyrinth of leadership. *Harvard business review*, 85(9), 62. doi: [10.1108/hrmid.2008.04416aad.004](https://doi.org/10.1108/hrmid.2008.04416aad.004)
- Eagly, A. H., Johannesen-Schmidt, M. C., & Van Engen, M. L. (2003). Transformational, transactional, and laissez-faire leadership styles: a meta-analysis comparing women and men. *Psychological bulletin*, 129(4), 569. doi: [10.1037/0033-2909.129.4.569](https://doi.org/10.1037/0033-2909.129.4.569)
- Elsesser, K. M., & Lever, J. (2011). Does gender bias against female leaders persist? Quantitative and qualitative data from a large-scale survey. *Human Relations*, 64(12), 1555-1578. doi: [10.1177/0018726711424323](https://doi.org/10.1177/0018726711424323)
- Flick, U. (2009). *An Introduction to Qualitative Research* (4th ed). Sage Publications. doi: [10.1080/14780880701473623](https://doi.org/10.1080/14780880701473623)
- Goethals, G., Sorenson, G., & Burns, J. (Eds). (2004). *Encyclopedia of leadership*. Thousand Oaks: SAGE Publications. doi: <http://dx.doi.org/10.4135/9781412952392>
- Gomes, A.R. (2014). Transformational leadership: Theory, research, and application to sports. In C. Mohiyeddini (Ed.), *Contemporary topics and trends in the psychology of sports* (pp. 53-114). New York: Nova Science Publishers.
- Ho, E.S.C. (2015). Confronting the Barriers of Women Leaders around the World. In Reilly, E. C., In Bauer, Q. J. (Eds). In *Women leading education across the continents: Overcoming the barriers*. Rowman & Littlefield Publishers. doi: [10.1080/02773940209391219](https://doi.org/10.1080/02773940209391219)
- Lowe, K. B., & Gardner, W. L. (2000). Ten years of The Leadership Quarterly: Contributions and challenges for the future. *The Leadership Quarterly*, 11, 459–514. doi: [http://dx.doi.org/10.1016/S1048-9843\(00\)00059-X](http://dx.doi.org/10.1016/S1048-9843(00)00059-X)
- Macedo, E. & Koning, M. (2009). *Reinventando Lideranças: Género, Educação e Poder*. Porto: “Fundação Cuidar o Futuro & Livpsic”
- Martin, J. (2015). Transformational and Transactional Leadership: An Exploration of Gender, Experience, and Institution Type. *Libraries and the Academy*, 15(2), 331-351. doi: [10.1353/pla.2015.0015](https://doi.org/10.1353/pla.2015.0015)
- Maume, D. J. (2011). Meet the new boss...same as the old boss? Female supervisors and subordinate career prospects. *Social Science Research*, 40(1), 287-298. doi: [10.1016/j.ssresearch.2010.05.001](https://doi.org/10.1016/j.ssresearch.2010.05.001).
- Merchant, K. (2012). *How Men And Women Differ: Gender Differences in in Communication Styles, Influence Tactics, and Leadership Styles* (Master's thesis). Retrieved from http://scholarship.claremont.edu/cmc_theses/513.
- Moller, M.A., & Gomes, J.F. (2010). Quid Vincit? O impacto da liderança feminina na implicação organizacional. *Análise Psicológica*, 4(28), 683-697. doi: [10.14417/ap.389](https://doi.org/10.14417/ap.389)
- Nogueira, C. (2006). Os discursos das mulheres em posições de poder. *Cadernos de Psicologia Social do Trabalho*, 9(2), 57-72. doi: <http://dx.doi.org/10.11606/issn.1981-0490.v9i2p57-72>
- Srivastava, S. B., & Sherman, E. L. (2014). Agents of Change or Cogs in the Machine? Re-examining the Influence of Female Managers on the Gender Wage Gap. *American Journal of Sociology*.
- Stentz, J. E., Clark, V. L. P., & Matkin, G. S. (2012). Applying mixed methods to leadership research: A review of current practices. *The Leadership Quarterly*, 23(6), 1173-1183. doi: [10.1016/j.leaqua.2012.10.001](https://doi.org/10.1016/j.leaqua.2012.10.001)
- Trinidad, C., & Normore, A. H. (2005). Leadership and gender: a dangerous liaison? *Leadership & Organization Development Journal*, 26(7), 574-590. doi: <http://dx.doi.org/10.1108/01437730510624601>
- Valentine, S. R. (2001). Men and Women Supervisors' Job Responsibility, Job Satisfaction, and Employee Monitoring. *Sex Roles*, 45 (3/4), 179-197. DOI: [10.1023/A:1013549710711](https://doi.org/10.1023/A:1013549710711)
- van der Kam, N. A., Janssen, O., van der Vegt, G., & Stoker, J. I. (2014). The role of vertical conflict in the relationship between leader self-enhancement and leader performance. *The Leadership Quarterly*, 25(2), 267-281. doi: [10.1016/j.leaqua.2013.08.007](https://doi.org/10.1016/j.leaqua.2013.08.007)
- Vinkenburgh, C. J., van Engen, M. L., Eagly, A. H., & Johannesen-Schmidt, M. C. (2011). An exploration of stereotypical beliefs about leadership styles: Is transformational leadership a route to women's promotion? *The Leadership Quarterly*, 22(1), 10–21. doi: [10.1016/j.leaqua.2010.12.003](https://doi.org/10.1016/j.leaqua.2010.12.003)

THE PORTUGUESE RETRO-FUS VERSION: FAMILY UNPREDICTABILITY AND FUTURE PERSPECTIVE

Teresa Sousa Machado, José Pacheco Miguel, José Tomás da Silva & Pedro Tiago Pereira
Faculty of Psychology and Sciences Education, Coimbra University (Portugal)

Abstract

Family unpredictability refers to the absence of family routines that prevent predictability of family behaviors and relationships. Family unpredictability may be due to parental inability in meeting regular children's needs and family regulation, and it has been associated with development of problem behavior, and/or psychopathology development of children.

In 2008, Ross and MacDuffy proposed a new version of *Unpredictability Scale – The Retro-FUS (Retrospective Family Unpredictability Scale)* – an instrument that assesses the memories of family past unpredictability. This study provides first data from Retro-FUS translation and adaptation to Portuguese sample – with 261 College young adults, from different College courses (aged 18 to 34 years old – M=21.3; DP=3.12; 54.8% boys, 44.1% girls). Portuguese *Retro-FUS* has good performance levels on dimensionality, following the original structure, with .88 *alpha* Cronbach for global scale; and good levels on reliability for *discipline, mother/father affect* dimensions, and critical values for *finance* and *meals* dimensions.

Additionally, we studied the relations between reported family memories of unpredictability and future time perspective – assessed by *Future Time Perspective Scale* (Husman & Shell, 2007). Negative correlations between retrospective family unpredictability and future time perspective corroborate the theoretical model. Implications – for adaptive development - of relations between the variables (memories of family unpredictability and future time perspective) are discussed.

Keywords: *Family unpredictability, future time, college students, Retro-FUS.*

1. Introduction

Family unpredictability is defined as “inconsistent behaviors and regulatory system of the family” (Ross, & Hill, 2000, p.549). Different variables may be responsible for family unpredictability, as inconsistent discipline and/or inconstant nurturance quality, significant variations in financial resources, or the lack of mealtime rituals. The literature supports the idea that family unpredictability induces stress and children's and parents' burnout, making it difficult to make plans and pre-structure the future. Familial unpredictability can occur due to environmental risk conditions (e.g., poverty, war, emigration, unemployment); or it may be associated with parental stressors, like divorce, alcoholism, and diseases. The common point of those stressors is the way they all will compromise family routines that would promote predictability in children outcomes. The social and economic situation in Portugal, characterized by employment instability and salaries' decrease, contributes to higher levels of family unpredictability; reinforcing the thesis about the relationships between the status of economy, and the structure and quality of familial life and marital satisfaction (Larson, Wilson, & Beley, 1994; Ross, & McDuff, 2008; Voydanoff, 2005). Unpredictability is associated with family dysfunction, and more children's risk behaviors. Absence of stable adaptive behaviors' patterns, and the difficulty, or impossibility of parents to monitoring children's behavior – that could orientate *what* and *how*, children were expected to do – increases the probability of disruptive mental states and problematic attitudes along children' development. Family unpredictability is associated with a cascade of negative behaviors in children and adolescents; like lower academic achievement, childhood truancy, unwanted pregnancy, involvement in antisocial behaviors, and incapacity to prevent common diseases (Hill, Ross, & Low, 1997; Hill, Jenkins, & Farmer, 2008; Plunkett, Behnke, Sands, & Choi, 2009). The problem is that if we don't believe that we can control the day-to-day, how can we believe to be able to “provide” the future?

In plus, chaotic family environments – e.g., like those having alcoholic parents – are associated with the risk of alcohol abuse among adults children of alcoholics; that risk being more associated to the

chaotic family environment, in itself – i.e., the *unpredictability life* – rather than having alcoholic parents *per se* (Nodar, 2012); which reinforces the negative role of family unpredictability to child development outcome.

The perception that the environment is unpredictable, leads to the construction of representations of “lack of control to adjust and to organize events” (Howar-Rodrigues, & Tokumaru, 2014). On the other hand, as attachment theoretical models have suggested, familiar routines – or, predictability – along childhood, promotes the development of adaptive models of relationships (enabling secure attachment development), and adaptive *selfs* (Bowlby, 1988; Bretherton, & Munholland, 2008). The same theory stands that insecure ambivalent attachment, and at greater degree, the disorganized attachment pattern, is related to children’s unpredictability care. It’s the unpredictable of their life that prevent children’s construction of secure internal working models of relationships and of behaviors’ norms. The same unpredictability will disturb the adaptive development of planning the future – as those children can’t rely on an “unpredictable-past”.

Considering the intergenerational transmission of non-cognitive skills reported in literature (in Vásquez & Cruz, 2013), it is expectable that family unpredictability will also be reproduced in (some) of the future families of those children. It’s very significant noting, that, according to one of the dimensions assessed by Retro-FUS scale – the *mealtime routines* (the evening family meal), with a north American sample – has suffered a huge alteration between 1987 and 2008. In 1987, 59% of respondents reported that they sat down together the evening meal, and by 2008, only 20% reported having evening family meal (Zimbardo, & Boyd, 2012). As Zimbardo and Boyd put on, it’s “(...) probably that parents have found a better use for the time traditionally spent on the evening meal. (...). Perhaps, but we believe it’s unlike” (2012). On the contrary, researches results consistently show positive correlations between secure attachment and predictable familiar routines together, and the development of future time perspective; which is understandable, according to those dominant stance theories (cf. Gjesme, 1983; Laghi, D’Alessio, Pallini, & Baioco, 2009; O’Dwyer, 2000; Zimbardo, & Boyd, 1999). Future time perspective is said to be evolve from motivational goals, having repercussions in several adaptive competences (Bilde, Vansteenkiste, & Lens, 2011).

Husman and Shell (2008) developed a multiple factor model of future time perspective (FTP) that includes four dimensions: *valence*, *connectedness*, *extension*, and *speed* – those dimensions, according to the authors, are constructs that researchers traditionally include as part of the FTP conception – although some authors, like Eren (2007, cit in Eren, 2014), had found a two-factor structure (i.e., connectedness and value), which may be explained by socio-cultural Turkish’ particularities. Others authors present unidimensional measurement techniques (Carelli, Wiberg, & Aström, 2015). Nevertheless, considerable amount of studies demonstrated that FTP is a multidimensional construct – as it is operationalized in Husman and Shell scale (Eren, 2009; Husman & Shell, 2008; Zimbardo & Boyd, 1999). *Valence* refers to the importance individuals place on the probability of achievement the goals they look for in the future (e.g., having the PhD, five years later). The more distant goals are more stronger is future time perspective. *Connectedness* refers to the ability to make connections between the present and future goals. For example, in a very different area – mobile commerce activities (in China), Kuppelwieser, Sarstedt and Tuzovic (2014) shows that the elder clients motivations to engage in those kind commerce, is not due to their age, but in their (changes) in future time perspective; so, the “problem” with the reduce number of sales was not the lake of *connectedness*, but the effects of reduced FTP, the changes in commercial strategies – based in FTP – improved significantly their sales. *Extension* is defined as “how far ahead a person projects one’s thoughts” (cit. in, Husman, & Shell, 2014, p.168); and *speed* is the ability to anticipate the future.

Literature on life stress, for example, indicates that among many threatening events and life circumstances, those characterized by intensity, duration and *unpredictability* tend to be the most stressful ones (Wolf, Noh, Fisman, & Speechley, 1989). The effect of divorce, in children, for example, as been consistently associated with negative developmental outcomes; nevertheless, new studies suggests that it isn’t necessarily the divorce *per se* that causes negative consequences; but whether other characteristics of divorced families are responsible: namely, the residential instability, that has been proved to be a key component for understanding negative effects of divorce (Ross, & Miller, 2009).

2. Objectives and design

The main purpose of this work – a cross sectional study – was to analyze the relations between the reported retrospective family unpredictability, and future time perspective in Portuguese College students. *Retrospective Family Unpredictability Scale* – Retro –FUS (Ross, & McDuff, 2008), data are the first ones concerning the Portuguese version.

3. Methods

3.1. Participants/Measures

Participants were 261 University students, from different Coimbra University Faculties: Sciences Education (14.94%); Mechanical Engineering (23.75%); Computer Engineer (44.06%), Psychology (4.9%), and Environmental Engineering (12.26%); 54.8% boys, and 44.1% girls; 71.7% of the sample were aged between 19 to 21 years old.

Retro-FUS (Retrospective Family Unpredictability Scale) ((Ross, & McDuff, 2008), assesses the memories of family past unpredictability. *Retro-FUS* has good performance levels on dimensionality, following the original structure, with .88 alpha Cronbach for global scale; and good levels on reliability for *discipline* = .90, *mother/father affect* .83 (father), .76 (mother) dimensions, and critical values for *finance* = .55 and *meals* = .67. No differences were found between boys/girls concerning the global score of retrospective family unpredictability, except concerning *mother affect* Retro-FUS dimension.

Future Time Perspective Scale (Husman & Shell, 2007), measures future time perspective as a set of stable beliefs and expectations about the future; composed by 27 items with four subscales (rating 5-point Likert scale) representing four distinct temporal dimensions (speed, connectedness, value, and extension). Portuguese version has good performance levels on dimensionality (.70 alpha Cronbach for global scale; and dimensions: $\alpha = .72$ for speed, $\alpha = .82$ connectedness; $\alpha = .74$ extension, and $\alpha = .72$ valence).

3.2. Results

Data from Portuguese *Retro-FUS* version presents significant correlations between the dimensions, suggesting that assess the same construct, i.e., *memories of family unpredictability* (Table 1).

Table 1. Correlations between Retro-FUS dimensions/Total

	(1)	(2)	(3)	(4)	(5)	Total Retro-FUS
Discipline (1)		.34**	.32**	.28**	.18**	.79**
Affection Father (2)			.57**	.13**	.19**	.75**
Affection Mother (3)				.14**	.22**	.71**
Finance (4)					.18**	.40**
Meals (5)						.39**

* $p \leq .05$; ** $p \leq .01$

To assess the relations between the Retro-FUS dimensions and future time perspective were performed (Table 2.).

Table 2. Correlations between Retro-FUS and FTP

	Valence	Connectedness	Speed	Extension.	FTPS
Discipline	.15*	-.10	-.30**	-.08	-.10
Affection Father	.05	-.04	-.20**	.01	-.05
Affection Mother	.04	-.12	-.17**	.06	-.13*
Finance	.03	-.26**	.04	.03	-.17**
Meals	.10	-.17**	-.16*	-.08	-.14*
Retro-FUS (Total)	.12*	-.16**	-.29**	-.07	-.15*

* $p \leq .05$; ** $p \leq .01$

Significant negative correlations between some of the Retro-FUS' dimensions, and future time perspective, reinforce, in Portuguese sample, that, as the literature revision suggested, more representations of past-family unpredictability – at dimensions such as *discipline*, *affection* (Mother / Father), *financial* resources of family, and *meals* – are related with lower levels of future time perspective (assessed by Husman and Shell (2007) scale).

4. Conclusions

Family unpredictability – defined as inconsistent family behavior patterns is an indicator of the vulnerability of the family and its members. Perceptions of unpredictability – and the memories of past unpredictability in owns' family of origin – has consistently been associated with negative outcomes for children development (Howat-Rodrigues, & Tokumaru, 2014; Ross, & Hill, 2000; 2002). The FUS (Ross,

& Hill, 2000), and Retro-FUS (Ross, & McDuff, 2008), scales were designed to assess the level of inconsistency of parental behavior in fulfilling their parental responsibilities. The FUS scale – the first one be constructed – a 23 items instrument – was developed to measure unpredictability in children’s environment. Alarcão and Gaspar (2007) conducted a study to validate the FUS Portuguese version. Ross and McDuff (2008), adapted the FUS to capture perceptions of unpredictability in the family context during childhood – the initial factors nurturance and discipline, were divided into parental discipline and maternal discipline.

Diverse research designs have analyzed children’s perceptions of parental inconsistency, and all were associated with children’ negative outcomes (Ross, 2006). Others studies have reported associations between chaotic, or *inconsistent/unpredictable* environments (e.g., homes of alcoholics parents) and the development of *parentification*, defined by Boszormayi-Nagy and Spark (1981, in Burnett, Jones, Bliwise, & Ross, 2006), as the subjective distortion of a relationship “as if one’s child were his parent”. If it is temporary, *parentification* may be normative some times, if excessive, it’s associated with negative outcomes in adulthood (like depressive symptoms, ambivalence about dependency needs, characteristics of narcissistic, and self-defecting personality styles (Burnet, et al., 2006).

The family unpredictability construct derives from attachment theory and learned helplessness theory (Ross, 2006; Machado, 2013). Attachment theory explain how daily routines enable the child to construct representations about themselves, and the world, that will enable them to feel secure – as their personal *world* is secure too. Learned helplessness, on the contrary, given the unpredictable and non-contingent feedback to owns behavior, leads to the construction of the believe that external forces determine their destiny (Ross, 2006).

Family unpredictability can be induced by several factors, such as poverty (Ackerman, Kogos, Youngstrom, Schoff, & Izard, 1999; Ross, 2006), the experience of children homelessness (Havlik, & Bryan, 2015), clinical situations of caregivers (e.g., alcoholic syndrome, parental chronic conditions requiring several hospitalizations), dissimilarity between parenting styles (Berkien, Louwerse, Verhulst, & der Ende, 2012; Nodar, 2012), job instability, and emigration. All these stressors create a vicious cycle from which it is difficult to get out – and the children are (probably) the greatest victims of those circumstances. The recent financial crisis has taken additional burdens on Portuguese’s families, and has weakened the stability and quality of home environments for children.

References

- Ackerman, B. P., Kogos, J., Youngstrom, E., Schoff, K., & Izard, C. (1999). Family instability and the problem of children economically disadvantaged families. *Developmental Psychology*, 35(1), 258-268.
- Alarcão, M., & Gaspar, F. (2007). Imprevisibilidade familiar e suas implicações no desenvolvimento individual e familiar. *Paidéia (Ribeirão Preto)*, 17(36), 89-102.
- Berkien, M., Louwerse, A., Verhulst, F., & van der Ende, J. (2012). Children’s perceptions of dissimilarity in parenting styles are associated with internalizing and externalizing behavior. *European Child & Adolescent Psychiatry*, 21(2), 79-85.
- Bilde, J., Vansteenkiste, M., & Lens, W. (2011). Understanding the association between future time perspective and self-regulated learning through the lens of self-determination theory. *Learning and Instruction*, 21, 332-344.
- Bowlby, J. (1988). *A secure base. Clinical applications of attachment theory*. London: Routledge.
- Bretherton, I., & Munholland, K. A. (2008). Internal working models in attachment relationships: Elaborating a central construct in attachment theory. In J. Cassidy, & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (2^{end} ed.), pp.102-127. New York: Guilford Press.
- Burnett, G., Jones, R. A., Bliwise, N. G., & Ross, L. T. (2006). Family unpredictability, parental alcoholism, and the development of parentification. *The American Journal of Family Therapy*, 34, 181-189.
- Carelli, M. G., Wiberg, B., & Aström, E. (2015). Broadening the TP profile: Future Negative Time Perspective. In M. Stolarski, N. Fioulaine, & W. van B. (Eds.). *Time Perspective Theory; Review, Research and Application*. (pp.87-97). Switzerland: Springer.
- Eren, A. (2009). Exploring the effects of changes in future time perspective and perceived instrumentality on graded performance. *Electronic Journal Of Research in Educational Psychology*, 7(3), 1696-2095.
- Gjesme, T. (1983). On the concept of future time orientation: Considerations of some functions and measurements’ implications. *International Journal of Psychology*, 18, 443-461.

- Havlik, S., & Bryan, J. (2015). Addressing the needs of students experiencing homelessness: School counselor preparation. *The Professional Counselor, 5*(2), 200-216.
- Hill, E. M., Jenkins, J., & Farmer, L. (2008). Family unpredictability, future discounting, and risk taking. *The Journal of Socio-Economics, 37*, 1381-1396.
- Hill, E. M., Ross, L. T., & Low, B. S. (1997). The role of future unpredictability in human risk-taking. *Human Nature, 8*(4), 287-325.
- Howat-Rodrigues, A. B. C., & De Andrade, A. L. (2012). Construção e validação da Escala de Imprevisibilidade Familiar na Infância, (EIFI). *Psicologia, Reflexão e Crítica, 25*(2), 221-220.
- Howat-Rodrigues, A. B. C., & Tokumaru, R. S. (2014). Scale of Family Unpredictability during childhood: Validity evidence. *Paidéia (Ribeirão Preto), 24*(57), 11-20.
- Husman, J., & Shell, D. F. (2008). Beliefs and perceptions about the future: A measurement of future time perspective. *Learning and Individual Differences, 18*, 166-175.
- Kuppelwieser, V. G., Sarstedt, M., & Tuzovic, S. (2014). The role of context and motivation variables in mobile commerce usage – A further perspective on Chong (2013). *Technological Forecasting & Social Change, 88*, 156-161.
- Laghi, F., D'Alessio, M., Pallini, S., & Baiocco, R. (2009). Attachment representations and time perspective in adolescence. *Social Indicators Research, 90*(2), 181-194.
- Larson, J. H., Wilson, S. M., & Beley, R. (1994). The impact of job insecurity on marital and family relationships. *Family Relations, 43*(2), 138-143.
- Machado, T. S., & Correia, I. (2013). Family unpredictability and social support reported by families in Earli Intervention programs versus community families. In A. Pereira, M. Calheiros, et al., (Org.). *Livro de Atas VIII Simpósio Nacional de Investigação em Psicologia* (pp257-264). Associação Portuguesa de Psicologia.
- Nodar, M. (2012). Chaotic environments and adult children of alcoholics. *The Professional Counselor: Research and Practice, 2*(1), 43-47.
- O'Dwyer, C. (2000). *Imagining one's future: A projective approach to Christian maturity*. Roma: Editrice Pontificia Università Gregoriana.
- Plunkett, S. W., Behnke, A. O., Sands, T., & Choi, B. Y. (2009). Adolescents' reports of parental engagement and academic achievement in immigrant families. *Journal of Youth and Adolescence, 38*, 257-268.
- Ross, L. T. (2006). Family unpredictability. In D. M. Devore (Ed.). *Parent-Child Relations: New Research* (pp.121-141). New York: Nova Science Publishers.
- Ross, L. T., & Hill, E. M. (2000). The Family Unpredictability Scale: Reliability and validity. *Journal of Marriage and Family, 62*(2), 549-562.
- Ross, L. T., & Hill, E. M. (2002). Childhood unpredictability, schemes for future unpredictability, and risk taking. *Social Behavior and Personality, 30*(5), 453-474.
- Ross, L. T., & McDuff, J. A. (2008). The retrospective family unpredictability scale: Reliability and validity. *Journal of Child and Family Studies, 17*(1), 13-27.
- Ross, L. T., & Miller, J. R. (2009). Parental divorce and College students: The impact of family unpredictability and perceptions of divorce. *Journal of Divorce & Remarriage, 50*(4), 248-259.
- Vásquez, A., & Cruz, O. (2013). "Start thinking what are you to be when adult!" The relationship between parental time orientation and the emergence of episodic foresight in preschool aged children. In M. P. Paixão, & J. T. da Silva (Coord.). *International Studies in time perspective*, (pp.13-18). Coimbra: Imprensa da Universidade de Coimbra.
- Voydanoff, P. (2005). Toward a conceptualization of perceived work-family fit balance: A demands and resources approach. *Journal of Marriage and Family, 67*(4), 822-836.
- Wolf, L. C., Noh, S., Fisman, S. N., & Speechley, M. (1989). Brief Report: Psychological effects of parenting stress on parents of Autistic children. *Journal of Autism and Developmental Disorders, 19*(1), 157-166.
- Zimbardo, P. G., & Boyd, J. N. (1999). Putting time in perspective: A valid, reliable individual-differences metric. *Journal of Personality and Social Psychology, 77*(6), 1271-1288.
- Zimbardo, P., & Boyd, J. (2012). *The time paradox. The new psychology of time that can change your life* (Random House eBooks).

THE WELCOME AND INTEGRATION CONTRACT OF LUXEMBOURG: SATISFACTION WITH THE QUALITY OF SERVICES ACCORDING TO NON-EU IMMIGRANTS

Angela Odero, Chrysoula Karathanasi & Michèle Baumann¹\$
INSIDE Research unit, University of Luxembourg (Luxembourg)

Abstract

Evaluating satisfaction with the quality of services is a central concern of social and educational programs, whose mission is to adhere as closely as possible to the needs of the population. Based on methodological and investigator triangulation methods, our aims were to analyze the level of satisfaction with the Welcome and Integration Contract of Luxembourg (*Contract d'accueil et d'intégration CAI*) and its respective activities (citizenship courses, language courses and an orientation day). First, 233 out of 1084 Non-EU immigrant beneficiaries responded to a self-administrated questionnaire. Second, 11 semi-structured focus groups with 50 volunteers were conducted around four themes: Quality of activities, organization, availability of support personnel and utility of the information received. More than 72% of the participants were very satisfied with the quality, organisation and availability of personnel, in regard to the information session and the civic courses. Divergences exist because various needs were recognized. Potential activities to reduce the quality gap were proposed, for instance the creation of an interactive online platform where the beneficiaries could regularly get information and, exchange experiences and/or help each other whenever possible. The dynamism and interactivity in the focus groups revealed that the users would like to actively contribute to improving the process. Indeed, the needs and requirements of each immigrant group cannot be totally covered by these activities as they stand. Involving users in the strategy and action plans would help create more accurate solutions.

Keywords: *Integration Services, Non-EU migrants, Focus Groups, Service Evaluation, Triangulation.*

1. Introduction

The idea of Integration Contracts was first reported by the Dutch Scientific Council for Government Policy (WRR) in 1989. Some countries that have implemented integration measures are: Sweden, Denmark, Finland, the Netherlands, Austria, Belgium, France, the UK Estonia (Guiraudon, 2008) and Luxembourg. In line with the EU initiatives on integration policies (Niessen & Huddleston, 2009; Niessen & Schibel, 2004), the government of Luxembourg introduced and continues to fund a Welcome and Integration Contract (*Contrat d'Accueil et d'Intégration - CAI*), to ensure the successful integration of immigrants since September 2011. The contract, valid for 24-36 months, is indiscriminately open to all foreigners' 16+ years, legally residing in the country and intent on settling long-term. Successful completion means attendance of citizenship training courses, an orientation day (signatories are introduced to institutions helpful to the integration process) and language courses in any of Luxembourg's three languages (French, German or Luxembourgish) at a reduced tariff through vouchers valid in public language schools (OLAI, 2011).

To review the success of the contract, the Luxembourg Welcome and Integration Office (*Office Luxembourgeois d'Accueil et d'Intégration - OLAI*), commissioned an evaluation among its non-EU beneficiaries to highlight their level of satisfaction with the contract in regard to meeting their integration needs. This project² was based on an investigator triangulation qualitative analysis and methodological triangulation, which combined qualitative and quantitative methods of data collection and analysis (Thurmond, 2001). The aims of this evaluation were to 1) measure the level of the satisfaction for each contract activity and 2) determine the impact of participating in the activities of daily life.

¹\$Research unit INSIDE, University of Luxembourg, Maison des Sciences Humaines Campus Belval, L-4366 Esch-sur-Alzette, Luxembourg. Corresponding author: michele.baumann@uni.lu

²Disclaimer: The views and opinions expressed in this article do not necessarily reflect the position of The Welcome and Integration Office of Luxembourg (OLAI).

2. Methods

2.1. Population and recruitment of the samples

Of the 1084 non-EU recipients of the survey, 233 responded, either by post, or online, in English, French, German, Luxembourgish, Portuguese, Serbo-Croatian or Chinese. A total of 11 semi-structured focus groups, recruited among the 233 respondents, were organised in different languages.

2.2. Data collection

Based on European and Luxembourgish integration measures documentation, items were created to evaluate the content of the contract and were assessed with a visual scale (from 1 to 10 “very satisfied”). The focus groups (4 to 8 people) were conducted (1.5 to 2.5 hours long) based on a guideline exploring the gap between their needs and experiences of satisfaction around four themes: The quality of activities, organization; availability of personnel support and utility of the information received. Each focus group participant received a 50 euro gift voucher in compensation for their time. The audio recordings were kept anonymous and destroyed after their transcription.

2.3. Data analysis

Descriptive statistical analyses were done with the use of SPSS 22. The analysis of thematically classified content of the transcripts was conducted with the support of N'Vivo 10 software. Identification of verbatim and the subsequent formulation of items (main ideas) were conducted by the authors. Decisions were made on the basis of a consensus.

3. Quantitative and qualitative results

3.1. Sociodemographic characteristics

The 233 survey respondents and the 50 focus group volunteers had the same sociodemographic profiles except for age (39 years versus 42 years)³.

3.2. Satisfaction with the four dimensions of each activity / service

As shown in Table 1 more than 72% of the participants were very satisfied with the quality, organisation and availability of personnel, with regard to the information sessions and civic courses. Over 62% reported high satisfaction with all aspects of orientation day. Satisfaction with the language courses was highest in the Luxembourgish courses > 65%, followed by French courses > 56% and finally German courses > 52%. Since these values still reflect a service quality gap (they are not the highest attainable scores), our qualitative data highlights the reasons stated for the existence of these differences.

Table 1. Percentages of user satisfaction with contract activities

<i>(Highest % of scores; ratings from 9 to 10 very satisfied)</i>				
Contract' services	<i>Quality of contract activities</i>	<i>Organization of sessions</i>	<i>Availability of personnel</i>	<i>Information received</i>
Information sessions	74,6	73,1	74,3	66,8
Orientation day	63,9	69,8	62,4	66,3
Civic course	73,8	72,5	72,2	65,0
Luxembourgish courses	65,7	66,7	65,3	68,6
French courses	56,3	59,8	61,5	57,3
German language courses	52,0	54,2	54,2	64,0

3.3. Quality of CAI services

3.3.1. Lack of consensus regarding the quality of service. Whereas the quantitative results reflect a positive overall outlook for all services (over 52% were very satisfied with all activities), the qualitative results were more mixed.

(FG7) Any questions I had they answered quickly. Each appointment...was fulfilled quickly.

(FG1) Perhaps more targeted training in how to receive signatories would go a long way in making the already vulnerable group feel welcome and more confident about their situation...

³The profile of the participants: 63.9% women, 78.9% lived in a couple, 62.3% had university degrees, 34% in intellectual or scientific professions, 20.3% in service, sales or trade industries, 20.7% in public administration and defence, education or health, 19% in finance and insurance, 15.1% in trade, transportation, warehousing, housing and hotel. In total, 51.3% were employed.

3.3.2. Activities have a one size fits all structure. Services offered are based on one size fits all programs, which are not able to meet the needs of the various immigrant groups, which require different kinds of information for their integration.

(FG1) Is it possible to somehow ask people what route they are on, to finally offer more extensive services to those who want citizenship and differentiate them from those on a different path?

3.4. Organisation

3.4.1. The aims and scope of the contract are sometimes not clear. To minimise any potential misunderstanding, disappointment or confusion that may ensue, it is necessary to clarify the scope of the contract beforehand to ensure that both parties understand it the same way.

(FG9): Specifically make it important... like, if you have signed this thing what are the benefits and what does it mean for the person? So that in that way they also know that this is something to sign.

3.4.2. Location and language either encourages or limits user participation in activities. Proximity, either to place of residence or work as well as vehicular language directly influences the users' decision to either participate in the activities or not on any given day.

(FG5) I still have not started any activity. I live in the northern part of the country. I signed up for a course at a local school, but they have only Portuguese, so I gave up and I will start in January...In January I will try in Luxembourg City somewhere in the evening, the only thing that is a problem for me is distance from my home to school.

3.4.3. A two year period is fitting for the contract. Regardless of the different profile of participants, there was a general consensus that the two year duration of the contract was appropriate.

(FG7) It's just enough time to use your vouchers and go to the civics and orientation days.

(FG2) I think it is absolutely perfect two years' time. If it was longer I think that people would not take it seriously. But shorter, absolutely not.

3.4.4. Extended waiting periods discourage participation. Orientation days are organised twice a year whereas most language schools have semester intakes (2 or 3 times a year), so users sometimes lose time and motivation while waiting to start activity.

(FG5) I called for an appointment in December last year, and they give me one in May.

(FG7) The experience of getting into a course was awful. I lost a lot of confidence in the process. I thought it took way too long.

3.5. Availability of Support Personnel

3.5.1. Contact with support personnel is considered infrequent. Several users reported contact with support personnel is often limited to 2 – 3 meetings during the 2/3 year period, usually restricted to registrations and emails informing them of upcoming activity schedules. However, signatories expect more frequent engagement from CAI support personnel indicating different opinions in the qualitative vs quantitative data.

(FG11) I think we are not connected in the right way because I don't have enough conversations with them. I received only 2 mails in one year just to offer me the terms for the citizenship courses.

3.5.2. Signatories wish to take an active role in the process. Signatories desired to help improve the process. For instance, already settled signatories proposed being intermediaries for the new arrivals while the latter wished to understand challenges faced by foreigners who had come before them

(FG9) Going to the companies takes a lot of organization and hard work... "You already have your sort of ambassadors there [other signatories]. Use them to spread what you have to offer"...Even I can facilitate something like this if people from OLAI wanted to come to the office over lunch or something.

3.5.3. There is no follow up at the end of the contract. After attending all the workshops and language classes, participants receive a certificate of successful completion of the contract. Most FG volunteers report the program seems to end rather abruptly.

(FG9) I was also thinking how do you keep people engaged? They come, they sign up they do these courses and...then they go away...There's no kind of like reconnect stuff. There's no connection with this kind of stuff...so the re-engagement is actually missing.

3.6. Impacts of the process on the daily lives of the participants

The signatories openly expressed appreciation for the efforts made and resources allocated to help them. 66% of the 233 respondents reported that the information received highly corresponded to their social and cultural integration. About 50% reported low satisfaction levels with the services in covering their professional integration needs. Potential activities to reduce the quality gap were proposed, for instance the creation of an interactive online platform where the beneficiaries could regularly get information and exchange experiences and/or help each other whenever possible.

4. Discussion

Our main finding showed that the non-EU participants were satisfied with the overall quality of the service. However, divergences were noted due to existence of various needs. Service quality can be defined as “the extent to which a service meets customer’s needs or expectations” (Asubonteng, McCleary, & Swan, 1996). In our case, service quality focused on: meeting the signatory’s needs, and not on expectations since we did not ask them their expectations before they signed the contract. This is because their perceptions, drawn from their own experiences would have influenced their judgement (Parasuraman, Zeithaml, & Berry, 1988) of the past. In reference to the Contract, we observed that the users expected more frequent engagement with the support personnel assigned to them and sometimes felt suddenly abandoned upon completion of the contract. This symbolises an unmet need (e.g. not finding one’s place or creating lasting connections) at the end of the contract. Clarifying the scope and characteristics of the contract from the beginning, would likely minimise any potential misunderstandings, disappointment or confusion and help in understanding how service quality is perceived by its users (Daniel & Berinyuy, 2010).

A comparison of our findings to *the gaps model of service quality* (SERVQUAL) was further used to evaluate service quality and customer satisfaction. Our results indicated that some of our findings are comparable with 3 of the 5 (Tangibles, Reliability, Responsiveness, Assurance, and Empathy) underlying dimensions (Parasuraman et al., 1988), i.e. Responsiveness (The willingness to help customers and provide prompt service), Tangibles (physical facilities, equipment, and staff appearance) and Reliability (ability to perform the promised service dependably and accurately). Responsiveness was seen in the frequency and nature of communication between the support personnel and the beneficiaries. For instance, quick response times coupled with pertinent information resulted in high satisfaction ratings whereas slow responses and less pertinent information was rated less favourably. Responsiveness, indicative of quality service was also seen in the use of multiple languages in the communications. For example during the orientation day, translation was provided for the presentations, and civic courses were offered in 8 different languages. The Tangibles dimension of the model is comparable to our “Availability of Personnel” dimension in that, during information sessions all activities are held in physical facilities complete with relevant equipment. Although the frequency of contact with personnel was sometimes insufficient and the information during the orientation day too general, the foundation for quality services was already present.

The intangible nature of service quality makes it challenging to measure in comparison to that of goods (Asubonteng et al., 1996). For this reason, it is necessary to train user-facing staff in quality service delivery and diversity recruitment (Gilbert, 1998). This would help minimise the quality gap between users’ needs and experiences, since the staff would provide the same quality service to all, regardless of their individual differences, which might influence interactions (Hoon et al., 2011). This aspect of providing predictable quality service is also known as Reliability, another dimension of the SERVQUAL model.

The EU Integration Policies elaborate 11 Common Basic Principles (CBP) to implementing immigration measures in member states (Niessen & Schibel, 2004). These principles have seen countries’ move away from national distinctiveness to broader, more inclusive and diversity valuing integration policies (Chambon & Richmond, 2001). The challenge therefore for host societies is creating a new, broader sense of togetherness which would ensure all population groups produce active and conscious citizens (Aleksynska, 2011). For such an approach to work, the contract would require the involvement of both citizens and immigrants in its initiatives. This could be achieved through language exchange programs, inclusion strategies within organisations and schools, religious dialogue, participation in elections, naturalisation, volunteering (Niessen & Schibel, 2004), literature and other kinds of artistic expressions (Pagani, 2014). Awarding grants for integration project initiatives that involve both sides could be proposed in a friendly and competitive spirit. Two examples are 1) the Körber Foundation which gives the “Hamburg Tulip” award to outstanding projects that bridge the gap between immigrants and non-immigrants in Hamburg (Körber Foundation, n.d.) and 2) The Municipal Fund – Innovative Immigration Initiatives in Canada municipalities offering grants to innovative immigration-based projects

to encourage economic development in their communities (Citizenship & Branch, 2014). Such projects, would lead to social cohesion, create jobs and professional independence for those concerned.

5. Conclusion

In addition to being managed as a two way process and actively including the immigrants in the process, the contract should also apply the quality gap method to determine gaps between expectations and perception, and between needs and experience. This should then be used to inform the process of reducing this quality gap where necessary, resulting in higher levels of satisfaction with the contract as it would meet the diverse immigrant needs thus leading to successful integration.

References

- Aleksynska, M. (2011). European Journal of Political Economy Civic participation of immigrants in Europe: Assimilation, origin, and destination country effects, *27*, 566–585. <http://doi.org/10.1016/j.ejpoleco.2010.12.004>
- Asubonteng, P., McCleary, K. J., & Swan, J. E. (1996). SERVQUAL Revisited: A Critical Review of Service Quality. *Journal of Services Marketing*, *10*(6), pp. 62–81. <http://doi.org/10.1108/08876049610148602>
- Chambon, A. S., & Chambón, A. S. (2001). L' évaluation des services d' établissement pour les personnes immigrantes et réfugiées: enjeux conceptuels et méthodologiques. *Cahiers de Recherche Sociologique*, *35*, 167–183. <http://doi.org/10.7202/1002241ar>
- Chingang Nde, D., & Lukong Berinyuy, P. (2010). Using the SERVQUAL Model to assess Service Quality and Customer Satisfaction. An Empirical Study of Grocery Stores in Umea. *Umea School of Business*. Retrieved from <http://umu.diva-portal.org/smash/record.jsf?pid=diva2:327600>
- Citizenship, I. O. M. of, & Branch. (2014). No Title. Retrieved from http://www.ontarioimmigration.ca/prodconsum/groups/csc/@oipp/documents/document/oi_innovation_guide.pdf
- Gilbert, A. (1998). Role of Informal Integration in Career Advancement: Investigations in Plural and Multicultural Organizations and Implications for Diversity Valuation, *39*.
- Guiraudon, V. (2008). Integration Contracts for Immigrants: Common Trends and Differences in the European Experience, 1–7.
- Hoon, H., Foo, M. Der, Kwek, M. H., Journal, M., Tan, H. H., & Kwek, M. I. N. H. U. I. (2011). The Effects of Customer Personality Traits on the Display of Positive Emotions, *47*(2), 287–296.
- Körber Foundation. (n.d.). No Title. Retrieved from <http://www.koerber-stiftung.de/en/foundation.html>
- Niessen, J., & Huddleston, T. (2009). Handbook on Integration for policy-makers and practitioners. *Security*, 174. <http://doi.org/10.2758/15387>
- Niessen, J., & Schibel, Y. (2004). *Handbook I. - Integration for policy-makers and practitioners*. (European Communities, Ed.) *Security* (1st ed.).
- OLAI. (2011). Contrat d'accueil et d'intégration (CAI). Retrieved from http://www.olai.public.lu/fr/accueil-integration/mesures/contrat-accueil/pps_cai.pdf
- Pagani, C. (2014). Diversity and social cohesion. *Intercultural Education*, *25*(4), 300–311. <http://doi.org/10.1080/14675986.2014.926158>
- Parasuraman, a, Zeithaml, V. a, & Berry, L. L. (1988). SERQUAL: A Multiple-Item scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*. [http://doi.org/10.1016/S0148-2963\(99\)00084-3](http://doi.org/10.1016/S0148-2963(99)00084-3)
- Thurmond, V. A. (2001). The Point of Triangulation. *Journal of Nursing Scholarship*, *33*(3), 253–258.

ATTACHMENT TO PARENTS AND ROMANTIC ATTACHMENT: ARE THERE DIFFERENT IMPLICATIONS FOR LIFE SATISFACTION AND HOPE?

Cátia Dias-da-Costa, Teresa Sousa Machado & José Tomás da Silva
Faculty of Psychology and Education Sciences, University of Coimbra (Portugal)

Abstract

This study examined the association between relational contexts – parental and romantic attachment – with life satisfaction and hope in a sample of 262 young adults (18-34 years) attending higher education in the city of Coimbra, Portugal. Romantic attachment was measured with the short version of the Romantic Attachment Questionnaire (RAQ); parental attachment was measured using the Portuguese version of the IPPA; satisfaction with life was assessed with the Portuguese version of the Satisfaction with Life Scale; and hope was measured with Portuguese version of the Hope Scale. Results suggest that romantic attachment cannot be explained by attachment to parents. The correlation between parental attachment and romantic attachment has statistical significance. However, the magnitude of the correlation and the percentage of variance explained by attachment to parents are too low to suggest that representations of romantic attachment can be explained by parental attachment. These findings are consistent with data presented by other studies, which suggest that these two types of attachment are different constructs. In addition, different styles of parental attachment may influence both the levels of life satisfaction and the cognitions of young adults on their ability to initiate and maintain the necessary actions to achieve a certain goal. On the other hand, personal constructs of life satisfaction and hope seem to be relatively independent from romantic attachment.

Keywords: *Parental attachment, romantic attachment, satisfaction with life, hope, young adults.*

1. Attachment relationships from parents to romantic partners

The study of attachment relationships and its influence in the area of emotional and social development is one of the most prominent subjects in development psychology. In the present study, we examine the attachment relationships of young adults to their parents and romantic partners, and explore their differential association to life satisfaction and hope for the future.

Bowlby (1982) conceptualises the attachment theory as a tendency to develop strong affectional bonds to particular others. This theory hypothesises that infant attachment behaviour is regulated by an innate motivational system – the attachment behavioural system – perfected by natural selection as means to maintain proximity between infants and their primary caregivers, hence protecting them from danger and promoting safety and survival (Bowlby, 1982). This system is activated by perceived danger or threat that leads the infant to seek proximity to their attachment figure. If proximity and protection is attained, the child feels relieved and secure, and develops positive mental representations of self and protective others (Mikulincer & Shaver, 2007). The attachment system operates continuously to provide a sense of security and facilitate the exploration of the world by the child (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1982). Over repeated interactions, children are theorised to internalise their experiences with caregivers. These early experiences form a prototype for later relationships outside the family, and are partly responsible for the *internal working models* – a set of knowledge structures or mental models about those interactions that contribute to the endogenous regulation of the attachment behavioural system (Bowlby, 1973; Bretherton & Munholland, 2008; Cassidy, 2000). There is a notion of continuity in relationship style, a linkage between early and later feelings and behaviours, in part due to these representations of self and social life, and also due to the expectations incorporated in these models. Despite age-related changes in the attachment behaviour, these representations based on earlier experiences are believed to persist and influence the personality, expectations, emotions, defences and the way of relating to others (Armsden & Greenberg, 1987; Bretherton & Munholland, 2008; Hazan & Shaver, 1987). After Bowlby's theory and subsequent formulations by several other researchers, parental

attachment is generally acknowledged as an ongoing influence on individual development throughout the lifespan, playing a powerful role in adult's emotional lives (Ainsworth et al., 1978; Bowlby, 1973; 1982), and generating effects that extend to other relationships, including romantic bonding.

According to Hazan and Shaver (1987), the emotional and behavioural dynamics of an adult romantic relationship is governed by the same biological system of infant-caregiver relationships. In early experiences, the proximity to the caregiver provides the sense of safety, security and confidence in the child. Through this relationship, the child builds the notion of being a person towards whom others and the attachment figure respond in a helpful way (*working models of self*); the caregiver is judged to be the sort of person who in general responds to calls for support and protection (*working models of others*) acting as a safety haven in time of need and as a secure base for exploration (Bowlby, 1973, 1982). Research suggests that adult romantic relationships may comprise similar dynamics (Bretherton & Munholland, 2008; Fraley & Davis, 1997). Yet, the threshold for activation of the attachment system in adulthood is normally higher than in childhood, since most adults have developed the ability to self-soothe and regulate emotions, and mental representations of relationship partners can become symbolic sources of protection (Mikulincer & Shaver, 2007). Personal roles in the relationship are also different. Whereas in infant-caregiver relationships the adult is the attachment figure and the infant is the attached individual, in adult relationships, the roles of attachment and caregiving are frequently interchanged (Cassidy, 2001). Adult attachment relationships involve not only the attachment system, but also the caregiving and the sexual or reproductive system (Fraley & Shaver, 2000). Nevertheless, it was proposed that adult romantic attachment relationships and infants' emotional bonds with their primary caregivers are conceptually parallel (Mikulincer & Shaver, 2007).

The working models of attachment developed in early experiences continue to guide a person's cognitions and feelings, and to shape the behaviour towards close relationships throughout life (Hazan & Shaver, 1987; Pietromonaco & Feldman Barrett, 2000). Attachment researchers argued that attachment representations are relatively stable across time and place, and that attachment behaviour is organised and consistent (Hazan & Zeifman, 1994). However, Bowlby (1982) also discusses changes in attachment models and behaviours, emphasising that, when these changes are necessary, they are not only likely to occur in reaction to particular traumatic events but are also adaptive (Fraley & Shaver, 2000). Several studies support the hypothesis of attachment stability (e.g. Fraley & Davis, 1997; Scharfe & Bartholomew, 1994). In addition, studies exploring change in attachment provide support to Bowlby's suggestion that change is not motivated solely in response to stressful situations, but in some cases is positive and healthy (e.g. Davila, Karney, & Bradbury, 1999). For this reason, working models of attachment can be subject to adjustment over time as a result of new experiences or unstable relationship environments, although there is some resistance to change (Crowell, Treboux & Waters, 2002; Mikulincer & Shaver, 2007). Therefore, despite the general trend for consistency of working models across relationships, in particular romantic relationships (Gleeson & Fitzgerald, 2014; Matos et al., 2001), some studies advocate that this association might not be observed in all individuals. For example, individuals who are insecure with reference to parental attachment are not necessarily insecure with reference to romantic relationships (see Cowan & Cowan, 2001), suggesting the existence of qualitatively different working models for these two key attachment relationships (Crowell, Fraley & Shaver, 2008). In the present study the hypothesis of continuity and stability in representations – from parental attachment to romantic attachment relationships – is explored.

Hope and life satisfaction are considered important variables in building a positive human development and are associated with adaptive outcomes, such as positive behaviours and attitudes. Over the past decades, researchers came to relate the perception of quality in attachment relationships with levels of satisfaction with life (e.g. Hinnen, Sanderman & Sprangers, 2009) and hope (Blake & Norton, 2014). In particular, attachment security has been associated with higher levels of life satisfaction (Sumer & Knight, 2001); and attachment avoidance and anxiety associated with lower levels of life satisfaction and less commitment to enduring relationships (Bethany & Lorne, 2008). An important question is how the primordial internal models (about the self, others and relations) will influence future relationships, namely the romantic ones, and how these influences are supposed to have significant effect on life satisfaction or hope. In the following sections, a study is presented on the association between relational contexts – parental and romantic attachment relationships – and satisfaction with life and hope.

2. Method

2.1. Participants and procedures

Participants (N= 262) were recruited through direct approach while attending their courses at higher education institutions in the city of Coimbra. Permission was sought to distribute questionnaires on venues which took approximately 20 minutes to complete. The informed consent complied with

institutional regulations and no incentives were offered. Data from individuals who reported not having experienced a romantic relationship (presently or in the past) were excluded from the analysis, as suggested by Matos, Barbosa and Costa (2001). Equally gender distribution was observed (131 males and 131 females) and the participants were aged between 18-34 years (average of 21.3 years and standard deviation of 3.12).

2.2. Measures

The romantic attachment was measured with the *Romantic Attachment Questionnaire (RAQ)*; Matos et al., 2001) in the short version (Matos, Cabral & Costa, 2008) using a 25-item instrument rated on a 6-point Likert-type response scale, from 1= “strongly disagree” to 6=“strongly agree”. For data analysis items are grouped to assess four dimensions concerning the romantic relationship or the romantic partner while attachment figure: (i) *Confidence*; (ii) *Dependency*; (iii) *Avoidance*; and, (iv) *Ambivalence*. The RQA is a valid and reliable measure for studying the quality of adult romantic attachment.

Parental attachment was measured using the *Inventory of Parent and Peer Attachment (IPPA)*; Armsden & Greenberg, 1987) in the Portuguese version (Machado & Oliveira, 2007), a 28-item measure rated on a 5-point Likert-type response scale, from 1=“never true” to 5=“always true”. This scale assesses positive and negative perceptions within the relationship with parents and close friends, considering both cognitive and affective scopes. For data analysis items are grouped in three dimensions: (i) *Confidence*; (ii) *Communication*; and, (iii) *Alienation*.

The general life satisfaction was assessed with the *Satisfaction with Life Scale (SWLS)*; Diener et al., 1985) in the Portuguese version (Simões, 1992). The 5-item measure, rated on a 6-point Likert-type response scale from 1= “strongly disagree” to 6= “strongly agree”, was created to measure overall life satisfaction through individual perceptions of subjective well-being given by the sum of all the items. Results vary from 5 to 25, with the highest score indicating more satisfaction with life.

The hope was measured with the *Hope scale (HS)*; Snyder, 1995) in the Portuguese version (Pais-Ribeiro, Pedro & Marques, 2006). The scale comprises 12 items to measure goal-directed thinking: i) four are distracters; ii) four measure *agency* (goal directed determination); and iii) and four measure *pathways* (planning to meet goals). The hope scale is therefore organised in two dimensions, *agency* and *pathways*, which together determine an overall “hope” score. Participants respond on an 8-point Likert-type rated scale, from 1= “definitely false” to 8= “definitely true”. Scores can range from 8 (low) to 64 (high). High scores indicate that individuals are more hopeful (overall *hope* score), more motivated to achieve their goals (*agency* subscale score) and more capable of designing means to achieve their goals (*pathways* subscale score) (Snyder 1995).

3. Results

The adequacy of sampling is verified through Kaiser-Meyer-Olkin’s test, whereas the strength of the relationship among variables is assessed through Bartlett’s test of sphericity. All measures are statistical significant ($p \leq 0.001$) and suitable for factorial analysis. The reliability is tested using Cronbach’s coefficient alpha. Results reveal good correlation among all the items. All measures have good internal consistency, confirming that all items are measuring the same underlying construct.

Table 1 summarises the correlations between scales and subscales concerning parental attachment (IPPA) and romantic attachment (RAQ). The correlation between mental representations regarding parental attachment (IPPA) and romantic attachment (RAQ) is significant (with low to moderate values), and the direction of this correlation occurs as expected, presenting positive correlations between: i) parental attachment (IPPA) and *trust* in romantic relationship (RAQ); ii) *alienation* in parental attachment (IPPA) and *ambivalence* in romantic relationships (RAQ); and negative correlations between: iii) parental attachment (IPPA overall score) and *trust* in romantic bonding (RAQ); iv) *alienation* in parental attachment (IPPA) and *trust* in romantic relationship (RAQ).

Table 1. Correlation between parental attachment (IPPA) and romantic attachment (RAQ)

IPPA		RAQ			
		Trust	Dependency	Avoidance	Ambivalence
	Global score	.17*	-.13**	-	-.22*
	Trust	.12**	-.17**	-	-.19*
	Communication	.15**	-	-	-.15*
	Alienation	-.21*	-	-	.25*

* $p=0.01$; ** $p=0.05$

Results concerning differential associations between parental and romantic attachment styles (IPPA; RAQ) and levels of hope (HS) and satisfaction with life (SWLS) are summarised in Table 2.

Table 2. Correlation between attachment relationships (IPPA; RAQ), hope(HS) and satisfaction with life (SWLS)

		HS			SWLS
		Hope	Agency	Pathways	SWL
IPPA	Global score	.33	.39(15.2%)	.22	.48(23%)
	Trust	.32	.36 (13%)	.21	.44 (19.4%)
	Communication	.25	.28	.17	.38 (14.4%)
	Alienation	-.30	-.35(12.3%)	-.19	-.45 (20.3%)
RAQ	Trust	-	-	-	.18
	Ambivalence	-.25	-.27	-.19	-.27

p≤0.01

The correlation between attachment to parents (IPPA) and satisfaction with life (SWL) is positive and statistically significant ($p \leq 0.01$) in regards to the overall score, *communication*, and *trust* in parental attachment (IPPA) and overall score of satisfaction with life (SWLS); and negative when considering the subscale *alienation* in parental attachment (IPPA) and overall score of *satisfaction with life* (SWLS). As for the association between romantic attachment (RAQ) and satisfaction with life (SWLS), this relationship is positive when considering the subscale *trust* in romantic attachment (RAQ) and general satisfaction with life (SWLS), and a negative when correlating *ambivalence* in pair bonding (RAQ) and satisfaction with life (SWLS). Although the correlations between these two variables (QVA and SWLS) happens as expected it is highlighted that the percentage of explained variance is low and not supports the hypothesis of covariance.

Considering the association between attachment to parents (IPPA) and hope (HS), it is possible to observe positive associations between: i) overall score, and subscales *trust* and *communication* in parental attachment (IPPA) and *agency* in hope (HS); ii) overall score and subscale *trust*, in parental attachment (IPPA) and overall score in hope (HS); and negative correlations between: iii) *alienation* in parental attachment (IPPA) and both overall score and *agency* in hope (HS). Associations between parental attachment (IPPA) and the subscale *pathways* (HS) are not statistically significant. As for associations between romantic attachment relationships (RAQ) and hope (HS), data suggest a negative correlation between *ambivalence* in romantic attachment (RAQ) and both the overall and *agency* in hope (HS).

4. Discussion

The relationship between attachment to parents and both satisfaction with life and agency in hope scale is stronger than the association between romantic attachment relationships and the same variables, providing evidence of the strength and prevalence of early relationships with parents. Data concerning the association between parental and romantic styles of attachment shows a significant correlation between these two variables and the direction of correlation occurs as expected. However, the percentage of explained variance, and the strength of association between variables, is low. Thus, parental attachment can only explain a small percentage of the variation occurred in romantic attachment relationship. This data is consistent with other studies (e.g. Crowell, Fraley & Shaver, 2008) reporting low correlations (below .35) between these two relational contexts and suggest that these two constructs might be independent. An alternative explanation could rely on the fact of RAQ and IPPA items being quite specific about the kind of relationship analysed – and this specificity, may itself justify the magnitude of correlations. Nevertheless, these findings suggest the need for further studies exploring the hypothesis of independent representations concerning parental attachment and romantic bonding. When examining the continuity of attachment patterns through lifespan, is important to clarify whether these constructs, regarding different relationships (e.g. parental and romantic attachment), are related or perceived as independent, and explore mediating variables, when change in patterns is observed.

References

- Ainsworth, M., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, N. J.: Erlbaum.
- Armsden, G. C. & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence*, 16 (5), 469-480.

- Bethany, B. & Lorne, C. (2008). Adult attachment, sexual satisfaction, and relationship satisfaction: A study of married couples. *Personal Relationships*, 15 (1), 141-154.
- Blake, J., & Norton, C. L. (20014) Examining the relationship between Hope and Attachment: A Meta-Analysis. *Psychology*, 5, 556-565
- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and anger*. New York: Basic Books.
- Bowlby, J. (1982). *Attachment and loss: Vol. 1, Attachment* (2nd ed.). New York: Basic Books.
- Bretherton, I., & Munholland, K. (2008). Internal working models in attachment relationships: Elaborating a central construct in attachment theory. In J. Cassidy & P. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (2nd ed., pp.102-127), New York: Guilford Press.
- Cassidy, J. (2000). Adult romantic attachments: A developmental perspective on individual differences. *Review of General Psychology*, 4, 111-131.
- Cowan, P., & Cowan, C. (2001). A couple perspective on the transmission of attachment patterns. In C. Clulow (Eds.), *Adult Attachment and Couple Psychotherapy: The 'secure base' in practice and research* (pp.62-82). London: Brunner-Routledge.
- Crowell, J. A., Fraley, R. C. & Shaver, P. R. (2008). Measurement of individual differences in adolescent and adult attachment. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (2nd ed., pp. 599-634). New York: Guilford.
- Crowell, J., Treboux, D., & Waters, E. (2002). Stability of attachment representations: The transition to marriage. *Developmental Psychology*, 38, 467-479.
- Davila, J., Karney, B., & Bradbury, T. (1999). Attachment change processes in the early years of marriage. *Journal of Personality and Social Psychology*, 76, 783-802.
- Diener, E., Emmons, R., Larsen, R., & Griffin, S. (1985). The satisfaction with life scale, *Journal of Personality Assessment*, 49, (1), 71-75.
- Fraley, R., & Davis, K. (1997). Attachment formation and transfer in young adults' close friendships and romantic relationships. *Personal Relationships*, 4, 131-144.
- Fraley, R., & Shaver, P. (2000). Attachment theory as an organizing framework: A view from different levels of analysis. *Review of General Psychology*, 4 (2), 107-110.
- Gleeson, G., & Fitzgerald, A. (2014). Exploring the association between adult attachment styles in romantic relationships, perceptions of parents from childhood and relationship satisfaction. *Health*, 6, 1643-1661.
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52, 511-524.
- Hazan, C., & Zeifman, D. (1994). Sex and the psychological tether. *Advances in Personal Relationships*, 5, 151-177.
- Hinnen, C., Sanderman, R. & Sprangers, M. (2009). Adult attachment as mediator between recollections of childhood and satisfaction with life. *Clinical Psychology & Psychotherapy*, 16 (1), 10-21.
- Machado, T. S. & Oliveira, M. (2007). Vinculação aos pais em adolescentes portugueses: O estudo de Coimbra *Psicologia e Educação*, 6 (1), 97-116.
- Matos, P. M., Barbosa, S. & Costa, M. E. (2001). Avaliação da vinculação amorosa em adolescentes e jovens adultos: Construção de um instrumento e estudos de validação *Revista Oficial de la Asociación Ibero Americana de Diagnóstico y Evaluación Psicológica*, 11, 93-109.
- Mikulincer, M., & Shaver, P. (2007). *Attachment in adulthood: Structure, dynamics, and change*. New York: Guilford Press.
- Pais-Ribeiro, J. L., Pedro, L. & Marques, S. (2006). Contribuição para o estudo psicométrico e estrutural da Escala de Esperança (de futuro). In I. Leal, J. L. Pais Ribeiro & S. N. Jesus (Orgs.), *Actas do 6º Congresso Nacional de Psicologia da Saúde* (pp.75-81). Faro: Universidade do Algarve.
- Pietromonaco, P., & Feldman Barrett, L. (2000). The internal working models concept: What do we really know about the self in relation to others? *Review of General Psychology*, 4, 155-175.
- Scharfe, E., & Bartholomew, K. (1994). Reliability and stability of adult attachment patterns. *Personal Relationships*, 1, 23-43.
- Simões, A. (1992). Ulterior validação de uma escala de satisfação (SWL). *Revista Portuguesa de Pedagogia*, 26 (3), 503-515.
- Snyder, C. R. (1995). Conceptualizing, measuring, and nurturing hope. *Journal of Counseling & Development*, 73, 355-360.
- Sumer, H., & Knight, P. (2001). How do people with different attachment styles balance work and family? A personality perspective on work-family linkage. *Journal of Applied Psychology*, 86, 653-663.

SELF-STIGMA IN MENTAL HEALTH: PLANNING EFFECTIVE PROGRAMS FOR TEENAGERS

Nicolina Bosco¹, Andrea Guazzini², Elisa Guidi³,
Susanna Giaccherini⁴ & Patrizia Meringolo⁵

¹PhD student, Department of Education and Psychology, University of Florence (Italy)

²PhD and Researcher, Department of Education and Psychology, University of Florence (Italy)

³PhD student, Department of Information Engineering, University of Florence (Italy)

⁴Psychologist, Public Mental Health Service of Tuscany (Italy)

⁵Professor, Department of Education and Psychology, University of Florence (Italy)

Abstract

Self-stigma is defined as the interiorization of negative aspects ascribed to an individual by his/her social context, producing a re-definition about the Self, conforming to social judgment. Self-stigma affects negatively one's self-esteem and self-efficacy, and reduces the possibilities of reaching important personal goals: it may prevent one from fostering a self-image. In mental health self-stigma plays a crucial role because of the impacts of the time between the first symptoms and the decision to seek help. Public health services too, even if present and effective in the local community, are negatively perceived as ascribing social stigma towards people utilizing their service. Thus, individuals may decide, despite early mental instability, to avoid asking for help for fear of being labeled as a "mental patient". This labeling is perceived as a problem particularly among teenagers, because of their still uncertain social identity.

This presentation is part of a greater action research plan carried out by a network of social actors at the University of Florence, Public Mental Health Service of Florence Area and a Public High School in the same local community.

Purpose: The research is aimed to explore self-stigma in adolescence, analyzing its relations with empowerment and gender differences.

Methods: Participants: 315 students (male 51,6%), aged 16 to 20 years (M= 17,46, SD= 0,66).

Instruments: Self-Stigma of Seeking Help Scale-SSOSH (Vogel, Wade & Haake, 2006), to analyze threats to self-esteem in seeking for help; Personal and Political Empowerment Scale (Francescato et al., 2007), to explore capability in deciding and effectively achieving goals, hopelessness, social and political participation; and an ad hoc questionnaire that assessed social support perceived in case of psychological problem.

The results will be explained and discussed in relation to the self-stigma construct. The data show a positive correlation between hopelessness and perceived threats towards self-esteem, first of all in the field of social acceptance and reputation. Capability in achieving goals is positively related to political participation (e.g. juvenile social groups or social activities in local community), and negatively related to hopelessness.

Attention paid to self-stigma in adolescence is a crucial task to understand and plan actions for an effective intervention before mental wellness deteriorates, therefore it may take a central role working with teenagers. Another important aspect concerns the network built in local communities, with an active cooperation among associations, social groups and NGOs, to allow a setting for mental health not (only) in medical sites but (above all) in the whole community.

Keywords: *self-stigma, empowerment, teenagers, mental health, community-based actions.*

1. Introduction

Mental health is defined by multiple factors at individual, social, cultural, economic, political and environmental levels. In addition to defined determinants of health, a relevant role is assumed by participation to promote also social inclusion for people with mental illness (WHO, 2013).

While participating to the community daily life is a central key in the promotion of mental health, this is more difficult to achieve in local community for people with mental illness because of stigma, a construct indicating a negative label that sets a person or a social group (Goffman, 1963).

According to Corrigan, Kerr and Knudsen (2005) we distinguish two forms of this construct, which affect two different levels: public stigma and self-stigma. The first is a social phenomenon sustained by stereotypes about, and acting against, a social group, such as people with mental illness; the second, is a re-definition about the Self in terms of negative attribution given by the others in the community. Thus, starting from the social system, the label becomes a specific characteristic about the Self (Gaebel et al., 2014).

The Self-stigma, focus of this paper, is also known as internalized stigma (VanBrakel et al., 2006).

It is a process derived from internalizing stereotypes and prejudice to one's self, and it diminishes the self-esteem and lowers the self-efficacy (Corrigan, Larson & Rüsich, 2009; Livingston and Boyd, 2010; Markowitz, 1998). In this process, the previously held or desired identities (e.g. as a partner) are lost and a stigmatized view of oneself is adopted (Yanos et al., 2008).

The self-stigma has a central role in seeking psychological help for a personal problem, and this strategy is less likely when people feel themselves as inferior or incompetent (Corrigan, Watson, & Barr, 2006; Vogel, Wester, Wei & Boysen, 2005). It is defined as a barrier because of the impact on the time between the first symptoms and the decision to seek help, related to the stigmatizing beliefs of mental illness on one's self-esteem (Gaebel, et al., 2014; O'Driscoll, Heary, Hennessy & McKeague, 2012).

The negative images of mental illness and the Public Mental Health Services (PMHS) are perceived as ascribing social stigma towards people utilizing these services. The public stigma associated with psychological services is, in fact, an important factor in the decision to seek treatment. Individuals may decide, despite early mental instability, to avoid asking for help for fear of being labelled as a "mental patient" (Corrigan et al., 2005; Holmes & River, 1998). Thus, in case of seeking help an individual's internalized self-concept, self-esteem, and self-efficacy are perceived as threatened (Corrigan, Kosyluk & Rüsich, 2013; Vogel, Wade & Haake, 2006). In addition, research suggests that age and gender are important factors in determining patterns of public stigma and self-stigma (Afifi, 2007).

According to Gaebel and colleagues (2014), these last factors, together with the trust and quality of the service, can influence the decision of seeking help in a PMHS. In particular, trust has a central role for young users (Gulliver, Griffiths & Christensen, 2010; Wallerstein & Bernstein, 1994).

The label as "mental patient" is perceived as a problem particularly among teenagers because of their still uncertain social identity, and for the central role of self-evaluation (Swords, Heary & Hennessy, 2011). In this paper the attention is posed on teenagers, to better understand their perception about self-stigma, which is necessary to plan effective interventions in the local community (Wahl, 2012).

2. Design

The study is part of a greater action research project realized in a network comprising the University of Florence, the Public Mental Health Service (PMHS) of Florence Area, and a Public High School in the same local community.

In accordance with the research objective, we used quantitative, and exploratory data. The data were collected from January 2015 until May 2015.

3. Objective

The aim of the research is to explore self-stigma in adolescence, analyzing its relations with empowerment and gender differences.

4. Method

4.1. Participants

Participants were 315 high school students, of whom 48,4% were female and 51% were male. The mean age was 17.46 (S.D.= 0.66).

4.2. Instruments

Self-Stigma was measured using the Self-Stigma of Seeking Help Scale-SSOSH (Vogel, Wade & Haake, 2006). SSOSH items involve statements rated for disagreement or agreement along a 5-point

Likert-type scale (from 1, for “I completely disagree”, to 5, for “I completely agree”) and analyze threats to self-esteem in seeking for help.

To explore intrapersonal empowerment, the Personal and Political Empowerment Scale was used (Francescato et al., 2007). The Personal and Political Empowerment Scale items involve statements rated for disagreement or agreement along a 6-point Likert-type scale (from 1, for “I completely disagree”, to 6, for “I completely agree”). Statements represent three components: a) capability in deciding and effectively achieving goals; b) hopelessness; c) social and political participation.

An ad hoc self-report questionnaire was developed to assesses the perceived social support in case of psychological problems, and the perception related to Public Mental Health Services (PMHS).

4.3. Data analysis

The data were analyzed using SPSS software (Statistical Package for Social Science). Descriptive statistics, Pearson correlation coefficients and Student’s t-test are presented.

5. Results

Descriptive analysis were carried out to investigate teenagers’ opinion related to the perceived social support in case of psychological problems, and their perception related to Public Mental Health Services (PMHS). Participants were asked to express their opinion about the most relevant difficulties for an adolescent to seek help in a PMHS. Prejudice was the most frequent answer ($M= 3,58$, $SD=1.021$). The lack of knowledge about how the Service works seems to be particularly present in the adolescents’ perception ($M=3.49$, $SD=1.116$). In case of psychological problems, participants referred that peers network ($M=3.74$, $SD= .952$) and relatives ($M= 3.70$; $SD= 1.048$) would be the preferred choices for source of social support. In addition, data show that participants perceived private psychologist more effective than PMHS ($M=3.40$, $SD=1.216$).

Sets of Pearson correlations were performed to explore the relation between SSOSH and Personal and Political Empowerment.

The data show a significant positive correlation between hopelessness and perceived threats towards self-esteem, first of all in the field of social acceptance and reputation ($p<.01$). Capability in achieving goals is positively related to political participation, as well as social activities in local community ($p<.01$). Data shows also a significant inverse relationship between the capability in achieving goals and hopelessness ($p<.01$).

Concerning the gender differences males have higher scores in SSOSH compared to females ($M=29.74$; $SD=6.6$) but there is not a significant difference ($p>.05$).

6. Discussion and conclusion

In this paper we report novel data referred to the self-stigma in adolescence, analyzing its relations with empowerment and gender differences.

In mental health self-stigma plays a crucial role because of the impact on the time between the first symptoms and the decision to seek help (Vogel, Wade & Haake, 2006; Gaebel et al., 2014).

Our data show a significant positive correlation between hopelessness and perceived threats towards self-esteem. In the field of social acceptance and reputation, peer networks have a significant role especially in adolescence (Gulliver, Griffiths & Christensen, 2010). Thus, seeking help in a PMHS in case of psychological problem is perceived by teenagers as an element of weakness or an acknowledgment of failure (Vogel, Wester, Wei & Boysen, 2005). Therefore, according to the literature, seeking help at PMHS is perceived as threatening one’s self-esteem for the participants.

Public health services too are perceived as ascribing social stigma towards people utilizing these services. Hence, individuals may decide to avoid asking for help because of the concern of being labeled as a “mental patient”. This labeling is perceived as a problem particularly among teenagers (Gulliver, Griffiths & Christensen, 2010). We show that one of the most relevant difficulties perceived by an adolescent in seeking help in a PMHS is prejudice. Also, the lack of knowledge about how the service works is considered by the participants as another perceived barrier related to the access to the PMHS.

The data show a significant positive correlation between hopelessness and perceiving the self-esteem threatened. Capability in achieving goals is both positively related to political participation as well as social activities in local community, and negatively related to hopelessness. These data imply that community participation, by promoting knowledge about the local territory, could favour the development of a critical awareness about the social context, including perceiving the PMHS as an important resource for wellbeing.

Additionally, this study shows that the principal source of support in adolescence is peer network. In case of a psychological problem, in fact, teenagers ask friends for help. This finding could open up opportunities for future interventions using peer education strategies to promote knowledge about mental health and functioning of the PMHS.

Interrogating aspects of Self-stigma in adolescence is thus particularly relevant to understand and plan effective actions for the mental health promotion in the community. Therefore, working in the network built within local communities, by fostering the active participation of teenagers, could be a key action in preventing mental illness.

References

- Afifi, M. (2007). Gender differences in mental health. *Singapore Medical Journal*, 48, 385-391.
- Corrigan, P. W., Kerr, A., & Knudsen, L. (2005). The stigma of mental illness: Explanatory models and methods for change. *Applied and Preventive Psychology*, 11, 179-190.
- Corrigan, P. W., Demming Lurie, B., Goldman, H. H., Slopen, N., Medasani, K., & Phelan, S. (2005). How Adolescents Perceive the Stigma of Mental Illness and Alcohol Abuse. *Psychiatric Services*, 56, 544-550.
- Corrigan, P. W., Watson, A. C., & Barr, L. (2006). The Self-Stigma of Mental Illness: Implications for Self-Esteem and Self-Efficacy. *Journal of Social and Clinical Psychology*, 25, 875-884.
- Corrigan, P. W., Larson, J. L., & Rüsck, N. (2009). Self-stigma and the “why try” effect: impact on life goals and evidence-based practices. *World Psychiatry*, 8, 75-81.
- Corrigan, P., W., Kosyluk, K., & Rüsck, N. (2013). Reducing Self-Stigma by Coming Out Proud. *American Journal of Public Health*, 103, 794-800.
- Francescato, D., Mebane, M., Sorace, R., Vecchione M., & Tomai, M. (2007). EMPO: Una scala di misurazione dell’empowerment personale e politico. *Giornale Italiano di Psicologia*, 2, 465-487.
- Gaebel, W., Muijen, M., Baumann, A. E., Bhugra, D., Wasserman, D., Van Der Gaag, R. J., Heun, R., & Zielesek, J. (2014). EPA guidance on building trust in mental health service. *European Psychiatry*, 29, 83-100.
- Goffman, E. (1963). *Stigma: Notes on the Management of Spoiled Identity*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Gulliver, A., Griffiths, K. M., & Christens, H. (2010). Perceived barriers and facilitators to mental health help-seeking in young people: a systematic review. *BMC Psychiatry*, 10, 113.
- Holmes, E. P., & River, L. P. (1998). Individual strategies for coping with the stigma of severe mental illness. *Cognitive and Behavioral Practice*, 5, 231-239.
- Livingston, J. D., & Boyd, J. E. (2010). Correlates and consequences of internalized stigma for people living with mental illness: a systematic review and meta-analysis. *Social Science and Medicine*, 71, 2150-2161.
- Markowitz, F.E., 1998. The effects of stigma on the psychological well-being and life satisfaction of persons with mental illness. *Journal Of Health And Social Behavior*, 39, 335-347.
- O’Driscoll, C., Heary, C., Hennessy, E., & McKeague, L. (2012). Explicit and implicit stigma towards peers with mental health problems in childhood and adolescence. *Journal of Child Psychology and Psychiatry*, 53, 1054-1062.
- Swords, L., Heary, C. & Hennessy, E. (2011). Factors associated with acceptance of peers with mental health problem in childhood and adolescence. *The Journal of Child Psychology and Psychiatry*, 52, 933-941.
- Van Brakel, W. H. (2006). Measuring health-related stigma: a literature review. *Psychology, Health and Medicine*, 11, 307-334.
- Vogel, D. L., Wester, S. R., Wei, M., & Boysen, G. A. (2005). The role of outcome expectations and attitudes on decisions to seek professional help. *Journal of Counseling Psychology*, 52,459-470.
- Vogel, D. L., Wade, N. G., & Haake, S. (2006). Measuring the Self-Stigma Associated With Seeking Psychological Help. *Journal of Counseling Psychology*, 53, 325–337.
- Wahl, O. F. (2012) Stigma as a barrier to recovery from mental illness. *Trends in Cognitive Sciences*, 16, 9-10.
- Wallerstein, N., & Bernstein, E. (1994). Introduction to Community Empowerment, Participatory Education, and Health. *Health Education Quarterly*, 21, 141-148.
- World Health Organization (2013). Mental Health Action Plan 2013-2020, Who, Genève.
- Yanos, P., Roe, D., Markus, K., & Lysaker, P. (2008). Pathways between internalized stigma and outcomes related to recovery in schizophrenia spectrum disorders. *Psychiatric Services*, 59, 1437-1442.

PROFESSIONAL IDENTITY OF ADOLESCENTS WITH DIFFERENT TYPES OF ATTACHMENT TO MOTHER

Tatiana Konshina

Postgraduate Student, Faculty of Psychology, Lomonosov Moscow State University (Russia)

Abstract

Attachment to mother, as a characteristic of child-parental relationship, has a profound influence on the level of personal autonomy in adolescence. Formation of professional identity is one of the most important developmental tasks (R. Havighurst) during adolescence. Nowadays adolescents in Russia need to make first choices in vocational area whereas they have a low level of autonomy in parental-child relations. The theoretical basis of the study is attachment theory, formulated by Bowlby and expanded by others (Bartholomew, Mikulincer, Shaver, Waters, Cassidy, Sheiver). The study of professional identity is based on theory of personal identity development (E. Erikson), theory of identity statuses (J.Marsia). The aim of the study was to explore the specificity of professional identity development of the teenagers with the different types of attachment to mother. 110 pupils from 15 to 18 years from Moscow schools (9th – 11th grades) participated in the research. Method of revealing the features of attachment to mother among adolescents (Yaremchuk, 2005) in the adaptation of G.V.Burmenskaya, O.V.Almazova (2015), Questionnaire of investigation of professional identity status of the adolescents (Azbel, 2004) were used in the research. The results of our research show that the pupils of 11th grade (the last grade of Russian school) mainly have the status of “achieved” professional identity (the crisis is over, the vocational choice is made). The predominate status of professional identity among pupils of 9th and 10th grades is “moratorium” (crisis of vocational choice). The study also revealed that adolescents with secure type of attachment to mother have the status of “formed” professional identity, whereas other groups of adolescents with unsecured type of attachment to mother often have “unformed” professional identity status. The central new formation at adolescence is the new level of self-conscience and the development of personality and vocational self-determination (L.S. Vygotsky, D.B. Elkonin, N.S. Pryazhnikov). The family appears to play a critical role in a child’s professional development (Guerra and Braungart-Rieker, 1999; Otto, 2000; Taylor and Hurriss, 2004) the career decision-making seems to become a cooperated resolution in family. Our research revealed the features of professional identity of the teenagers with different types of attachment to mother. Peculiarities of preliminary vocational self-determination among pupils of different school grades were found. Research concludes that attachment to mother is an important factor for professional identity building at adolescence.

Keywords: *professional identity, child-parental relationship, adolescence, career decision-making.*

1. Introduction

Actual Russian society is characterized by a high level of uncertainty and volatility as the rapid dynamics of social transformations, considered by variability, plurality, contradiction and low predictability (Belinskaya, 2014). The problem of self-determination of a teenager in different spheres of life is associated with both psychological characteristics of this age period of development, which is traditionally characterized as a critical (Bozhovich, 1981, 1997; Vygotsky, 1982; Erikson, 1996; Lichko, 1997, etc.), and the current situation of Russian society, the peculiarities of modern childhood, its crisis, changes in the social situation of development of modern adolescents compared to the social situation of their peers development at 1990th and 2000th (Rean, 2010; Sobkin, 1999, 2013; Feldstein, 2008; Polivanova, 2011, 2013; Venger, 2008; Karabanova, 2014; Marsinkovskaya, 2013; Dubovskaya, 2011; Sadovnikova, 2014, etc.).

As a central characteristics of the age of adolescence (15-17 years) we can distinguish the establishment of a new level of consciousness, the search for identity, the development of moral and value orientations, the possibility of forming an autonomous morality based on a new level of intellectual development, development of reflection, to build life plans in a time perspective (J. Piaget; G. Craig;

D. Stern; Ph. Rice; L.I. Bozhovich; A.I. Lichko; L.S. Vygotsky). The school as a community (L. Kohlberg), moral atmosphere of school affects the formation of moral and value orientations of adolescents (Sadovnikova, 2005; Karabanova, Sadovnikova, 2014). The leading activity in adolescence is considered to be the educational and professional activities as the activities of mastering the system of scientific concepts in the context of pre-professional self-determination (Elkonin, 1971; Klimov, 2004).

The empirical studies of early 2000th indicate a complication of the social situation of development among adolescents (Karabanova, 2002; 2011; 2013), extending the period of childhood, immaturity as a common trait of modern youth representatives (Seregina, 2006), the need of identifying mechanisms for the development of the child's personality in the conditions of the "new childhood" (Polivanova, 2011; 2013). We agree that in the cohort of modern Russian adolescents there are the teenagers' groups with different level of individual autonomy, characteristics of separation from the parent family, career aspirations, focus on personal initiative and success, etc. (Varga, 2001; Sytko, 2014).

The task of the pre-professional self-determination is traditionally considered in Russian psychology as a problem of development of the adolescents (R. Havighurst) purchases qualitatively new features at the present stage of development of Russian society. After the adoption of the new Educational Law of Russia (2012) the need for an earlier career decision-making appeared. This Law obliges the adolescent to choose the educational profile, the subjects to pass at the end of 9th and 11th grades. Professional choice, opposed to professional self-determination (for Golovakha E.I.) - " is a decision that affects only the near-term pupil life" (Pryazhnikov, 2001). The decision on the activities of the adolescent, the choice of specific objectives of the pupil's activity, aimed to the construction and implementation of his personal professional perspective is adopted as a cooperated action of parents and teenagers. The objective necessity of cooperated planning and implementation of the adolescent's personal professional perspective is determined by the insufficient autonomy level of the adolescent who, as a rule, is in a certain extent dependent on the parents emotionally, financially, etc. The process of formation of the personal autonomy in adolescence, the adolescent separation from parents is a long and complex process, mediated by the pattern of parent-child relationship (Poskrebysheva, 2010; Karabanova, Poskrebysheva, 2013; Dzukaeva, Sadovnikova, 2013).

The impact of the parental family characteristics and the parental-child relationship on the professional self-determination of the adolescent is obvious. In despite of this, the subject of the association between the personal professional perspective features and the level of the adolescent's personal autonomy in the parental-child relationship seems insufficiently explored.

2. Objectives

The study was aimed to explore the specificity of professional identity development of the adolescents with different types of attachment to mother. We analyzed the age dynamics of adolescent's professional identity formation and compared the features of this formation among adolescents with different types of attachment to mother.

3. Methods

3.1. Sample

110 pupils from 15 to 18 years from Moscow schools (9th – 11th grades) participated in the research. Several questionnaires were used: Method of revealing the features of attachment to mother among adolescents (Yaremchuk, 2005) in the adaptation of G.V. Burmenskaya, O.V. Almazova (2015), Questionnaire of investigation of professional identity status of adolescents (Azbel, 2004). The results were statistically analyzed with IBM SPSS program.

3.2. Procedure

Method of revealing the features of attachment to mother among adolescents (Yaremchuk, 2005) in the adaptation of G.V. Burmenskaya, O.V. Almazova (2015) consists of 11 ternaries of claims corresponding to three classic types of attachment: secure, ambivalent and avoiding (M. Ainsworth). The conclusion about type of attachment to mother was based on subjects choices.

Questionnaire of investigation of professional identity status of adolescents (Azbel, 2004) includes 20 statements, implying one of the four possible answers. The conclusion about the prevailing status of the professional identity of the subject is based on his choices.

A.A. Azbel distinguishes four statuses of professional identity (PI):

- Uncertain professional identity: the choice of way of life is not made, there is no defined conception of the career choice, but the subject doesn't even set itself a problem.
- Imposed professional identity: a person has formed ideas about his professional future, but they are imposed from the outside (eg, parents) - not the result of self-selection.
- Moratorium (the crisis of choice) of professional identity: a person aware of the problem of choice of the occupation and is in the process of its solution, but the most suitable option is not yet defined.
- Achieved professional identity: professional plans determined, and it's the result of comprehended self-selection (Gretcov, Azbel, 2006).

4. Discussion

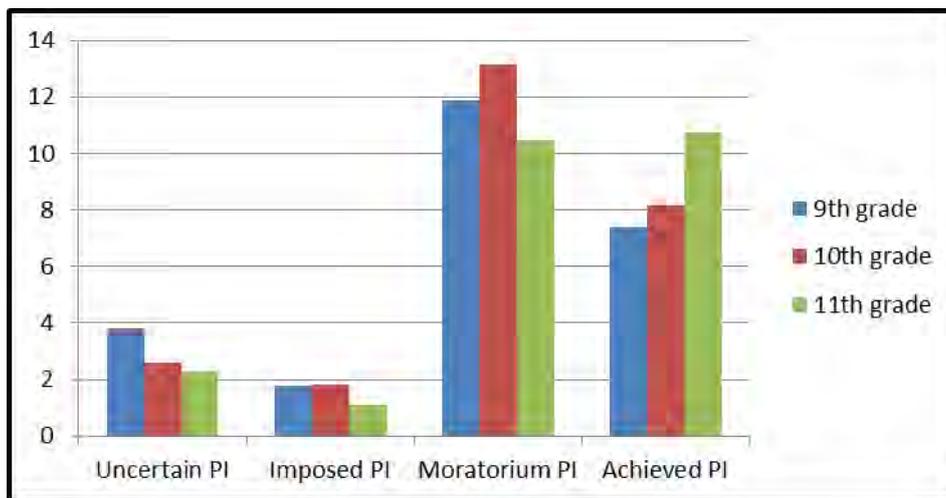
The results we received from the Questionnaire of adolescents' professional identity statuses investigation were analyzed at 2 steps. Firstly, we analyzed the average scores of different age groups of pupils. Secondly, we analyzed the expressiveness of each PI status – from 1(not defined) to 4 (brightly expressed).

A significant proportion of adolescents (40.9%), according to the results obtained using the procedure of A.A. Azbel is characterized by a defined achieved PI status. According to the description of the author's methodology, these adolescents are characterized by the fact that they are willing to make an informed choice of further professional development or have already made it. These adolescents have already gone through a "crisis of choice" (J. Marcia) and formed their own system of knowledge about themselves, professional values and beliefs in life.

At the same time, in our sample defined statuses of uncertain or imposed PI were not detected. The status of the moratorium (or "crisis of choice") is defined only in 2.7% of cases.

We analyzed age dynamics of average scores PI status in adolescence. Several results were observed (Figure 1).

Figure 1. Age dynamics of average scores PI status in adolescence (N = 110)



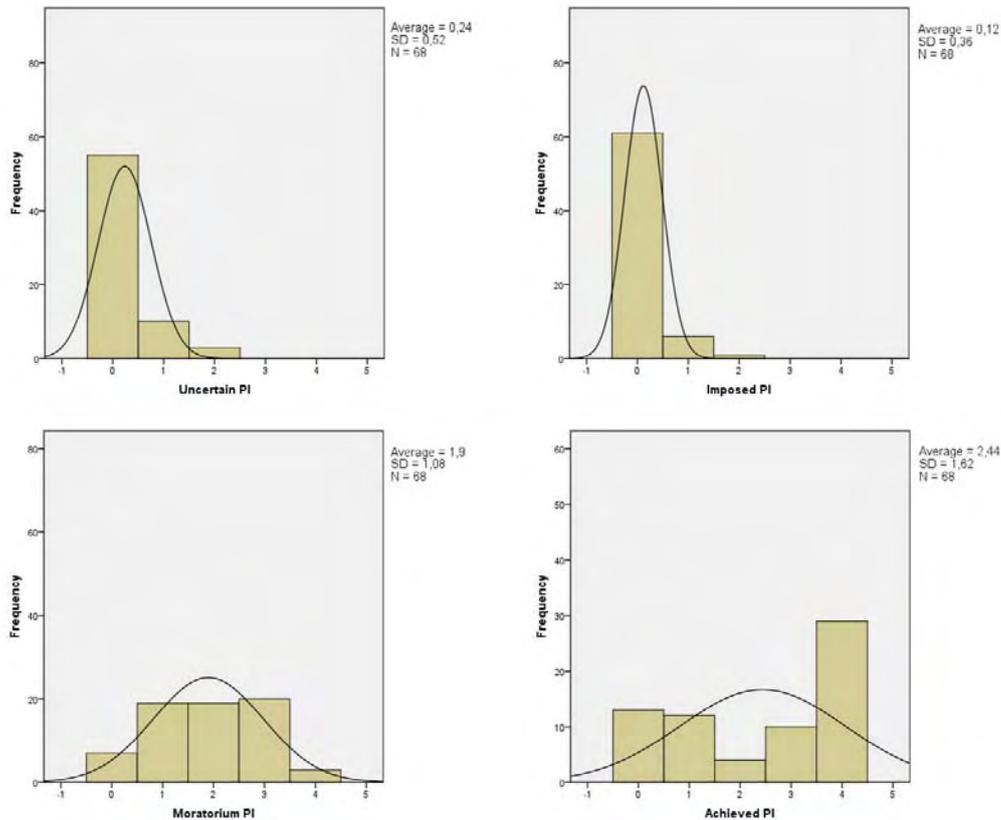
The highest average score for both pupils of 9th and 10th grade was revealed for the status of the *moratorium* PI, which indicates that most of them are in a crisis of their existential choice. There are significant differences in the transition from the 10th to the 11th grade ($p = 0,045$). At the same time the average scores of the *moratorium* PI status is declining and the average status of the *achieved* PI is increasing (it's the highest average score for the 11th grade). There are significant differences between the pupils of 9th and 11th grade at the average score of the *achieved* PI status ($p = 0,015$). Such results can be explained by the fact that by the end of high school the adolescents need to make their professional choice (at least at the stage of selecting a profile of the university and /or special education at the university, because this choice affects the choice of subjects to pass).

The average scores of the *uncertain* PI status is significantly decreased from 9th to 11th grade. It is reasonable to assume that adolescent's competence in professional choice is growing while the high school graduating is approaching.

The lowest scores for the entire sample are revealed at the *imposed* PI status. Our subjects, adolescents, are not inclined to accept the external (foreign) professional goals and interests, or it isn't conscious and reflexed by adolescents. The procedure of M.A. Yaremchuk (adaptation of

G.V. Burmenskaya, O.V. Almazova) is aimed at studying the characteristics of adolescent attachment to his mother. According to received information, 68 adolescents from our sample (61,8%) have the secure type of attachment to mother. Frequency profiles of the expressiveness of PI statuses of the adolescents with the *secure* type of attachment to mother are presented at Figure 2.

Figure 2. Profiles of the PI statuses of the adolescents with the secure type of attachment to mother



We can notice that in the group of adolescents with the secure type of attachment to mother the statuses of the *uncertain* PI and the *imposed* PI are manifested at the least expressiveness. The status of *moratorium* of PI is manifested in middle level. The greatest expressiveness between the adolescents with the secure type of attachment to mother is at the status of *achieved* PI.

It can be said that the secure type of attachment to mother acts as a characteristic of the parent-child relationship in which the mother takes part in a child's life, not imposing her views. Thus, a "healthy" type of attachment corresponds to a "healthy" (effective) status of a professional identity of adolescents – the *moratorium* of PI and *achieved* PI (Azbel, 2005).

There were only 6 subjects (5,4 %) characterized by the *ambivalent* type of attachment to mother in the studied sample. Subjects which were characterized by the *avoidant* type of attachment to mother in our sample also proved to be 6 (5,4%). The remaining amount of subjects (27, 24,5%) have the mixed type of attachment to mother. In this connection, we will compare the data type of the adolescents with the *secure* type attachment and those who do not have a secure type of attachment.

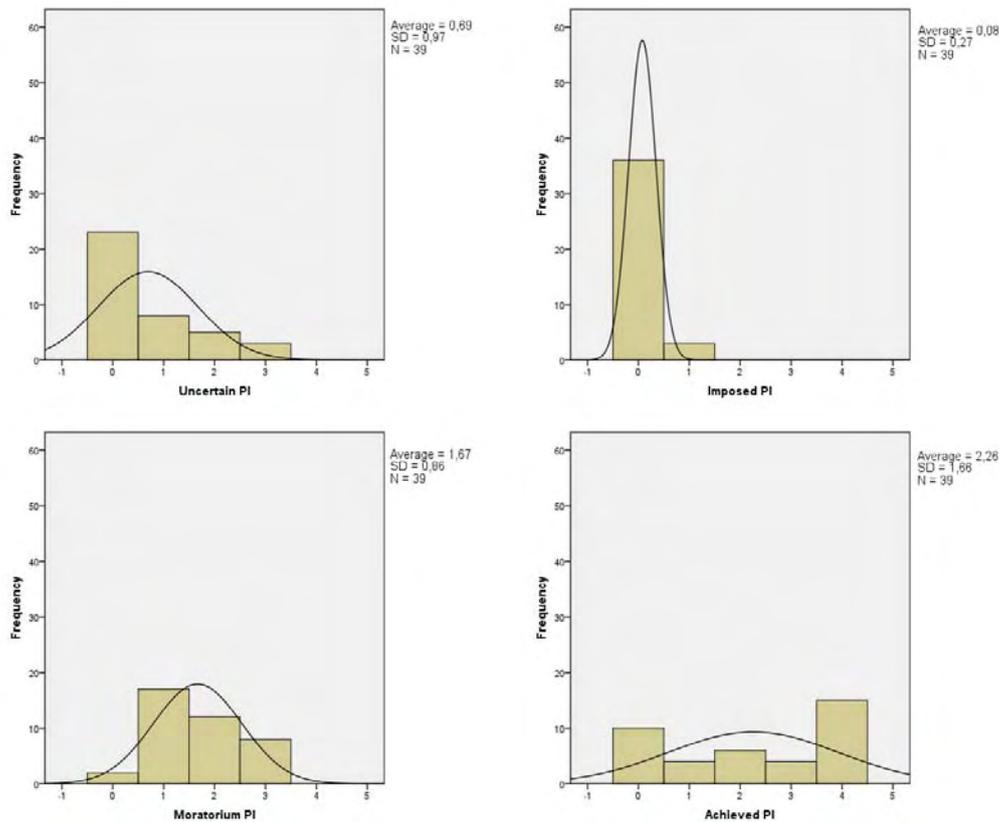
Frequency profiles of the expressiveness of statuses of PI of the adolescents with the *insecure* type of attachment are distributed as follows (Figure 3)

As can be seen from the profiles, the group with the *uncertain* PI status is more expressed in this part of sample.

The status of *imposed* PI in the group with the *insecure* type is expressed in the lesser extent. These data can be interpreted in different ways: as a complete refusal to accept and the position of parents in their own professional choices; as a low reflexion level of the professional choice among adolescents.

It can be seen that in comparison with a group of teenagers with the *secure* type of attachment to mother in this group the *uncertain* PI status is more present, and less present – the status of the *moratorium* of PI and *achieved* PI. These results can be interpreted as a confirmation that the healthier type of attachment (secure) corresponds to a healthy (achieved) professional identity.

Figure 3. Profiles of the PI statuses of the adolescents with the unsecure type of attachment to mother.



5. Conclusions

There are several significant results of our research. The significant age dynamics of the professional identity formation from 9th to 11th school grades were found: the level of professional identity is increasing from the unformed to the achieved PI. The study shows the influence of the type of attachment to mother on the formation of professional identity in adolescence. The adolescents with the secure type of attachment to mother are characterized of more healthy statuses of professional identity – moratorium and achieved PI in compare of adolescents with unsecure type of attachment to mother: less formed professional identity

References

- Azbel, A.A. (2004) Peculiarities of senior pupils' professional identity statuses forming: The thesis on competition of an academic degree of the Ph.D in psychological sciences, Saint Petersburg, SPBGU
- Karabanova, O. A., & Sadovnikova, T. Yu. (2011) The models of the adolescent's school moral atmosphere perception as the component of the social situation of development in modern Russia. *The Moscow University Herald, Series 14, Psychology, 2, 73-86.*
- Karabanova, O.A. & Sadovnikova, T.Yu. (2014) The comparative research of Adolescent's School Moral Atmosphere Perception in Modern Russia. *Procedia, social and behavioral sciences. Elsevier (United States), Vol.146. Num. 25, pp. 395-400.*
- Pryazhnikov N.S. (2008). *Professional self-determination: theory and practice.* M: Academia.
- Sadovnikova, T. Yu. (2005) Moral and valuable orientations of teenagers with various perception of the moral atmosphere of school. The thesis on competition of an academic degree of the Ph.D in psychological sciences. Moscow, LMSU

RELATIONSHIP WITH PARENTS AND PEERS OF ADOLESCENTS WITH DIFFERENT ATTACHMENT TYPES TO PARENTS

Tatiana Sadovnikova, PhD

Faculty of Psychology, Lomonosov Moscow State University (Russia)

Abstract

Relationship with parents and peers are an important characteristic of the level of personality development in adolescence. Effective communications with peers and parents, common activities and mastering new age's position provides positive resources and resilience of the teenager's personality.

One of the goals of our work was the approbation the IPPA in a Russian sample. The theoretical framework of Inventory of Parent and Peer Attachment (IPPA) (Armsden, Greenberg, 1987) is an attachment theory, formulated by Bowlby and expanded by others. Three dimensions are assessed: degree of mutual trust; quality of communication; and the extent of anger and alienation.

The 1-st study was aimed at exploring the specificity of adolescent-parent relationship and peer-peer relationship of teenagers with different types of attachment. 84 pupils aged from 13 to 16 years from Moscow schools participated in the research. Projective technique (Eudemiller, 1999), IPPA (Armsden, Greenberg, 1987), in the author's adaptation to the Russian language, Inventory of Interpersonal relations' diagnostics (DMO) (Sobchik, 2001), Self-Esteem Scale Dembo-Rubinshtein (version by Prikhogan, 1988) were used in the research.

The aim of the 2-nd study was to explore features of the adolescents' separation from parents depending on different types of attachment. 67 students aged from 18 to 23 years from Moscow High Schools participated in the research. IPPA (Armsden, Greenberg, 1987), Separation-Individuation Test of Adolescence (SITA) (Levine, Green, Millon, 1986; Levine, Saintonge, 1993); Psychological Separation Inventory (PSI) (Hoffman, 1984; Sadovnikova, Dzukaeva, 2013) were used.

The results show that adolescents of the secure type of attachment system to parents use more effective communication strategies with peers and have more adequate self-esteem than other unsecured groups of adolescents. The specific role of the attachment to father as an important factor for a high level of teenagers' self-esteem was revealed in the research.

The older adolescents (18-23) have high rates in the field of Conflictual separation (according to J. Hoffman). We consider the received result as confirming the described phenomenon of «generation gap» in the child-centered type of family which is widespread in modern Russian society. Another factor of the «generation gap» is liberal style of education (emotional support and an obscure system of requirements).

Similarities and differences in communication with peers of teenagers with different types of attachment were found. The research showed peculiarities of adolescents' separation from parents. The research concludes that the system of attachment to parents is important for developing psychological well-being of personality in adolescence.

Keywords: *development, adolescence, attachment, parents, separation.*

1. Introduction

Adolescence is a period of new mental opportunities (J. Piaget, L.S. Vygotsky), a period of the identity development (E. Erikson), a period of multiple complex changes in the personality and behavior of teenagers. The theory of R. Havighust defines the main tasks of development at the period between the childhood and maturity. One of the most important spheres of changes is the transformation of relations with parents and peers. The identity development demands from the teenager the efforts directed to awareness of the one's uniqueness. The age-specific psychological approach proposed by L.S. Vygotsky and D.B. Elkonin to analyzing the psychological development in adolescence is very promising due to its emphasis on the importance of social situation of development (L.S. Vygotsky). The last is the set of social communications and the relations into which the teenager is included.

Psychological separation from parents is one of the main developmental tasks during late adolescence. Adolescence separation-individuation can be described as a developmental process whereby the individuals increase their sense of differentiation and independence from mother and father. Researchers are in general agreement in viewing adolescent separation-individuation as a critical process in adolescent development. The need for successful separation-individuation in adolescence, according to widespread opinion, is helpful in the healthy development of one's, his or her psychological well-being. Successful resolution of the separation-individuation process occurs when the adolescent is able to establish a balance between enmeshment with parental identifications and complete disengagement and isolation. The authors describe the psychological separation as the formation of the self in close

relationships with family members. The present two studies sought to test the hypothesis that attachment to parents is the important factor of successful transformations the relationships with the parents and with peers at adolescence.

2. Design

One of the goals of our work was the approbation the IPPA in a Russian sample. The theoretical framework of Inventory of Parent and Peer Attachment (IPPA) (Armsden, Greenberg, 1987) is an attachment theory, formulated by J. Bowlby and expanded by others (Bartholomew, Mikulincer, Shaver, Waters, Cassidy, Sheiver). Three dimensions are assessed: degree of mutual trust with parents and peers; quality of communication; and the extent of anger and alienation.

3. Methods

The 1-st study was aimed at exploring the specificity of adolescent-parent relationship and peer-peer relationship of teenagers with different types of attachment. 84 pupils aged from 13 to 16 years from Moscow schools participated in the research. Projective technique (Eudemiller, 1999), IPPA (Armsden, Greenberg, 1987), in the author's adaptation to the Russian language, Inventory of Interpersonal relations' diagnostics (DMO) (Sobchik, 2001), Self-Esteem Scale Dembo-Rubinshtein (version by A.M. Prikhogan, 1988) were used in the research.

The aim of the 2-nd study was to explore features of the adolescents' separation from parents depending on different types of attachment. 67 students aged from 18 to 23 years from Moscow High Schools participated in the research. IPPA (Armsden, Greenberg, 1987), Separation-Individuation Test of Adolescence (SITA) (Levine, Green, Millon, 1986; Levine, Saintonge, 1993); Psychological Separation Inventory (PSI) (Hoffman, 1984; Sadovnikova, Dzukaeva, 2013) were used.

3.1. The research of adolescent-parent relationship and peer-peer relationship of teenagers with different types of attachment

It is proved that teenagers with high rates of attachment to both parents (both mother, and the father) possess a higher self-assessment in comparison to teenagers with an insecure system of attachment to parents.

The hypothesis of distinctions in the self-assessment of teenagers with high rates of attachment only to one of the parents was confirmed partially: teenagers with high rates of attachment to mother, in comparison to teenagers with high rates of attachment both to mother, and to father, have rather lower indicators on the self-assessment scales: character, cheerfulness, popularity with peers, «mother accepts me», force, the «father accepts me». Thus, it is, possible to assume the attachment to father affect the teenager's self-assessment.

Attachment to peers is connected with the self-assessment in the following parameters: cheerfulness, popularity, force/beauty (for young men and girls, respectively). The third private hypothesis that the self-assessment of teenagers with high rates of attachment to friends alone will be higher than the self-assessment of teenagers with lower indicators of attachment to friends.

The data testified the interconnection between the self-assessment and the system of the interpersonal relations of teenagers (according the model of L.N Sobchik): the teenagers possessing a high self-assessment have no bright features which influence negatively interpersonal relations. Teenagers having a high self-assessment in scales suspiciousness, discontent with others, self-abasement, dependence on opinion of others, comparing to teenagers with a low self-assessment at the same scales have more salient characteristic leadership features (distinctions significant are revealed).

Table 1. Connection between attachment to significant another (parents and peers) and self-assessments of teenagers

IPPA	Self-Esteem Scales Dembo-Rubinshtein												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Spearman's rho	health	intellect	cheerfulness	character	popularity at peers	kindness	has a lot of friends	beauty	mother's acceptance	self-confidence	strength	father's acceptance	happiness
Attachment to mother	.165	.063	.114	.000	-.004	-.008	.090	-.015	.415**	.106	.038	.271*	.091
Attachment to father	.314*	.136	.207	.027	.152	.166	.223	.024	.451**	.161	.152	.600**	.173
Attachment to peer	.103	.097	.209	.199	.236	.075	.225	.224	.362**	.144	-.023	.120	.208

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

On a scale "rejection" we received a little unexpected result – that on average, teenagers reject the friends most strongly as compared to their parents. Communication with peers, as shown in a number of recent works, is a difficult activity for a part of modern teenagers (Kondrashkin A.V., 2013). In the modern Russian society saturate with information technologies, the growing of individualistic tendencies, availability of wide information space, a high rate of life, the researchers reveal the extension of depressive tendencies in the emotional sphere of teenagers (Podolskii A.I., Idobayeva O. A. and et., 2007). The attention of researchers is directed at searching resources to ensure the formation of psychological wellbeing of modern children.

The results show that adolescents of the secure type of attachment system to parents use more effective communication strategies with peers and have more adequate self-esteem than other unsecured groups of adolescents. The specific role of the attachment to father as an important factor for a high level of teenagers' self-esteem was revealed in the research.

The older adolescents (18-23) have high rates in the field of Conflictual separation (according to J. Hoffman). We consider the received result as confirming the described phenomenon of «generation gap» in the child-centered type of family which is widespread in modern Russian society. Another factor of the «generation gap» is liberal style of education (emotional support and an obscure system of requirements).

3.2. The research of adolescent-parent relationship and peer-peer relationship of teenagers with different types of attachment

The internal consistency (Cronbach's Alpha) of the Russian version of SITA is 0.72. Table 2 presents the comparative analyze of internal consistency of the scales of SITA and Russian version of SITA.

It is shown that psychological separation from parents has heterochronic character. Functional and Conflictual separation from parents (accjding to J. Hoffman) is formed more successfully and, on average, earlier, than Attitudinal and Emotional separation. Means and standard deviations were obtained for the Total sample and for Males and Females separately (Table 2). It must be stressed that Russian adolescences are more independent from their father, than from the mother. The result corresponds with the opinion of well-known Russian psychotherapist A.Varga.

Gender differences. There were significant differences: males were more emotionally (0.01), functionally (0.002) and attitudinally (0.000) independent from their mothers, than females. And there were no significant gender differences in independence from father. Gender distinctions were shown that young men, on average, separate from parents, in comparison with girls significantly best of all. Girls are afraid of physical and emotional loss of "an attachment figure" significantly more strongly, their need for attachment and care is significant above, than for young men.

Attachment indicators to mother, on average, are higher, than the same indicators of attachment to the father. Mothers are generally more involved in the parent-adolescent relationship and seem to be more cooperating, but more prescriptive. Fathers seem to give adolescent less control, representing a greater degree of autonomy in relationships.

Table 2. The internal consistency of the scale of SITA

Scales of SITA	Russian sample 67 sub.	Levine (Nonclinical sample) 302 sub.	Levine (Clinical Sample) 117 sub.	Jennifer N.Engler&M. Wiemann) 83 sub.
age	18-23	12-22	12-22	18-21
Engulfment Anxiety	0,66	0,77	0,77	0,65
Practicing-Mirroring	0,80	0,88	0,85	0,79
Dependency Denial	0,73	0,79	0,74	0,73
Separation Anxiety	0,66	0,77	0,68	0,62
Teacher enmeshment	0,79	0,75	0,79	-
Peer enmeshment	0,66	0,75	0,74	0,75
Nurturance Seeking	0,74	0,70	0,74	0,69
Healthy Separation	0,45	0,64	0,64	0,69
Rejection Expectancy	0,82/ 0,77	-	0,79	0,74

Additionally, results showed that Russian late adolescents emotionally and attitudinally dependent from

parents. The problems of psychological separation of late adolescence from parents are mainly the problem of separation from mother in Russia. Gender and cultural differences in separation from parents were found.

4. Conclusions

Similarities and differences in communication with peers of teenagers with different types of attachment were found. The research showed peculiarities of adolescents' separation from parents. The research concludes that the system of attachment to parents is important for developing psychological well-being of personality in adolescence.

References

- Bowlby, J. (1969). *Attachment and loss: Volume I. Attachment*. New York: Basic Books.
- Bozhovich, L. I. (1981). *Psychological analysis of conditions of harmonic personality formation. Psychology of formation and development of personality*. Moscow: MSU
- Erikson E. (1994). *Identity and the life cycle*. NY: W. W. Norton & Company.
- Havigherst, R.J. *Developmental Tasks and Education*, 3rd ed. New York: David McKay Co, 1972.
- Youniss J., Smollar J. *Adolescent Relations with Mothers, Fathers and Friends*. The University of Chicago Press, 1994.
- Vygotsky L.S. *Psihologija razvitiya cheloveka* [Developmental psychology]. Moscow, 2003
- Armsden, G. C., & Greenberg, M. T. (1987). The Inventory of Parent and Peer Attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence*, 16 (5), 427-453.
- Bartholomew, K. & Horowitz, L. (1991). Attachment styles among young adults: A test of a four category model. *Journal of Personality and Social Psychology*, 61, 226-244
- Hoffman, J. A. (1984). Psychological separation of late adolescents from their parents. *Journal of Counseling Psychology*, 31, pp.170-178
- Karabanova, O. A., & Sadovnikova, T. Yu. (2011) The models of the adolescent's school moral atmosphere perception as the component of the social situation of development in modern Russia. *The Moscow University Herald, Series 14, Psychology*, 2, 73-86.
- Karabanova, O. A., & Poskrebisheva, N. N. (2013) Adolescent Autonomy in Parent-Child Relations *Procedia - Social and Behavioral Sciences*, Published by Elsevier Ltd, Vol. 86, Num. 10, pp. 621-628
- Karabanova, O. A., & Sadovnikova, T. Yu. (2014) The Comparative Research of Adolescent's School Moral Atmosphere Perception in Modern Russia. *Procedia - Social and Behavioral Sciences*, Volume 146, 25 August 2014, Pages 395-400
- Levine, J.B., Green, C. J. & Millon, T. (1986) The Separation-Individuation Test of Adolescence, *Journal of Personality Assessment*, 50:1, 123-139/
- Sadovnikova, T.Y. (1998) *Vozrastno-psihologicheskie osobennosti junoshey s addiktivnym povedeniem* [Aging psychological characteristics of addictive adolescents]. Diplomnaya rabota vypolnena pod

- rukovodstvom Ph.D. Karabanovoy O.A. [Graduate work, supervised by Karabanova O.A.] Moscow State University, 1998. Non published.
- Sadovnikova T.Yu. Nравstvenno-cennostnie orientacii podrostkov s razlitnim vospriyatiem moralnoi atmosfery shkoly [Moral-value orientations of teenagers with various perception of the school moral atmosphere, Thesis. Moscow, 2005
- Sadovnikova, T.Y. *Otnoshenie roditel'ey k vzrosleniyu podrostkov* [Parents relation to teenager's growing] // *V Congress of the All-Russian public organization "Russian Psychological Society."* Contributions of the participants of the congress. T. III. Moscow: Russian Psychological Society, 2012. pp. 151 - 152.
- Sadovnikova, T. Y., Dzukaeva, V. P. Adaptatsiya Psychological Separation Inventory na rossiiskoy vyborke. (PSI) [Adaptation of Psychological Separation Inventory for Russian Sample]. *Semeinaya psikhologiya i semeinaya psihoterapiya* [Family psychology and psychotherapy], 2014, № 1, pp. 1 – 16.
- Sadovnikova, T. Yu. (2013). The attachment to parents as a factor of the young romantic partner's emotional relation. *Proceedings of the 6th International Attachment Conference*, Pavia, Italy. pp. 603.

ATTITUDES OF STUDENTS TO POLITICAL EXTREMISM: THE CASE OF THE COUNTRIES OF THE EURASIAN UNION

Olga Deyneka

Dr. S; Department of Psychology, Saint-Petersburg State University (Russia)

Abstract

Students are the most active and often radical part of modern society. Identification of psychological prerequisites of political extremism among students was the purpose of the study. The study was conducted among students in Russia, Belarus, Kazakhstan and Kyrgyzstan (654 Ss). Some of the characteristics of political and economic consciousness and personal competitiveness were also measured. In addition, the research of such personal characteristics as deviations of monetary behavior (C. Rubinstein), and life satisfaction (A. Diner) were conducted. The results showed mostly negative attitude towards extremism. However 5% of the subjects showed sympathy for extremists and extremist movements and 19% said that in some cases could support extremists. Students believe that the information expansion with elements of extremism (media and Internet) is the most significant cause of extremism taking. On the contrary, the preservation of cultural traditions they consider as a factor in the safety of society. High economic and global optimism is also a prerequisite for the prevention of extremism. The negative correlation between self-esteem of personal competitiveness and predisposition to extremism was discovered. Students who are below the rated understanding of own goals, responsibility and hard working, more expressed tendency towards extremism. Correlations between deviations of monetary behavior and propensity to extremism were found. Also correlation analysis showed the higher satisfaction with their lives the lower the prerequisites to extremist manifestations. Thus, the study revealed both social and personal factors of predisposition to extremism. Comparative analysis of the attitudes to political extremism of students from the four countries was made. The results showed both general and specific characteristics of the relationship to extremism among students of the four countries. Students from Kyrgyzstan have shown the greatest risk of the prerequisites of political extremism in the background of awareness of economic problems, low tolerance towards migrants, expression of national superiority and radical attitudes.

Keywords: *political extremism, attitudes, students.*

1. Introduction

As part of the promising project called the Eurasian Union, which is currently represented in the media primarily as economic and cultural exchange activities to ensure security in the Eurasian space it is also very important. Worldwide, there has been increasing political extremism in the youth environment. "Extremism" is an act aimed at seizing or keeping power through the use of violence or changing violently the constitutional regime of a State, as well as a violent encroachment upon public security, including organization, for the above purposes, of illegal armed formations and participation in them, criminally prosecuted in conformity with the national laws of the Parties (Shanghai Convention ...,2001, art.1). *Political extremism* - it is an activity that involves the interaction of opposition groups and individuals, aimed at the seizure and retention of political power or destabilization, with the use of illegal means and methods, including illegitimate extremely radical ideology and violent methods and tools (Goetz, 2011).

Youth extremism can lead to destabilization of entire regions. Russia, Belarus, Kazakhstan and Kyrgyzstan, which have close cultural and historical ties, build a common policy in the current global situation. Young people in these countries can be considered not only as part of the human capital that embodies the potential of the development of society, but also as an area containing the possible risk to national security. Students are the most active and often radical part of modern society. Student youth considered by scientists as the group "of the rapid accumulation and realization of the negative potential

of protest" (Voronov, 2014). When dissatisfaction with reforms, students may be included in the protests, and even in the organization of an extremist wing (Olesich, 2009).

Researchers identify different groups of factors and prerequisites of political extremism that due to the complexity and diversity of this phenomenon (Raizberg & Lysenko, 2015; Schneider, 2014; Voronov, 2014; Yurchevsky, 2012). Extremism is also determined as a mechanism for the destruction of culture in general, "a sort of kind of cultural and social suicide" (Aksenovskaya, 2006). There are geopolitical and cultural-historical, socio-economic and psychological factors of political extremism. In our study, the emphasis is on identifying the psycho-political prerequisites to extremist activity (Deyneka & Zabarin, 2014).

The purpose of this study was to identify "weak signals" predisposition of students to political extremism through the study of their relationship to extremism into account the characteristics of civic consciousness and certain personality traits. Another objective of the study was to compare the attitudes toward political extremism among students from Russian, Belarusian, Kyrgyz and Kazakh universities.

2. Method

2.1. Participants

A total of 654 students from Russia (227 Ss), Belarus (192 Ss), Kyrgyzstan (147 Ss) and Kazakhstan (88 Ss) took part in the research. Samples of students from these countries were balanced by age and sex. There were 60% female and 40% male aged 18 to 22 (mean 20,9).

2.2. Instruments

The main methods of the research were

1) A self-developed questionnaire of attitudes toward political extremism was used (35 affirmations with a seven-point scale of responses). The loyalty to the political system and the leadership of the country; attitude towards extremism in the media; attitude towards extremism on ethnic or religious grounds; respect for the rules and the law; manifestations of aggression; manifestations of destructiveness can be measured by this questionnaire.

2) "Citizen's questionnaire" (Deyneka & Dauksha, 2014). It reflects the aspects of economic and political patriotism, economic optimism, solidarity, time perspective, and assessing the most pressing problems of society.

3) The rapid methods of measuring attitudes towards extremists and extremist organizations (Zabarin & Ivanova, 2013).

As additional methods (only a sample of Russian students) we used personal competitiveness (Fetiskin & Kozlov & Manuilov), the monetary strategies and deviation (Rubinstein, 1980; Furnham, 2014; Deyneka, 2011), life satisfaction (Diener & Diener & Diener, 1995).

3. Results

The results of measuring attitudes towards extremists and extremist organizations showed mostly negative attitude towards extremism. However, a small part of the respondents tend to idealize and make heroes of extremists (3%) or sympathize with them (3%). Besides 5% of the subjects showed sympathy for extremist movements, and 19% said that in some cases could support extremists.

The ranking causes of extremism showed a low differentiation of their importance in the minds of respondents (Table 1), indicating that representations of extremism were the complex.

Table 1. The main results of ranking the causes of extremism

No	Cause	Rank	M	σ
1	Lack of a clear youth policy in the country	7	6,22	2,99
2	The deterioration of the economic situation of the population	1	5,10	3,09
3	Violation of the principles of social justice and the aggravation of social inequality	3	5,43	2,70
4	Reducing the general cultural level of society	4	5,48	2,74
5	Propaganda hedonism values	11	6,88	2,90
6	Problems in the education and upbringing of the younger generation	2	5,14	2,91
7	Financing extremist organizations from abroad	9	6,52	3,43
8	The high level of illegal migration	6	6,16	3,22
9	The destruction of family values	5	6,00	3,29
10	The activity of religious sects	8	6,22	3,34
11	The absence of censorship in the media	10	6,53	3,84

According to the basic questionnaire results, students also believe that the information expansion with elements of extremism (media and Internet) is the most significant cause of extremism taking. On the contrary, the preservation of cultural traditions they consider as a factor in the safety of society. High economic and global optimism is also a prerequisite for the prevention of extremism.

Table 2. Factor individual prerequisites of extremism

weight factor 8,5				
I could use force in response to an insult or humiliation (0,736)	I am happy to look at different fights and carnage (0,666)	I do not condemn the aggression as a reaction to the aggression of others (0,623)	I am not a supporter of compliance with laws, rules and regulations (0,611)	I feel that my country needs me (0,555)
Sex (0,576)	For earnings, I agree to do what harms the country (smuggling, the disclosure of classified information, etc.) (0,552)	Upbringing of love for people is an essential objective of modern schools (-0,476)	The life of man - not the most valuable in the world (0,418)	

The matrix of the seven factors was obtained from factor analysis of the questionnaire data after rotation technique. The first most significant factor was named "*factor of individual prerequisites of extremism*" (Table 2) include aggression and disrespect for the law, the fetish of money and the devaluation of the value of human life.

Table 3. Factor of loyalty to the current government and political regime

weight factor 4,6		
I was completely satisfied with the current political system (0,743)	I absolutely don't agree with the actions of our leadership, and I believe that they lead to the decline and destruction of the country (-0,718)	I am satisfied with the measures taken for the control and prevention of extremism in our city (0,477)
Our country fits the role of peacemaker in the international conflicts (0,469)	The country will not get any coups, revolutions and / or color revolutions (0,467)	

The second factor is the "*factor of loyalty to the current government and political regime*" (Table 3). It embodies the state of relations "citizen-government" and contains political prerequisites of extremism.

Moreover, analysis revealed "*factor of awareness of threats to national security*", "*factor alarmism or diffuse anxiety*", "*factor radicalism*", "*economic factor*", "*factor of social activity of students*."

Results of a comparative study show highly significant differences in attitudes towards political extremism between the groups. The highest risk zone in the manifestations of the prerequisites of extremism is the youth of Kyrgyzstan. For example, a comparative analysis of the data groups in Kyrgyzstan and Kazakhstan has once again confirmed that among respondents from Kyrgyzstan greater willingness to join the ranks of political extremists (Table 4).

Table 4. Ratings extremists and extremist organizations in Kazakh and Kyrgyz groups of respondents

The Statements describing the extremists (66), and related extremist organizations (72, 74)	Kazakhstan		Kyrgyzstan		p
	M	σ	M	σ	
66. Courageous, sincere people who are fighting for justice	1,89	1,46	3,73	2,55	,000***
72. I fully support the extremist organizations and is ready to join them	1,27	0,91	2,08	1,92	,000***
74. I consider unacceptable for me slogans and methods of extremist organizations.	5,63	2,06	4,35	2,45	,000***

Note: *** - при $p < 0,001$

The results of analysis of variance showed, for example, that students from Kyrgyzstan to a greater extent than in Russia, Belarus and Kazakhstan believe that the nation is necessary to prove the superiority at any cost (fig.1) and more with the fear of color revolutions (fig 2). In addition, students from Kyrgyzstan are not satisfied with the current political system (fig 3) and economic situation that is supported by studies of other authors (Islamova, 2014).

Figure 1. The degree of agreement with the statement "National superiority have to prove at any cost"

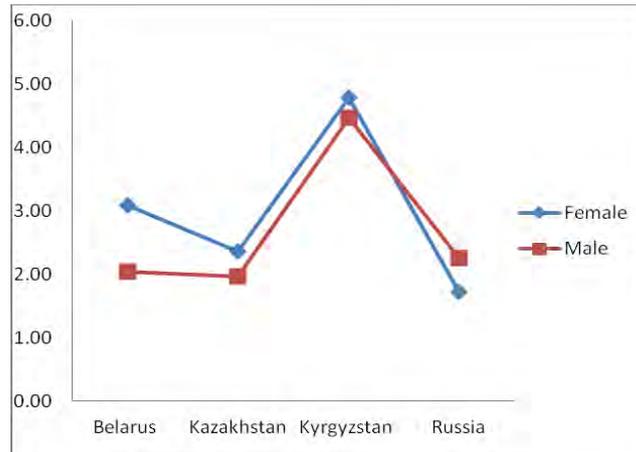


Figure 2. The degree of agreement with the statement "the coup d'état and / or the colored revolutions do not threaten my country"

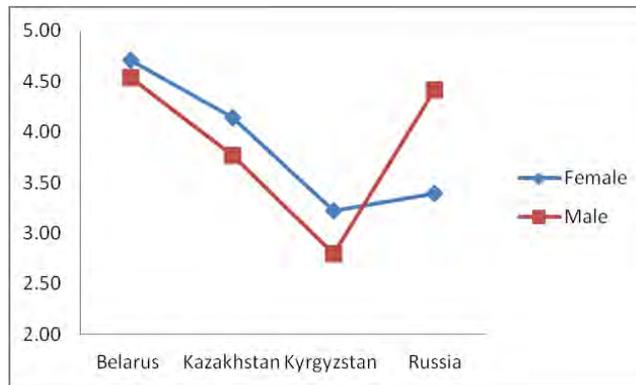
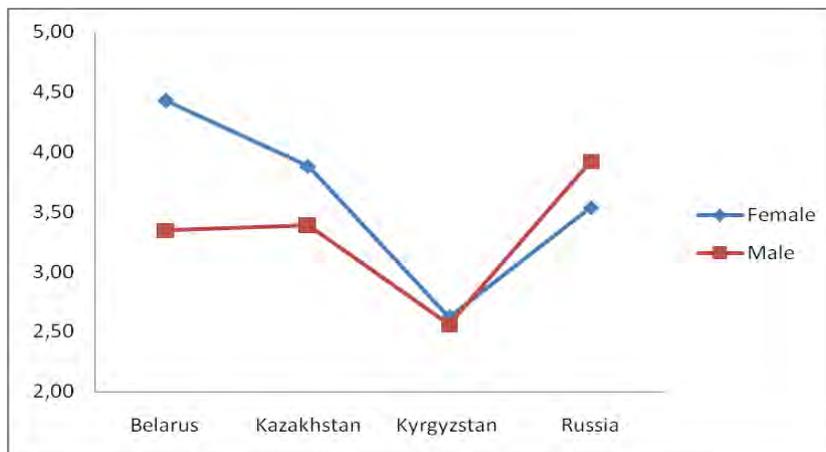


Figure 3. The degree of agreement with the statement "I am completely satisfied with the current political system"



The results of correlation analysis of the "Attitude towards extremism" with "Citizen's questionnaire" data showed some close correlations. Students with high economic and global optimism are in less prone to extremism. It was found that among those who show willingness to cross the moral barriers for the sake of money, more those who are willing to break the law for the sake of money and even harm the country. Also monetary deviations correlates with such prerequisites of extremism as intolerance, national superiority and the use of violence in response to an insult, a craving for aggressive spectacle, devaluation of human life. The negative correlation between self-esteem of personal competitiveness and predisposition to extremism was discovered. Students who are below the rated understanding of own goals, responsibility and hard working, more expressed tendency towards extremism.

4. Conclusions

Thus, the study revealed both social and personal factors of predisposition to extremism.

The results showed that, overall, the youth have a negative attitude towards extremism. Only 6% of the students romanticize and sympathize with the extremists.

According to the results, the students of Kyrgyzstan demonstrate the highest risk zone in the manifestations of the "weak signals" prerequisites of extremism compared with students from Russia, Belarus and Kazakhstan

The value of human life has been one of the effective indicators of propensity to extremism.

Acknowledgments

This study was prepared within the framework supported by Russian Foundation for Humanities research project "Psychological bases of students' group destructive behavior" № 14-06-00719.

I wish to acknowledge students V. Maksimov, A. Abdylidaeva, V. Dauksha who helped me to collect empirical data.

References

- Aksenovskaya L. N. (2006). Extremism: the meaning and the result is (made out to order aspect). *Extremism and the media* (Proceedings of the scientific-practical conference). Ed. V. E. Semenov. St. Petersburg: Asterion, 10 - 11.
- Deyneka O.S. (2011). Morality as a factor in perceptions of competitiveness. *Economic Psychology: Current theoretical and applied problems*: Proceedings 12th International Scientific and Practical Conference. Ed. A. D. Karnyshev. Irkutsk: BSUEL. 55–65 (in Russia).
- Deyneka O. S, Zabarin A.V. (2014). Psychological and political reasons a group of destructive behavior // *Modern problems of science and education*. 6; URL: <http://www.science-education.ru/120-15837> (in Russia).
- Deyneka O., Dauksha V. (2014). The image of the Belarusian State in students' consciousness during the recent financial crisis. *Psychology Applications & Development*. /Ed. by Clara Pracana, Lisbon: Psychology Applications & Developments /Ed. By Clara Pracana. Lisbon: inScience Press. 264-272.
- Diener E., Diener M., Diener C. (1995). Factors predicting the subjective well-being of nations // *Journal of Personality and Social Psychology* 69 (5), 851-864.
- Fetiskin N.P., Kozlov V.V., Manuilov G.M. (2002). *Socio-psychological diagnosis of personality and small groups*. Moscow: Institute of Psychotherapy. 278–281 (in Russia).
- Furnham, A. 2014. *The New Psychology of Money*. London & NY: Routledge.
- Goetz R. N. (2011). Political extremism: a position of vision in modern scientific literature. *Gramota. Archive of scientific articles* 4, 43 – 47. www.gramota.net (in Russia).
- Islamova N. N. (2014). Formation of the economic behavior of young people in the period of social transformation of modern Kyrgyzstan. *Youth extremism: origins, warning, prevention*: Proceeding International Conference. (Moscow, 23 - 24 May 2014.). Moscow: MPSU. 1, 293 -301(in Russia).
- Olesich N.Y. (2009). Political and psychological foundation of youth political extremism: the historical aspect // *Vestnik of St.-Petersburg University*.12 (4), 183-187 (in Russia).
- Raizberg B. A. Lysenko A.A. (2015). *Extremism: the origins of the manifestations and ways to counter*. Moscow: MPSU (in Russia).
- Rubinstein S. (1980). Your money or your life. *Psychology Today*. 12, 47-58.
- Schneider L. B. (2014). *Youth extremism: the nature, gender, combating and prevention*. Moscow: MPSU (in Russia).
- Shanghai Convention on Combating Terrorism, Separatism and Extremism (2001). www.mid.ru/sanhajskaa...sos-/-/.../579606
- Voronov V. N. (2014). Economic culture in the context of youth extremism. *Youth extremism: origins, warning, prevention*: Proceeding International Conference. (Moscow, 23 - 24 May 2014.). Moscow: MPSU. 2. 21-24 (in Russia).
- Yurchevsky S. D. (2012). The content and forms of political extremism. *Questions of Russian and international law*. 5, 8-23. (in Russia).
- Zabarin A.V., Ivanova A.S. (2013). The ratio of students to extremism: psycho-political dimension. *Bulletin of St.-Petersburg State University*. 12 (1), 121-129 (in Russia).

PERSONALITY AND POLITICAL IDEOLOGY IN CANADA

Derek Gaudet, Kathryn Flood & Lisa Best

Department of Psychology, University of New Brunswick (Canada)

Abstract

The purpose of this study was to examine the role of personality and left-right wing affiliation in predicting attitudes on several socio-political topics (e.g. abortion, euthanasia). Participants completed a demographics questionnaire, a set of personality measures, and a contentious issues questionnaire (CIQ). Our final sample consisted of 267 participants. A total score on the CIQ was created and hierarchical linear regression found that left-right wing affiliation, openness, and private self-consciousness predicted higher total CIQ scores. Right wing affiliation predicted lower CIQ score. The results of this study suggest that that total CIQ score was measuring right-left wing attitudes on socio-political issues and could be a useful tool in predicting voting behaviour.

Keywords: *political psychology, left-wing vs. right-wing; personality correlates; contentious social issues.*

1. Introduction

Ideologies are sets of beliefs formed by groups of individuals to minimize in-group conflict by creating a consensus while conversely promoting superiority over another group (Sidanius, Pratto, Martin, & Stallworth, 1991). Political ideology studied in the field of psychology described by Jost (2006) can be defined as a social cognitive framework of ethical principles driven by individual's needs and motivations. Researchers have suggested that an individual fulfills deeper psychological needs by adopting a specific political perspective which in turn may be influenced by their personalities. These models have recently been supported by twin studies suggesting that political beliefs may be inherited and related to primary human traits (Koenig & Bouchard, 2006; Ludeke, Johnson, Bouchard, 2013). Personality could offer yet another explanation as to why an individual might adopt a specific political ideology and affiliation.

1.1. Liberalism and conservatism

In the majority of Western cultures since the beginning of the French revolution in 1789, political beliefs have been viewed dimensionally as left-wing or right-wing (Bobbio, 1996). Political liberalism has become synonymous with left-wing views representing egalitarianism, social programming, and change (Jost, 2006). Contrarily, the right-wing or political conservatism is established on traditional values, supporting hierarchal institutions, authority, the status quo, and structure (Jost, 2006; Jost, Nosek, & Gosling, 2008). It has been suggested that conservatives tend to have a greater concern for their in-group and have a lower sense of security rationalizing their acceptance of social inequality, and resilient opposition to change (Jost, Glaser, Kruglanski, & Sulloway, 2003; Jost, Fitzsimons, & Kay, 2004; Landau et al., 2004; & Jost, et al., 2007). Both belief systems essentially emphasize one of two basic human needs: protection (conservatism) and provision (liberalism) (Janoff-Bulman, 2009). However; because there are a variety of different societal issues that frame and thus cloud an individual's view of the two political dimensions they may be understood subjectively and should therefore be regarded on a left-to-right-wing *continuum*. Although it is interesting to note that Tomkins (1963) remarked perhaps they are perhaps just two very basic personality make-ups (left-wing: imagination, experience, interest vs. right-wing: firm, orderly, economically sound, etc.).

Although Canada is a multi-party parliamentary system there are three political parties that traditionally garner the majority of votes. These three parties are the New Democratic Party of Canada on the far left (NDP), the Liberal Party of Canada on the center-left, and the Conservative Party of Canada (PC) on the far right, respectively. The NDP were founded in 1961 as a socially democratic party, the party is typically viewed as the left-leaning "socialist" party, they have never been elected federally, but were elected as the official opposition to the PCs in the House of Commons in 2011 (Whitehorn, 2013). The Conservative and Liberal parties have been the only two parties in Canadian history to ever form government federally. The Conservative party was the first political party to form government in Canada in 1867; traditionally they are viewed as right-wing economic stewards and military supporters (Harrison,

2011/15). Presently, the Liberals form government, the Liberal party usually forms a less socialist stance on issues than the NDP in the center-left, and the party's success could perhaps be attributed to its ability to at least partially reside in the center (McCall & Clarkson, 2012/15).

1.2. Personality correlates of political attitudes

The lack of literature proposes that the relationship between personality and political beliefs is not yet fully understood. Although, few studies have successfully applied the Five-factor model of personality (e.g., Neuroticism, Agreeableness, Conscientiousness, Extraversion, and Openness to Experience) to political attitudes, the results of these studies have incorporated these traits into the traditional liberal and conservative systems (outlined above in section 1.2.). It is unsurprising that liberals appear to score significantly higher on openness to experience scales than conservatives and that conservatives score similarly high on conscientiousness scales (Carney, Jost, Gosling, & Potter, 2008). The trait of conscientiousness is related to a disposition for stability and order so this relationship with conservatism is not unexpected (McCrae & Costa, 1997). Another study divided the Big Five Inventory (BFI) model into a personality model that found agreeableness (compassion) was associated with liberal attitudes while politeness was associated with the orderliness aspect of conscientiousness. The same study suggested that the relationship between personality and political ideology may be mediated by the importance of certain moral values. That is a high aspiration for order and a low need for equality may predict conservatism and a high aspiration for equality and a low need for order may predict liberal values (Hirsh, DeYoung, Xu, & Peterson, 2009).

1.3. Purpose of the current study

Given the growing research interest in social cognitive models of ethical principles or political ideologies and personality the purpose of this study was to examine the relationship between personality characteristics and attitudes on socio-political topics in Canada. Many individuals typically identify with one political party, but often show a heterogeneous mix of views when considering different social issues. This study examines how well political party affiliation and personality predicts attitudes on socio-political topics.

2. Methods

2.1. Participants

In total, 267 participants completed the online questionnaire. The average age of participants was 29.25 years ($sd = 12.36$); there were 133 females ($M_{age}=27.56$, $sd=11.03$) and 49 males ($M_{age}=33.84$, $sd=14.57$). The majority of participants were Canadian (93.3%) who were born in Canada (90.7%). In terms of the political party that participants most identified, 12% identified with the Conservative Party, 49.8% identified most with the Liberal Party, 16.7% identified most with the NDP party, and 20.8% indicated that they identified with at least two parties.

2.2. Materials

Demographics and Contentious Issues Questionnaire. The demographics portion of this questionnaire asked respondents to provide age, sex, nationality, language, and country of birth. It also asked them to indicate on a 1 (Not at all) to 7 (Completely) point Likert-scale the degree to which they identified with the three most impactful Canadian political parties (i.e., the New Democratic Party, Liberals, Progressive Conservative/Conservative). The contentious issues questionnaire (CIQ) requires respondents to indicate the degree to which they agree or disagree with 22 statements about socio-political issues (e.g. "abortion should be legal"). Responses are given on a 1 (strongly disagree) to 7 (strongly agree) point Likert scale. Respondents are also asked to indicate how important their opinion is to them on each issue on a similar 1 (very unimportant) to 7 (very important) point Likert-scale.

Big Five Inventory. The BFI (John & Srivastava, 1999) consists of 44 characteristics (e.g. "Is inventive") that are rated on a 1 (disagree strongly) to 5 (Agree Strongly) point Likert-Scale. The BFI results in 5 scale scores: Extraversion, Neuroticism, Agreeableness, Openness, and Concienciousness.

Eysenck Personality Questionnaire. The EPQ (Eysenck & Eysenck, 1985). is comprised of 48 statements that may or may not be characteristic of the respondent. Each statements requires a "Yes" or "No" response. The EPQ results in 4 subscale scores: Extraversion, Neuroticism, Psychoticism, and a lie scale.

Three Factor Self Monitoring Scale. The Briggs, Cheek, and Buss (1980) self-monitoring scale contains 20 questions requiring a response on a 1 (extremely uncharacteristic) to 5 (extremely characteristic) point Likert-Scale. It results in three subscale scores: "Extraversion", Other-directedness (e.g, a readiness to change to suit others) , and Acting (e.g., skill and predilection for entertaining others in social settings).

Self Consciousness Scale. The Self Consciousness Scale (Fenigstein, Scheier, & Buss, 1975) has 23 items rated on a 1 (extremely uncharacteristic) to 4 (extremely characteristic) Likert-point scale.

Balanced Inventory of Desirable Responding. The BIDR (Paulhus, 1991) is a measure of desirable responding. It contains 40 statements requiring a response on a 1 (Not true) to 7 (Very True) point Likert-Scale. The BIDR results in two subscale scores: Self deceptive enhancement and Impression management.

2.3. Procedure

The study was advertised within the University of New Brunswick’s psychology department and through social networking sites. All participants were provided with a link to complete the study using the online survey software, Qualtrics. The complete questionnaire package took approximately 30 minutes to complete.

3. Results

3.1. Measuring socio-political attitudes

A total CIQ score was calculated by summing scaled item scores. Initial analyses of the inter-item correlation matrices indicated that some of the variables on CIQ were not related to other items and, as a result, 8 items were dropped. Although the total number of participants is relatively small (n=267), the participant-variable ratio was quite high (26:1), and an exploratory factor analysis was conducted. To determine if factor analysis was appropriate for this data set, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett’s test of sphericity were conducted. The KMO = .834 and Bartlett’s $\chi^2 (45) = 549.89, p=.0001$, indicating that factor analysis was appropriate for this data set. Following Costello and Osborne (2005), a maximum likelihood analysis with an oblique rotation was used. Based on an examination of the initial factor loadings and factor correlations, an additional item was dropped from the factor analysis. As a result, a two factor structure best represented the data. Based on this solution, reliability analyses were conducted on the two subscales and the total scale score. The coefficient alpha of the Social Opinions Factor was $r = .701$, indicating adequate internal reliability. With all items included, the coefficient alpha of the Social Values Factor was $r=.583$ but the internal reliability of both the Factor ($r=.75$) and the total scale score ($r=.783$) improved if the reliability and thus this item was dropped. To offer some validation of the scale, differences in attitudes between primarily left wing or primarily right wing participants were examined. Self-rated NDP and liberal self-identification ratings were averaged together to create a left-wing affiliation score and PC/conservative scores were used to represent right-wing affiliation. Participants were assigned to either left or right wing affiliation based on the scale in which they scored the highest. A multivariate analysis of variance was conducted with left or right wing political affiliation as the independent variable and agree-disagree Likert scale ratings on retained items within the CIQ as the dependent variable. The overall model was statistically significant (Roy’s largest root=0.312, $F (10, 243)=7.581, p<0.001$). The results of the oneway ANOVAS are presented in Table 1. Even using a conservative post hoc Scheffe test, statistically significant differences emerged on several of the issues. Left and right-wing respondents rated the extent to which they agreed or disagreed with CIQ items differently. Only two of the retained issues from the CIQ did not demonstrate significant differences in agreement/disagreement.

Table 1. Mean Likert Agree/disagree ratings of items on the Contentious Issues Questionnaire

	Right-Wing	Left-Wing	Other	ANOVA	Post hoc
FACTOR 1					
Global warming is scientific fact.	5.28	6.32	5.56	13.00 (<.0001)	LW > RW & Other
We need to adopt stricter gun laws to ensure public safety.	4.23	5.32	4.66	7.14 (p=.001)	LW >RW
Evolution should be taught in high school science class.	5.33	5.98	5.33	5.34 (p=.005)	LW > RW
Addiction is a real disease.	5.21	5.99	5.41	5.28 (p=.006)	LW > RW
The death penalty should be legal.	3.70	3.30	3.33	.70 (p=.495)	
Vaccinations should be optional.	3.14	2.79	3.67	2.38 (p=.095)	
FACTOR 2					
Abortion should be legal.	4.48	6.03	5.04	13.95 (p<.0001)	LW > RW & Other
Assisted suicide (Euthanasia) should be legal.	4.09	5.76	4.56	21.55 (p<.0001)	LW > RW & Other
Same-sex marriage should be legal.	5.16	6.57	5.93	18.46 (p<.0001)	LW > RW
Using human embryos in stem cell research is unethical.	3.77	2.92	3.89	6.87 (p=.001)	LW < RW & Other

*RW = right-wing affiliation, LW = left-wing affiliation

3.2. Personality correlates of political ideology

To examine potential predictors of CIQ total scores, a hierarchical linear regression was conducted. Age, gender, and nationality were entered in Block 1, degree of affiliation with left or right wing political parties was entered in Block 2, and the personality variables were entered in Block 3. The overall model was statistically significant, $F(13,128)=9.15$, $p<.0001$, and explained 42.9% of the variability. The effects of age, gender, and nationality were not statistically significant, $F_{\text{change}}(3, 138) = 1.86$, $p=.139$. Block 2 variables were statistically significant, $R^2 \text{ change} = .30$, $F(2, 136) = 31.32$, $p<.0001$. Greater right-wing affiliation was associated with lower CIQ scores and Greater left-wing scores were associated with higher CIQ scores. Block 3 personality variables were also statistically significant and explained an additional 14.0% of the variability. In this block, greater private self consciousness (SCS) and Openness (BFI) was associated with higher CIQ Scores.

4. Discussion

Here, we examined the role of left-right wing affiliation and personality on attitudes concerning controversial socio-political topics. We found that left and right-wing respondents differed in the extent to which they agreed with several statements on the CIQ (e.g. “abortion should be legal”, “Same-sex marriage should be legal”). Though differences were found, there was a general consensus between political wings on each issue. For instance, everyone agreed that same-sex marriage should be legal, but left-wing affiliates agreed more strongly. Some issues, such as the adopting stricter gun laws and having abortion and euthanasia as legal medical procedures placed right wing respondents on the neutral point of “neither agree nor disagree, whereas left-wing respondent were clearly in favor of these. This may represent a desire to maintain the status-quo, which is characteristic of traditional right wing views (Jost, 2006; Jost, Nosek, & Gosling, 2008).

Using a hierarchical linear regression we were able to predict a substantial proportion of the variance in attitudes on several controversial socio-political topics. Beta values suggested that left-wing affiliation was associated with higher CIQ scores and right-wing affiliation was associated with lower CIQ scores. These two factors were the strongest predictors of total CIQ scores. This suggest to us that Lower CIQ scores represented right-wing views and higher CIQ scores represented left-wing views. Private self-consciousness and openness were also found to predict higher CIQ scores. Seeing that liberals have traditionally scored higher on measures of openness (Carney, Jost, Gosling, & Potter, 2008), it is unsurprising that this personality construct would predict more left-wing attitudes. Liberals have been found to evaluate their position on the issues more closely than conservatives (Bizer et al., 2004). Private self-consciousness is believed to represent a tendency to introspect and examine the inner self and personal feelings (Fenigstein, Scheier, & Buss, 1975). Identifying more strongly with left-wing political parties was found to be positively correlated with private self-consciousness in this study.

5. Conclusion

Political party affiliation is theorized to be influenced by deeply rooted beliefs and values. It is also thought to preceed and play into our appraisal of socio-political issues (Gidengil et al, 2012). Whereas attitudes on the issues could depend on the social climate or evidence supporting or refuting a particular position on a particular issue, an individual’s political identity is believed to be more resistant to change. Though we found differences in attitudes on several socio-political topics between right-wing and left-wing affiliates, there was general consensus on most issues, despite common beliefs that the parties falling on each wing would maintain polar opposite attitudes on issues like abortion, gun control, and euthanasia. This could mean that there might not be a clear distinction between the average right-wing and left-wing position on the examined socio-political issues within Canadian politics. Rather than approaching the issues in terms of dichotomous attitudes we used the CIQ, which offers a continuous measure of attitudes and could be useful in predicting voter behaviour.

References

- Bizer, G. Y., Krosnick, J. A., Holbrook, A. L., Christian Wheeler, S., Rucker, D. D., & Petty, R. E. (2004). The impact of personality on cognitive, behavioral, and affective political processes: The effects of need to evaluate. *Journal of Personality*, 72(5), 995-1028.
- Bobbio, N., & Cameron, A. (1996). *Left and right: The significance of a political distinction*. University of Chicago Press.
- Briggs, S. R., Cheek, J. M., & Buss, A. H. (1980). An analysis of the Self-monitoring Scale. *Journal of Personality and Social Psychology*, 38(4), 679.

- Carney, D. R., Jost, J. T., Gosling, S. D., & Potter, J. (2008). The secret lives of liberals and conservatives: Personality profiles, interaction styles, and the things they leave behind. *Political Psychology*, 29(6), 807-840.
- Eysenck, S. B., Eysenck, H. J., & Barrett, P. (1985). A revised version of the psychoticism scale. *Personality and Individual Differences*, 6(1), 21-29.
- Fenigstein, A., Scheier, M. F., & Buss, A. H. (1975). Public and private self-consciousness: Assessment and theory. *Journal of Consulting and Clinical Psychology*, 43(4), 522.
- Gidengil, E., Nevitte, N., Blais, A., Everitt, J., & Fournier, P. (2012). Explaining Vote Choice. In *Dominance and Decline: Making Sense of recent Canadian elections* (pp. 1-18). Toronto, Ontario: University of Toronto Press.
- Harrison, T.W. (2011). Conservative Party. In P.Diekmeyer & R. Foot (Ed.), *The Canadian Encyclopedia*. Historica Canada. Toronto, Canada. Retrieved December, 12, 2015 from <http://www.thecanadianencyclopedia.ca/en/article/conservative-party/>
- Hirsh, J. B., DeYoung, C. G., Xu, X., & Peterson, J. B. (2010). Compassionate liberals and polite conservatives: Associations of agreeableness with political ideology and moral values. *Personality and Social Psychology Bulletin*, 36(5), 655-664.
- Janoff-Bulman, R. (2009). To provide or protect: Motivational bases of political liberalism and conservatism. *Psychological Inquiry*, 20(2-3), 120-128.
- John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. *Handbook of personality: Theory and research*, 2(1999), 102-138.
- Jost, J.T. (2006). The end of the end of ideology. *American Psychologist*, 61(7), 651-670.
- Jost, J. T., Fitzsimons, G., & Kay, A. C. (2004). The ideological animal. *Handbook of experimental psychology*, 263-83.
- Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin*, 129(3), 339.
- Jost, J. T., Napier, J. L., Thorisdottir, H., Gosling, S. D., Palfai, T. P., & Ostafin, B. (2007). Are needs to manage uncertainty and threat associated with political conservatism or ideological extremity?. *Personality and Social Psychology Bulletin*, 33(7), 989-1007.
- Jost, J. T., Nosek, B. A., & Gosling, S. D. (2008). Ideology: Its resurgence in social, personality, and political psychology. *Perspectives on Psychological Science*, 3(2), 126-136.
- Koenig, L. B., & Bouchard Jr, T. J. (2006). Genetic and environmental influences on the traditional moral values triad—authoritarianism, conservatism, and religiousness—as assessed by quantitative behavior genetic methods. *Where God and Science Meet: How Brain and Evolutionary Studies Alter Our Understanding of Religion*, 1, 31-60.
- Landau, M. J., Solomon, S., Greenberg, J., Cohen, F., Pyszczynski, T., Arndt, J., ... & Cook, A. (2004). Deliver us from evil: The effects of mortality salience and reminders of 9/11 on support for President George W. Bush. *Personality and Social Psychology Bulletin*, 30(9), 1136-1150.
- Ludeke, S., Johnson, W., & Bouchard, T. J. (2013). "Obedience to traditional authority:" A heritable factor underlying authoritarianism, conservatism and religiousness. *Personality and Individual Differences*, 55(4), 375-380.
- McCall, C.C. & Clarkson S. (2012). Liberal Party. In J.Smyth & S. Azzi (Ed.), *The Canadian Encyclopedia*. Historica Canada. Toronto, Canada. Retrieved December, 12, 2015 from <http://www.thecanadianencyclopedia.ca/en/article/liberal-party/>
- McCrae, R. R., & Costa Jr, P. T. (1997). Conceptions and correlates of openness to experience. In R. Hogan, J.A. Johnson, & S.R. Briggs (Eds.) *Handbook of personality psychology* (pp. 825-847). San Deigo, CA: Academic Press.
- Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 17-59). New York: Academic Press.
- Sidanius, J., Pratto, F., Martin, M., & Stallworth, L.M., (1991). Consensual racism and career track: Some implications of social dominance theory. *Political Psychology*, 12, 691-720.
- Tomkins, S. (1963). Left and right: A basic dimension of ideology and personality. In R.W. White (Ed.) *The study of lives* (pp. 388-411). Chicago: Atherton.
- Whitehorn, A. (2013). New Democratic Party. In J.Smyth (Ed.), *The Canadian Encyclopedia*. Historica Canada. Toronto, Canada. Retrieved December, 12, 2015 from <http://www.thecanadianencyclopedia.ca/en/article/new-democratic-party/>

POST-TRAUMATIC STRESS RESPONSES AMONG REFUGEES FOLLOWING XENOPHOBIC ATTACKS IN DURBAN, SOUTH AFRICA

Gail Womersley¹, Amir Shroufi², Nathalie Severy³ & Gilles Van Cutsem²

¹ University of Neuchâtel (Switzerland)

² Médecins Sans Frontières – Operational Centre Brussels, South African mission (Belgium)

³ Médecins Sans Frontières – Operational Centre Brussels, Medical Department (Belgium)

Abstract

Following a recent spate of xenophobic attacks against foreign nationals in Durban, South Africa, displacement camps were set up to shelter predominantly Congolese and Burundian refugees. Embedded within the emergency program a prevalence study of symptoms of posttraumatic stress disorder (PTSD) was conducted among a convenience sample of this population. Participants included men and women who were screened for symptoms using the Harvard Trauma Questionnaire (HTQ). Results indicate a prevalence rate of 85% among this population. Limitations include the small sample size and potential self-reporting. The high prevalence rate of people who meet diagnostic criteria for PTSD has profound implications for psychosocial interventions and access to mental health services for this community – as well as significant broader legal and social justice implications.

Keywords: PTSD, refugees, trauma, cross-cultural.

1. Introduction

Over the past two decades, there has been an increasing interest in the question of trauma among refugee populations. In general, the literature reports greater mental health difficulties among refugees compared to general populations within host communities with statistically significant higher levels of post-traumatic stress, anxiety and depression documented (de Arellano & Danielson, 2008; Kirmayer, Kienzler, Afana, & Pederson, 2010; Lambert & Alhassoon, 2015; Schweitzer *et al.*, 2006, Steel *et al.*, 2009; Sturm, Baubet, & Moro, 2010; Van Ommeren *et al.*, 2001; Weine, Kuc, Eldin, Razzano, & Pavkovic, 2001). Significant rates of medically unexplained pain and somatoform disorder have also been highlighted (Drozdek, Noor, Lutt, & Foy, 2003, Van Ommeren *et al.*, 2001). Despite this high prevalence, the assessment of refugees' mental health remains complicated. There have been significant concerns raised in the literature over the cross-cultural validity of PTSD itself as a diagnostic construct, particularly among humanitarian interventions (Bracken, 2001; Bracken, 2002; Marsella, 2010; Summerfield, 2001). There is also a lack of standardized measurement tools for posttraumatic stress responses among culturally diverse populations, a reflection of the significant void in our knowledge regarding the relation of culture to trauma and the relevance of a PTSD diagnosis to refugee populations (Drozdek & Wilson, 2007, Mattar, 2011; Summerfield, 2001). Furthermore, the medicalisation of trauma on an individual level, linked to fixed 'traumatic' events in the past, risks rendering us blind to other ongoing aspects of interpersonal, political and social violence on a more global scale, including significant post migration factors which may be deemed equally traumatic by refugees (Maier & Straub, 2011; Silove *et al.*, 1998; Silove, Steel, & Watters, 2000).

In April 2015, following an upsurge in violent xenophobic attacks throughout the country, displacement camps were set up to house roughly 7,500 foreign nationals seeking refuge in Durban, KwaZulu-Natal. Médecins Sans Frontières/Doctors Without Borders (M.S.F.) were among the actors intervening in the camp by providing the population with basic medical care and psychosocial support. The majority were refugees and asylum seekers from the Democratic Republic of Congo and Burundi who choose to remain in the camps: stating that they cannot return home to their countries of origin safely due to fear of persecution and that they fear returning to the South African communities from which they fled, in many cases after experiencing significantly violent attacks on themselves and their property. The people remaining in the displacement camps represent a population which has been exposed to multiple traumatic events – both in their countries of origin and more recently in South Africa – and were therefore presumed to be at risk of experiencing symptoms of post-traumatic stress. As part of a package of

psychosocial care offered by MSF in the displacement camps, a study of post-traumatic stress symptoms was conducted among a convenience sample of refugees in order to explore the extent of the psychological trauma among this particular population, to reflect on the relevance of a PTSD diagnosis within this particular cultural setting and to offer relevant treatment.

2. Methodology

After obtaining authorization from the local municipality and campsite managers, men and women – all of them foreign nationals from the DRC or Burundi - were approached on site at three displacement camps by a researcher/clinical psychologist working for M.S.F. The Harvard Trauma Questionnaire (H.T.Q.) was used as a screening instrument due its recognised cultural sensitivity in assessing highly traumatised populations (Mollica *et. al.*, 1992; Kleijn, Hovens & Rodenburg, 2001; Shoeb, Wienstein & Mollica, 2007). The HTQ was subsequently administered with the assistance of the researcher and results scored. PTSD was defined according to a scoring algorithm previously described by the Harvard Refugee Trauma Group on the basis of DSM IV diagnostic criteria (American Psychiatric Association, 1994; Mollica *et al.*, 1999). The aim was to identify and highlight the mental health needs of this particular population, to develop a culturally-appropriate intervention programme as well as to enrich advocacy campaigns for their humane treatment by state and non-governmental organizations alike.

3. Results

27 participants completed the Harvard Trauma Questionnaire with the researcher and the results of questions 1-16 of part 4 of the HTQ were noted and scored. The mean score was 2,87. Participants included 12 women, out of which all 12 (100%) met diagnostic criteria and 15 men, out of which 12 (80%) met diagnostic criteria. When questioned about the traumatic event which participants had either experienced, witnessed or heard about, the majority referred to events which had taken place in their country of origin, as well as the recent xenophobic attacks. 22 participants (81%) reported experiencing or witnessing conflict, murder, torture and/or sexual violence. All participants had been in the camp for at least 7 weeks after the xenophobic violence. For all participants, the traumatic symptoms reported were related to events which had happened in their countries of origin, exacerbated by the xenophobic violence and experiences of being in a refugee camp.

Participants rated the following items on a scale of 1 to 4 where:

1 indicates 'not at all', 2 indicates 'a little,' 3 indicates 'quite a bit' and 4 indicates 'extremely'

	ITEM	Mean Score	Standard Deviation
1.	Recurrent thoughts or memories of the most hurtful or terrifying events	3,11	0,89
2.	Feeling as though the event is happening again	3,41	0,75
3.	Recurrent nightmares	2,37	1,21
4.	Feeling detached or withdrawn from people	3,00	1,11
5.	Unable to feel emotions	2,48	1,25
6.	Feeling jumpy, easily startled	3,00	0,92
7.	Difficulty concentrating	2,78	0,93
8.	Trouble sleeping	3,04	0,94
9.	Feeling on guard	3,19	0,89
10.	Feeling irritable or having outbursts of anger	3,07	0,87
11.	Avoiding activities that remind you of the traumatic or hurtful event	2,85	1,67
12.	Inability to remember parts of the most traumatic or hurtful events	1,93	1,11
13.	Less interest in daily activities	2,96	1,06
14.	Feeling as if you don't have a future	3,15	1,06
15.	Avoiding thoughts or feelings associated with the traumatic or hurtful experience	2,41	1,15
16.	Sudden emotional or physical reaction when reminded of the most hurtful or traumatic events	3,34	0,83
TOTAL MEAN		3,34	

There were no statistically significant outliers in terms of the mean response to individual items ($p < 0,05$). However, it must be noted that the mean response of items 3, 5, 12 and 15 fell below 2,5. This suggests that participants reported not being strongly affected by recurrent nightmares, an inability to feel emotions, an inability to remember part of the most traumatic or hurtful event in their lives or a sense of avoiding thoughts or feelings associated with the traumatic or hurtful experience. In general, participants

reported being fully aware and emotionally responsive to the traumatic events which they had experienced or witnessed. The highest mean response to an individual item was to item number 2 (mean score = 3,4). This item refers to a feeling that the event is happening again. When questioned, the majority of participants explained that the recent xenophobic attacks which they had experienced or witnessed in South Africa had triggered traumatic memories or flashbacks of events from which they had had to flee in their country of origin. The greatest standard deviations were for item 3 ('recurrent nightmares,' std dev = 1,21), 5 ('unable to feel emotions,' std dev = 1,25) and 11 ('avoiding activities that remind you of the hurtful or traumatic event,' std dev = 1,67).

4. Conclusion

This study found a significantly high prevalence rate (85%) of post-traumatic stress symptoms among a convenience sample of refugees and asylum seekers residing in displaced camps after fleeing from xenophobic violence in Durban, South Africa. This population experienced numerous traumatic events and suffered from repressive measures inside and outside of their countries of origin, and continued to face uncertainty about their security and future within South Africa. Many participants reported experiencing symptoms of composite trauma, described by Kilpatrick, Resnick and Acierno (2009) as arising from multiple types of traumatic events or incidents. One cannot distinguish easily between an acute stress reaction and a clinical diagnosis of PTSD in this context. PTSD symptoms scores among the participants were significantly higher than those reported in other long-term refugee populations screened using the HTQ, such as 45,5% among earthquake survivors in Wenchuan China (Kun *et al.*, 2009), 37,2% among Cambodian refugees living on the Thai–Cambodian border camps (Cardozo, Talley, & Crawford, 2004), 29,3% among populations living in conflict-ridden southern Lebanon (Farhood, Dimassi, & Lehtinen, 2006) or 11,8% among Guatemalan refugees living in Chiapas, Mexico (Sabin *et al.*, 2003). It is possible that the high prevalence rate of traumatic stress response symptoms reported could be partly attributed to the current significant levels of environmental stress and insecurity. The individual item symptom analysis suggests a culturally specific presentation of trauma response which could be explored in future research.

Limitations of the study include the convenience sampling and the small sample size taken by convenience. Meta-analyses of prevalence studies have indicated that small studies have much higher prevalence than the apparent true prevalence (Terhakopian *et al.*, 2008). A recommendation for future research would therefore be to increase the sample size, as well as to compare this group of individuals with a control group of people from the same national group who are not living in the displacement camp. Another limitation is potential self-reporting bias. Perceived secondary gain for being considered psychologically impacted by the events may have included, for example, the perceived hope of improved access to social, medical, psychological and legal services. To minimise the impact of this bias, all participants were clearly informed of the fact that responses to the questionnaire would in no way impact treatment by state mechanisms or NGOs.

Despite these limitations, the high prevalence rate of people who meet diagnostic criteria for PTSD has profound implications for psychosocial interventions and access to mental health services for this community – as well as significant broader legal and social justice implications. Given such high prevalence of mental health problems in this population, interventions need to be largely community-based rather than health facility-based. The long-term and ongoing nature of the ongoing violence and a history of composite trauma reported by participants necessitate a long-term intervention, including dialogue with local communities concerning the re-integration of this population and sustained engagement with local community-based services.

References

- American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders, text revision (DSM-IV-TR). American Psychiatric Association.
- Bracken, P. J. (2001). Post-modernity and post-traumatic stress disorder. *Social Science & Medicine*, 53(6), 733-743
- Bracken, P. (2002). *Trauma: Culture, meaning and philosophy*: Whurr Publishers.
- Cardozo, B. L., Talley, L., Burton, A., & Crawford, C. (2004). Karenni refugees living in Thai–Burmese border camps: traumatic experiences, mental health outcomes, and social functioning. *Social science & medicine*, 58(12), 2637-2644.

- de Arellano, M. A., & Danielson, C. K. (2008). Assessment of Trauma History and Trauma-Related Problems in Ethnic Minority Child Populations: An INFORMED Approach. *Cognitive and Behavioral Practice*, 15(1), 53-66.
- Drozdek, B., Noor, A. K., Lutt, M., & Foy, D. W. (2003). Chronic PTSD and medical services utilization by asylum seekers. *Journal of refugee studies*, 16(2), 202-211.
- Drozdek, B., & Wilson, J. P. (2007). *Voices of trauma: treating psychological trauma across Cultures*: Springer Science & Business Media.
- Farhood, L., Dimassi, H., & Lehtinen, T. (2006). Exposure to war-related traumatic events, prevalence of PTSD, and general psychiatric morbidity in a civilian population from Southern Lebanon. *Journal of Transcultural Nursing*, 17(4), 333-340.
- Frans, Ö., Rimmö, P. A., Åberg, L., & Fredrikson, M. (2005). Trauma exposure and post-traumatic stress disorder in the general population. *Acta Psychiatrica Scandinavica*, 111(4), 291-290.
- Hinton, D. E., & Lewis-Fernández, R. (2011). The cross-cultural validity of posttraumatic stress disorder: implications for DSM-5. *Depression and anxiety*, 28(9), 783-801.
- Hollifield, M., Warner, T. D., Lian, N., Krakow, B., Jenkins, J. H., Kesler, J., & Westermeyer, J. (2002). Measuring trauma and health status in refugees: a critical review. *Jama*, 288(5), 611-621.
- Kilpatrick, D. G., Resnick, H. S., & Acierno, R. (2009). Should PTSD criterion A be retained? *Journal of Traumatic Stress*, 22(5), 374-383.
- Kirmayer, L. J., Kienzler, H., Afana, A. H., & Pedersen, D. (2010). Trauma and disasters in social and cultural context. *Principles of social psychiatry*, 2, 155-77.
- Kleijn, W. C., Hovens, J. E., & Rodenburg, J. J. (2001). Posttraumatic stress symptoms in refugees: assessments with the Harvard Trauma Questionnaire and the Hopkins symptom Checklist-25 in different languages. *Psychological reports*, 88(2), 527-532.
- Kleinman, A. (1978). Concepts and a model for the comparison of medical systems as cultural systems. *Social Science and Medicine. Part B: Medical Anthropology*, 12, 85-93.
- Kun, P., Chen, X., Han, S., Gong, X., Chen, M., Zhang, W., & Yao, L. (2009). Prevalence of post-traumatic stress disorder in Sichuan Province, China after the 2008 Wenchuan earthquake. *Public Health*, 123(11), 703-707.
- Landau, L.B. (ed), 2011. *Exorcising the Demons Within: Xenophobia, Violence and Statecraft in Contemporary South Africa*. Johannesburg: Wits University Press; Tokyo: United Nations University Press.
- Lambert, J. E., & Alhassoon, O. M. (2015). Trauma-focused therapy for refugees: Meta-analytic findings. *Journal of counseling psychology*, 62(1), 28.
- Maier, T., & Straub, M. (2011). "My head is like a bag full of rubbish": Concepts of illness and treatment expectations in traumatized migrants. *Qualitative health research*, 21(2), 233-248.
- Marsella, A. J. (2010). Ethnocultural aspects of PTSD: An overview of concepts, issues, and treatments. *Traumatology*, 16(4), 17.
- Mattar, S. (2011). Educating and training the next generation of traumatologists. Development of cultural competencies. *Psychological Trauma: Theory, Research, Practice, and Policy*, 3(3), 258-265.
- Mollica, R. F., Caspi-Yavin, Y., Bollini, P., Truong, T., Tor, S., & Lavelle, J. (1992). The Harvard Trauma Questionnaire: Validating a cross-cultural instrument for measuring torture, trauma, and posttraumatic stress disorder in Indochinese refugees. *The Journal of nervous and mental disease*, 180(2), 111-116.
- Mollica, R. F., McInnes, K., Sarajlic, N., Lavelle, J., Sarajlic, I., & Massagli, M. (1999). Disability associated with psychiatric comorbidity and health status in Bosnian refugees living in Croatia. *Journal of the American Medical Association*, 282, 433-439.
- Sabin, M., Lopes Cardozo, B., Nackerud, L., Kaiser, R., & Varese, L. (2003). Guatemalan refugees twenty years later: Factors associated with poor mental health outcomes. *Journal of the American Medical Association*, 290, 635-642.
- Schweitzer, R., Melville, F., Steel, Z., & Lacherez, P. (2006). Trauma, post migration living difficulties, and social support as predictors of psychological adjustment in resettled Sudanese refugees. 2(40), 179-187.
- Shoeb, M., Weinstein, H., & Mollica, R. (2007). The Harvard trauma questionnaire: adapting a cross-cultural instrument for measuring torture, trauma and posttraumatic stress disorder in Iraqi refugees. *International Journal of Social Psychiatry*, 53(5), 447-463.
- Silove, D., Steel, Z., McGorry, P., & Mohan, P. (1998). Trauma exposure, postmigration stressors, and symptoms of anxiety, depression and post-traumatic stress in Tamil asylum-seekers: comparison with refugees and immigrants. 97(3), 175-181. Retrieved from <http://dx.doi.org/10.1111/j.1600-0447.1998.tb09984.x>

- Silove, D., Steel, Z., & Watters, C. (2000). Policies of deterrence and the mental health of asylum seekers. *Jama*, 284(5), 604-611.
- Steel, Z., Chey, T., Silove, D., Marnane, C., Bryant, R. A., & Van Ommeren, M. (2009). Association of torture and other potentially traumatic events with mental health outcomes among populations exposed to mass conflict and displacement: a systematic review and meta-analysis. *Jama*, 302(5), 537-549.
- Sturm, G., Baubet, T., & Moro, M. R. (2010). Culture, trauma, and subjectivity: The French ethnopschoanalytic approach. *Traumatology*, 16(4), 27.
- Summerfield, D. (2001). The invention of post-traumatic stress disorder and the social usefulness of a psychiatric category. *BMJ: British Medical Journal*, 322(7278), 95.
- Terhakopian, A., Sinaii, N., Engel, C. C., Schnurr, P. P., & Hoge, C. W. (2008). Estimating population prevalence of posttraumatic stress disorder: an example using the PTSD checklist. *Journal of traumatic stress*, 21(3), 290-300.
- Weine, S. M., Kuc, G., Eldin, D., Razzano, L., & Pavkovic, I. (2001). PTSD among Bosnian refugees: A survey of providers' knowledge, attitudes and service patterns. *Community Mental Health Journal*, 37(3), 261-271.
- Van Ommeren, M., de Jong, J. M., Sharma, B., Komproe, I., Thapa, S. B., & Cardeña, E. (2001). Psychiatric disorders among tortured bhutanese refugees in nepal. *Archives of General Psychiatry*, 58(5), 475-482.
- Wilson, J. P., & Droždek, B. (2007). Are we lost in translations?: Unanswered questions on trauma, culture and posttraumatic syndromes and recommendations for future research *Voices of Trauma* (pp. 367-386): Springer.

FACTORS THAT CONTRIBUTE TO WORK SATISFACTION OF MASTER STUDENTS AND GRADUATES

Chrysoula Karathanasi, Angela Odera, & Michèle Baumann[§]

Institute for Health & Behaviour, Research Unit INSIDE, University of Luxembourg (Luxembourg)

Abstract

From employers to university managers, they all want their employees or students to be the most satisfied in their work or studies respectively. Our study aim was to analyze the associations between work satisfaction (WS) with psychosocial job-related factors, general and psychological quality of life, and socioeconomic characteristics. An online questionnaire was completed by Master students (N=66) and graduates (N=71). WS was assessed with a single item (1 to 10=very satisfied). Determinants of Postgraduates' WS were: *physical working conditions, recognition you get for good work, opportunity to use ones abilities* as well as *general and psychological quality of life*. These results show that their entrance into the job market is recent and hasn't yet allowed them to feel the reinforcement they are entitled to expect. Indeed, for Masters Students, the higher their WS was, the better the financial situation they declared was, and the higher *the freedom to choose their own work methods and relationships with colleagues and fellow workers* were. Whereas for graduates, it is *the amount of responsibility they are given*, which was higher. The perceptions of graduates' WS in relation to their career attitudes and at different stages of their careers must be further explored with a longitudinal study.

Keywords: *work satisfaction, financial situation, psychosocial job aspects, quality of life.*

1. Introduction

Work satisfaction (WS) is an essential concept to running a business nowadays and it is related to social welfare improvement (Addabbo & Solinas, 2012). With the technological advancement and the difficulties in the labor market, young people tend to study more and more in order to be qualified and adapted to the demands of the market. A high education can mean higher wages, more professional success and higher satisfaction with one's job. However, postgraduates such as nurses and teachers have high aspirations of work, which might decrease their level of satisfaction (Côté, 2016).

A meta-analysis (Behson et al, 2000) shows that psychological states play a substantial role in WS, and we have a better understanding of it by measuring work-related characteristics and psychological feelings. WS is also linked to general happiness; which seems to explain differences in ratings between the measures of these two concepts, as reflected in fifty professions, in which doctors were among those who displayed the greatest gaps (Côté, 2016). The factors which contribute to higher WS are psychosocial aspects such as quality of working relations and accountability, which lead to feeling fulfilled and the achievement of one's goals (Kaliski, 2007). In the same line, positive relationships have been recognized between student and graduate employees, job characteristics and job satisfaction (Bhatti, Syed, & Shaikh, 2012; Gray, Niehoff, & Miller, 2000; Thomas, Buboltz, & Winkelspecht, 2004) which bring a state of psychological satisfaction among employees, and the motivation to perform (Hackman & Oldham, 1976). In opposite, a lack of recognition, the feeling of belonging, self-realization and inadequate compensation are also factors which influence negatively WS (Côté, 2016). But which are the factors that contribute to a better WS? And how do we assess the impacts of WS?

Preventing psychosocial risks, safer and healthier working conditions contribute to a better quality of life among employees and allows them to perform their skills set, interests or resources, and consequently improve productivity within the company, (Sauter et al., 2002). Regardless of the philosophical origins and the socio-cultural sphere in which they operate, (be they employers or university managers), they all want to have the employees or students who are as satisfied as possible, with their work and with higher productivity (Dugguh & Dennis, 2014). Our study aim was first, to

[§]Research unit INSIDE, University of Luxembourg, Maison des Sciences Humaines, Campus Belval, L-4366 Esch-sur-Alzette, Luxembourg. Corresponding author: Prof. Michèle Baumann: michele.baumann@uni.lu

analyze the relationships between WS, psychosocial job aspects, general and psychological quality of life and socioeconomic characteristics; and second, to identify which of them contributes to WS among Masters students and graduates.

2. Methodology

Population: All postgraduate students regardless of their socio-economic status who received financial aid from the government of Luxembourg between 2012 and 2013, were registered in the Centre of Documentation and Information on Higher Education database.

Procedure: Contacted by mail to complete an online questionnaire in English or French. The inclusion criterion was to answer the “Job aspects” items, available only to those who were working. Out of the 644 respondents, Master students (N=66) and graduates (N=71) met this criterion.

Data collection:

- *Work satisfaction (WS)* (single item), (dependent variable), applied as in the third European Quality of Life Survey (1 to 10=very satisfied) (Eurofound, 2012)

- *General Quality of Life (General QoL)* (single item), used as in the European Quality of Life Survey (1 to 10=very satisfied)(Eurofound, 2012)

- *Psychological Quality of Life (Psy QoL- 6 items)*, a subscale from the Whoqol-bref instrument (1 to 5=extremely) (Skevington, Sartorius, & Amir, 2004)

- *Job aspects* (6 items), exploring psychosocial attitudes (Warr, Cook, & Wall, 1979). Each item was assessed from 1 to 5=extremely satisfied.

- *Socioeconomic characteristics:* Age, gender, household type, types of contract, working hours per week, and perceived financial situation (1 to 6=very good).

Statistical analyses: Scores of each scale were calculated on a range from 1 to 10. A regression model was fitted separately for each variable that was significantly ($p<0.05$) linked to WS, for at least one of the two study groups. The model included an interaction term with the Student/Graduate status in order to estimate a distinct slope for each group. All the analyses were performed with SPSS 22.0.

3. Results

Table 1 presents the postgraduates’ WS indicator which was 7.8/10, and the difference compared to the happiness indicator which was -0.19. Mainly women consisted the students group. In the graduates’ group, majority had an indeterminate contract, working 21-40h/week and were more satisfied with their financial situation.

Table 1. Psychosocial job aspects, quality of life and socioeconomic characteristics.

		Master			Total population % or Mean(SD) ¹
		Students % or Mean(SD) ¹	Graduates % or Mean(SD) ¹	p ^{**2}	
Work satisfaction (DV)	[1-10]	7.7 (1.54)	7.9 (1.42)	.553	7.8 (1.47)
Age		29.2 (7.68)	28.2 (4.41)	.363	28.7 (6.17)
	[min-max]	[23-56]	[23-45]		[23-56]
Gender	men	36.1%	66.2%	.001**	51.9%
	women	63.9%	33.8%		48.1%
Household type	alone	25.0%	19.1%	.138	21.9%
	with parents	18.3%	33.8%		26.6%
	with other adults or children	56.7%	47.1%		51.5%
Type of contract	indeterminate	34.4%	57.4%	.027*	46.2%
	fixed term	39.1%	27.9%		33.3%
	other	26.6%	14.7%		20.5%
Working hours per week	until 20h/week	39.6%	14.0%	.008**	28.1%
	21-40h/week	45.3%	51.2%		47.9%
	more than 40h/week	15.1%	34.9%		24.0%
Financial situation	[1-10]	6.6 (2.24)	7.5 (2.34)	.035*	7.1 (2.33)
Psychosocial job aspects [1-10]	work conditions	7.4 (1.91)	7.6 (1.93)	.511	7.5 (1.92)
	freedom	7.1 (2.29)	7.0 (2.32)	.759	7.1 (2.29)
	colleagues	7.6 (2.21)	7.9 (1.77)	.623	7.7 (1.99)
	recognition	6.2 (2.78)	7.0 (2.14)	.075	6.6 (2.49)
	responsibility	6.7 (2.41)	7.2 (2.14)	.158	6.9 (2.28)
General Qol	abilities	6.5 (2.87)	7.2 (2.30)	.115	6.9 (2.60)
	[1-10]	7.7 (1.69)	8.1 (1.79)	.229	7.9 (1.74)
Psy-Qol score	[1-10]	7.3 (1.34)	7.4 (1.29)	.628	7.4 (1.31)
Happiness	[1-10]	7.8 (1.84)	8.1 (1.45)	.352	8.0 (1.54)
WorkSat-Happiness	Score difference	-0.14	-0.17	.822	-0.19

¹SD = Standard deviation ; ²Significant p-value: * $p<0.05$; ** $p<0.01$; *** $p<0.001$

Table 2 describes the correlations positively linked to the WS. These were: *physical working conditions, recognition you get for good work, opportunity to use your abilities* and general and psychological quality of life. The relationships which were positively related to WS was perceived financial situation, *freedom of working method* and *relation with colleagues*, for the students' group only. In the graduates' group, only *the amount of responsibility they are given* was positively related to WS.

Table 2. Correlations between work satisfaction, psychosocial job aspects, quality of life and socioeconomic factors

		Work satisfaction [1-10]					
		Master				Total population	
		Students		Graduates			
		Mean (SE) ¹	p-value ²	Mean (SE) ¹	p-value ²	Mean (SE) ¹	p-value ²
Gender	Men	7.77 (.294)	.784	7.73 (.197)	.338	7.75 (.162)	.780
	women	7.66 (.267)		8.09 (.338)		7.82 (.210)	
Household type	Alone	8.00 (.258)	.607	7.54 (.514)	.112	7.79 (.274)	.657
	with parents with other adults or children	7.73 (.384) 7.52 (.201)		7.52 (.258) 8.25 (.229)		7.59 (.212) 7.88 (.200)	
Type of contract	indeterminate	7.75 (.298)	.989	8.15 (.213)	.204	8.02 (.173)	.338
	fixed term	7.68 (.402)		7.67 (.388)		7.68 (.278)	
	Other	7.69 (.362)		7.33 (.373)		7.56 (.265)	
Working hours per week	until 20h/week	7.47 (.515)	.536	7.00 (.856)	.220	7.35 (.434)	.193
	21-40h/week	8.04 (.259)		7.77 (.378)		7.91 (.224)	
	more than 40h/week	7.86 (.404)		8.33 (.252)		8.18 (.215)	
		Correlation coefficient ³	p-value ²	Correlation coefficient ³	p-value ²	Correlation coefficient ³	p-value ²
Age		.116	.379	-.028	.823	.056	.533
Financial situation [1-10]		.306	.022*	.111	.362	.196	.028*
work conditions		.392	.002**	.284	.018*	.342	.000***
Psychosocial freedom		.284	.028*	.176	.150	.224	.011*
job aspects [1-10] colleagues		.263	.042*	.069	.574	.180	.042*
recognition		.445	.000***	.466	.000***	.455	.000***
responsibility		.216	.097	.274	.023*	.248	.005**
abilities		.378	.003**	.392	.001***	.387	.000***
General Qol [1-10]		.368	.004**	.413	.000***	.394	.000***
Psy-Qol score [1-10]		.380	.003**	.514	.000***	.449	.000***

¹SE = Standard error; ²Significant p-value: *p < 0.05; **p < 0.01; ***p < 0.001; ³Pearson's correlation

In Table 3 is shown that the higher of *physical working conditions, recognition you get for good work, opportunity to use your abilities* and general and psychological quality of life were, the higher the WS was. For the students, the factors which were positively associated with WS were the financial situation, *freedom to choose your own method of working*, and *relationships with colleagues and fellow workers*. In the graduates' group, only one related to WS, the *amount of responsibility they are given*.

Table 3. Associations between financial situation, psychosocial aspects of job, quality of life and work satisfaction

		Work satisfaction [1-10]				
Master students		b ¹	SE ²	L95 ³	U95 ⁴	p ⁵
Financial situation		0.184	0.082	0.022	0.346	0.026*
Psychosocial job aspects [1-10]	work conditions	0.311	0.094	0.126	0.496	0.001***
	freedom	0.201	0.086	0.030	0.372	0.022*
	colleagues	0.180	0.084	0.013	0.347	0.035*
	recognition	0.241	0.060	0.121	0.360	0.000***
	responsibility	0.141	0.080	-0.016	0.299	0.078
abilities		0.210	0.064	0.083	0.338	0.001***
General Qol		0.339	0.106	0.128	0.549	0.002***
Psy-Qol score		0.436	0.128	0.182	0.690	0.001***
Master graduates		b ¹	SE ²	L95 ³	U95 ⁴	p ⁵
Financial situation		0.068	0.071	-0.073	0.208	0.344
Psychosocial job aspects [1-10]	work conditions	0.221	0.093	0.037	0.404	0.019*
	freedom	0.108	0.076	-0.043	0.259	0.159
	colleagues	0.058	0.106	-0.151	0.267	0.583
	recognition	0.305	0.074	0.158	0.451	0.000***
	responsibility	0.179	0.081	0.019	0.339	0.029*
abilities		0.240	0.072	0.098	0.383	0.001***
General Qol		0.327	0.093	0.143	0.511	0.001***
Psy-Qol score		0.563	0.125	0.316	0.809	0.000***

¹b = Parameter estimate; ²SE = Standard error; ³L95 = Lower limit of the 95% confidence interval; ⁴U95 = Upper limit of the 95% confidence interval; ⁵p-value = Significance level of the t-test *p < 0.05; **p < 0.01; ***p < 0.001

4. Discussion

Our main findings show that the postgraduates' work satisfaction (WS) indicator was 7.8/10 which is in line with Gallup Poll (Robison, 2002) where 92% of postgraduates declared being completely satisfied or satisfied with their work, but the difference between the two indicators of the postgraduates' WS and happiness was a negative value. This interesting observation is not surprising because they are new in the professional world, but the interpretation suggests that the entry in to the labor market had contributed feebly to their general happiness, and that their job hasn't yet allowed them to feel the reinforced feelings of competence and confidence that comes with experience.

Another finding was that the physical working conditions, recognition you get for good work, opportunity to use your abilities, and general and psychological quality of life, were determinants of postgraduates' WS. Psychological states and psychosocial work environment have been shown to be associated with WS (Pressman & Cohen, 2005; Rose, 2003; Stansfeld & Candy, 2006). In our study, psychological quality of life was the strongest contributor to WS, which is in line with previous findings on postgraduates' life satisfaction, where psychological quality of life was important in adopting behaviors helpful to career planning and prospects (Karathanasi, Karavdic, Odero, & Baumann, 2015). Other studies demonstrated also that employee recognition/rewards lead to higher job satisfaction (Rathi & Rastogi, 2008; Tessema, Ready, & Yu, 2012) which improves employee retention, motivation and positively influence their financial situation (Dugguh & Dennis, 2014). The better the employees feel about all aspects of their jobs, the more cohesive and harmonious the workplace atmosphere is and the more willing and motivated to perform at the highest level the employees will be. It is in the best interest of every organization to assess, evaluate, and improve their employees' job satisfaction, whether through various strategies of job enrichment, policies or attractive incentives (Çelik, 2011).

However, the specifics for each studied group allows us to make two observations which correspond to different factors associated with the students' WS and the graduates' WS. For the students' group, the better their perceived financial situation was, higher the freedom to choose their own method of working and relations with colleagues was, the higher their WS was. Students are affected by their economic situation which might be a stress factor which influences their WS. The financial aid of the Luxembourgish government is an important support to reduce social inequalities. The other factors contributing to WS were the *freedom to choose your own method of working*, and *relationships with colleagues*. Indeed, on the one hand, when employees have a sense of freedom and autonomy in their work, their motivation and well-being are fostered (Eurofound, 2014). On the other hand, good relationships with colleagues can increase efficiency and enhance the feeling of belonging, which is important especially for those who are new in the work place. For the graduates' group, only one factor was positively associated with WS, this was the amount of responsibility given which may be due to the fact that graduates have the need to feel competent and qualified enough for the job. We can suggest that they are looking for Master's degree level professions, which also correspond to their professional expectations.

5. Conclusion

Future research could focus on longitudinal studies examining the perceptions of graduates' WS over the time, to confirm the observations obtained in this survey. The measurement of WS and its impact when graduates make a new entry or re-entry in the labor market, would also make for an interesting direction.

Acknowledgment

Many thanks to the Centre for Documentation and Information on Higher Education (CEDIES) and to all the student volunteers, without whom this research would have not been possible. The project 2013/16 entitled "CAPJOB – Students' and graduates' Capital employability and quality of life" was supported by a financial grant from the University of Luxembourg.

References

Addabbo, T., & Solinas, G. (2012). *Non-Standard Employment and Quality of Work. The Case of Italy. AIEL Series in Labour Economics* (1st ed.). AIEL - Associazione Italiana Economisti del Lavoro. Retrieved from <http://ideas.repec.org/b/ail/labook/06.html>

- Behson, S. J., Eddy, E. R., & Lorenzet, S. J. (2000). The importance of the critical psychological states in the job characteristics model: A meta-analytic and structural equations modeling examination. *Current Research in Social Psychology*, 5(12), 170–189.
- Bhatti, N., Syed, A. A. S., & Shaikh, F. M. (2012). Job Satisfaction and Motivation in Banking Industry in. *Jurnal of Asian Business Strategy*, 2(3), 54–62.
- Çelik, M. (2011). A theoretical approach to the job satisfaction. *Polish Journal of Management Studies*, 4, 7–15.
- Côté, P. (2016). Le bonheur au travail, c'est payant! Retrieved March 31, 2016, from <http://www.indicedebonheur.com/fr/articlesfr/bonheur-au-travail-payant.htm>
- Dugguh, S., & Dennis, A. (2014). Job satisfaction: Traceability to employee performance in organizations. *Journal of Business and Management*, 16(5), 11–18.
- Eurofound. (2012). *Quality of life in Europe: Impacts of the crisis*. (E. Anderson, Robert; Dubois, Hans; Leoncik, Tadas; Sándor, Ed.). Luxembourg: Publications Office of the European Union. <http://doi.org/10.2806/42471>
- Eurofound. (2014). *Working conditions and job quality: Comparing sectors in Europe*.
- Gray, R. A., Niehoff, B. ., & Miller, J. . (2000). The effect of job characteristics on student employee job satisfaction and intent to turnover in college and university foodservice. *Journal of the National Association of College and University Food Services (NACUFS)*, 22, 44–57. Retrieved from <http://en.journals.sid.ir/ViewPaper.aspx?ID=349190>
- Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: test of a theory. *Organizational Behavior and Human Performance*, 16(2), 250–279. [http://doi.org/10.1016/0030-5073\(76\)90016-7](http://doi.org/10.1016/0030-5073(76)90016-7)
- Kaliski, B. . (2007). Encyclopedia of Business and Finance. In *Library Journal* (2nd ed., p. 446). Thompson Gale. Retrieved from <http://search.proquest.com/docview/196826091?accountid=14549&http://hl5yy6xn2p.search.serialsolutions.com/?genre=article&sid=ProQ:&atitle=Encyclopedia+of+Business+and+Finance&title=Library+Journal&issn=03630277&date=2004-11-01&volume=129&issue=18&page=>
- Karathanasi, C., Karavdic, S., Odero, A., & Baumann, M. (2015). Life Satisfaction between Non-Luxembourgish and Native Luxembourgish Postgraduate Students. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 9(11), 3872–3877. Retrieved from <http://wuset.org/publications/10003867/life-satisfaction-of-non-luxembourgish-and-native-luxembourgish-postgraduate-students>
- Pressman, S. D., & Cohen, S. (2005). Does Positive Affect Influence Health? *Psychological Bulletin*, 131(6), 925–971. <http://doi.org/10.1037/0033-2909.131.6.925>
- Rathi, N., & Rastogi, R. (2008). Job Satisfaction and Psychological Well-Being. *ICFAI Journal of Organizational Behavior*, 7(4), 47–57.
- Robison, J. (2002). Does Higher Learning = Higher Job Satisfaction? Retrieved March 30, 2016, from <http://www.gallup.com/poll/6871/does-higher-learning-higher-job-satisfaction.aspx>
- Rose, M. (2003). Good Deal, Bad Deal? Job Satisfaction in Occupations. *Work, Employment {&} Society*, 17(3), 503–530. <http://doi.org/10.1177/09500170030173006>
- Sauter, S. L., Brightwell, W. S., Colligan, M. J., Hurrell, J. J., Katz, T. M., Legrande, D. E., ... Robertson, S. R. (2002). *The Changing Organization of Work and the Safety and Health of Working People*.
- Skevington, S., Sartorius, N., & Amir, M. (2004). Developing methods for assessing quality of life in different cultural settings. *Social Psychiatry and Psychiatric Epidemiology*, 39(1), 1–8. <http://doi.org/10.1007/s00127-004-0700-5>
- Stansfeld, S., & Candy, B. (2006). Psychosocial work environment and mental health--a meta-analytic review. *Scandinavian Journal of Work, Environment & Health*, 32(6), 443–462. <http://doi.org/10.5271/sjweh.1050>
- Tessema, M. T., Ready, K., & Yu, W. W. (2012). Factors Affecting College Students ' Satisfaction with Major Curriculum : Evidence from Nine Years of Data United States of America United States of America United States of America. *International Journal of Humanities and Social Science*, 2(2), 34–44.
- Thomas, A., Buboltz, W., & Winkelspecht, C. (2004). Job characteristics and personality as predictors of job satisfaction. *Organizational Analysis*, 12(2), 205–219. <http://doi.org/http://dx.doi.org/10.1108/eb028993>
- Warr, P., Cook, J., & Wall, T. (1979). Scales for the measurement of some work attitudes and aspects of psychological. *Journal of Occupational Psychology*, 52, 129–148.

THE IMPORTANCE OF CREATIVITY IN THE MUSEUM IMMERSIVE EXPERIENCE OF THE ADULT VISITOR¹

Colette Dufresne-Tassé

Maîtrise en museology, Université de Montréal (Canada)

Abstract

An adaptation of the Thinking Aloud technique validated for collecting data in the museum setting enabled to obtain information on the experience of the adult visitor as he is strolling in exhibition rooms. The data gathered indicate that an immersive or intensive experience is totally absorbing because it involves all at once the cognitive, imaginative and the affective functioning of the visitor in a creative production of meaning.

Keywords: museum, adult visitor, immersive experience, creativity.

1. Introduction

Immersion has become a fashionable term in the museum milieu. Sometimes it refers to a new type of display (*museographie*) (Belaën, 2003) that dives the visitor into a physical or virtual context totally surrounding him (Belaën, 2003; Bitgood, 2002; Grau, 2003; Jeudy, 2005*)². This setting intends to induce sensations or emotions rather than to convey or explain knowledge (Montpetit, 1996). Sometimes, immersion rather evokes the intensive, fascinated experience already described by Csikszentmihalyi (1990), Latham (2007) or Pranskūnienė (2013). Considering their description as well as more ancient ones (Dewey, 1934; May, 1994), Hansen and Mossberg define immersion as “the feeling of being fully absorbed, surrendered to, or consumed by the activity to the point of forgetting one’s self and one’s surroundings (2013: 212).

The piece of research that I am introducing here deals with the second understanding of immersion, i.e. the intensive experience. This choice is motivated by the three following reasons: 1) Video games specialists (Chabot, 2012; Guelton, 2014*) consider that this experience should be one of the main outcomes of a surrounding environment; 2) This strong link between a surrounding environment and an intense experience raises a fundamental question for the fine arts museums: Could a visitor who wanders through them have an immersive experience, considering that they offer their collections in naked rooms, the works of art being hung with a very small label that simply establishes their identity and a short panel that announces the content of the room, i.e. in a very little surrounding environment? 3) Until now, the intensive experience has been studied only through its memories, i.e. the traces left in the memory; but memories are seldom faithful to what is lived in a museum (Savard, Savard and Dufresne-Tassé, 1994*).

Having verified that an intensive immersion experience is possible in the type of non surrounding museum rooms described above (Dufresne-Tassé, 2014), I propose to verify that in this context, the visitor’s creativity is essential to the existence of this experience as studied while it is lived through.

Firstly I shall introduce the way I collected information while a visitor is dealing with objects presented in a fine arts museum, a general description of the data collected, a functional definition of the intense experience and of its cognitive, imaginary and affective components. Secondly, analyzing an example, I shall describe its unfolding and the role of creativity in it, discuss the data presented and suggest new paths of research.

¹This research has been funded by the Social Sciences and Humanities Research Council of Canada (SSHRC), by the Fonds pour la formation de chercheurs et l’aide à la recherche (FCAR), as well as by the Fonds québécois de la recherche sur la société et la culture (FQRSC) of the Province of Quebec Government. It also has received logistic support from the Université de Montréal. References marked with an (*) are only examples as the subject matter has been treated in many more publications.

2. Collecting information while a visitor is dealing with a work of art

I gathered information through an adaptation that I developed and validated of the Thinking Aloud technique (Ericsson and Simon, 1993). It consists of asking an adult visitor who arrives at the museum to do his visit as he wishes, saying aloud what comes to his mind. While talking, he voices his experience as it unfolds, or, this is equivalent, he reveals what he is thinking, imagining or feeling. In so doing, he produces units of meaning that, put together, build the signification that he gives to the object that he is observing³, but also a “discourse” that is tape recorded and then computerized. Therefore it could be analyzed in its written form globally or according to each unit of meaning that it contains (Dufresne-Tassé et al., 1998a and 1998b).

3. General description of the data collected

During various data gatherings realized mainly in Canadian and European fine arts museums, 10 000 discourses-objects were collected. These discourses were produced by 150 adults of the general public type visiting a permanent exhibition. The works of art were presented as indicated above with very restricted texts and display elements. Amongst the 10 000 discourses, I could identify 20 for which the visitor (10 of them) had spontaneously said⁴: “I was completely isolated with the painting”, “I was immersed in it” or “There was nothing but this painting for me”⁵, these remarks indicating a deep involvement in the treatment of the work of art. Of these 20 discourses, two were long (50 units of meaning or more), nine were of medium length (25 to 49 units) and nine were short (10 to 24 units).

4. Functional definition of intensive experience

An intensive experience lived in front of a work of art implies a strong utilization of the visitor’s cognitive, imaginary and affective functioning, potentially in all their forms, including the most complex ones (Dufresne-Tassé, 2014).

5. Components of the intensive experience and forms that they could take during a museum visit

The following forms of the cognitive, imaginary and affective functioning have been observed repeatedly.

The cognitive functioning (CO) works through 13 mental operations that could be grouped in five categories offering a scale of complexity. The first and least complex category consists either in collecting information by observing or reading, or in reacting rapidly to this information; the second one is checking the accuracy of the information collected; the third one, enriching some information already produced by the visitor; the fourth one, comprehending what he is examining; and the fifth and most complex one, generating inferences related to some already produced information (Dufresne-Tassé et al., 2014).

The imaginary functioning (IM) expresses itself according to the three following forms: Representative: it develops image-like representations as the visitor is reading or listening to something; Reproductive: it produces memories or image-like knowledge associated with what the visitor is observing or reading; Constructive: it proposes a variety of products like: hypotheses, assumptions, anticipations, consequences (Dufresne-Tassé et al., 2014).

The affective functioning (AF) appears in a great variety of forms including: emotion, sentiment, feeling, appraisal (positive or negative), pleasure, empathy, personal projection or expression of one’s own tastes (Dufresne-Tassé et al., 2013).

6. Unfolding of the intensive experience

I shall deal with the unfolding of the intensive experience, analyzing an example offered by one of the 20 discourses identified earlier. The one that I chose is at the same time the shortest, the one that best illustrates the process as it goes on and the intervention of creativity.

³One can say that producing meaning is putting words on what comes to one’s consciousness. The words could be kept for oneself or said aloud and communicated to someone. Said differently, this is the discourse that is produced in one’s mind while one is living something (Dufresne-Tassé, 2011).

⁴The number of these objects would have probably been bigger if a question had been systematically asked.

⁵Jancert (2015) obtains similar remarks from visitors having an immersive experience.

6.1. Example

The analyzed discourse comes from a man who is regarding Jackson Pollock's "Autumn Rhythm". It is presented one meaning unit at a time, accompanied by the cognitive, imaginary and affective activity that produces it.

Units of meaning	Psychological activity (functioning)		
	CO	IM	AF
<u>First Step</u>			
1. "Waw!"	---	---	Emotion (surprise)
2. Waw!	---	---	Emotion (surprise)
3. This is a real jumble. Wait a minute, I am going to look at how this is done	Reacting (first category)	---	Appraisal (not analyzed because the visitor stops voicing his experience and talks to the researcher)
<u>Second step</u>			
4. This is all painting that one lets dropping!	Comprehending (fourth category)	Constructive (hypothesis)	---
5. This is fun!	Reacting (first category)	---	Pleasure
6. This is great fun!	Reacting (first category)	---	Pleasure
7. It seems that the artist had a good time doing this thing.	Inference (fifth category)	Constructive (hypothesis)	Empathy
8. Anyway, I would have had great fun doing it.	Inference (fifth category)	Constructive (assumption)	Projection of oneself
9. When I was looking at a Pellán painting, I knew that artists have fun with colours.	Enriching (third category)	Reproductive (memories)	Empathy
10. Well now, I feel that artists have fun with the way they put colours on canvas".	Inference (fifth category)	Constructive (hypothesis)	Empathy

7. Analysis

The preceding discourse contains two steps, the first one corresponding to units 1, 2 and 3, and the second one, units 4 to 10.

Step one

The first contact with the Pollock's work raises a real surprise (units 1, 2), then a positive reaction where it is clear that the visitor has collected information on the work (unit 3). This first gathering becomes the basis of the ensuing production of the visitor.

Step two

Starting with unit 4 and until the discourse end, the visitor will detail the "real jumble" and deepen its meaning. In order to do this, he will establish a dialogue between, on the one hand what he is observing, and on the other hand his own baggage of knowledge or experience (unit 9), and assumptions developed from this baggage (units 7, 8, 10).

Such an activity necessitates an important and diversified psychological functioning. Indeed it involves the cognitive one in all its categories except for the second, the imaginary one under two of its three forms (reproductive and constructive), and the affective one under three of its figures: pleasure, projection of oneself and empathy.

The units of meaning created by this activity have a very personal character as they are fed by the visitor's own knowledge and experience.

Although very personal, this production is not erratic. In other words, the visitor's mental operations do not simply pile up one on top of the preceding one. Indeed each one prepares the next, so they are joined together and end up deepening the meaning of what the visitor started observing.

On the whole, using as a basis his first observation of the Pollock's work and drawing from his personal baggage, the visitor elaborates a harmonious meaning set that is different from his first perception of the work and enriches it. In other words, he is creative.

8. Characteristics of the immersive experience

The characteristics of the immersive experience are four in number:

1. It includes two steps, the first one being used by the visitor to collect information on what he is observing, while the second one details the signification of this information;
2. The latter step involves a dialogue between the first information gathered and the personal baggage of the visitor;
3. This dialogue is not possible without an important and diversified psychological functioning;
4. It progressively ends up in an articulated and harmonious meaning set of a very personal character.

9. Stability and variations around the model

The two steps described have been observed in the 20 discourses previously identified. Usually the first one is as short as what we have seen here, but the second one could be much longer.

Once he is through with a meaning set, the visitor could leave the work of art. If this is the case, his production includes about 10 to 15 units of meaning. But he could also return to the work and starts again the whole process that goes through the two steps even 10 times. Then his discourse could contain as much as 70 units of meaning regrouped in nine or ten meaning sets at least loosely related together. So the whole discourse looks integrated and the two specimens that I gathered end up in an important discovery for the visitor (Dufresne-Tassé, 2014).

10. Characteristics of the visitor's creativity

The visitor's creativity takes place in the second step of the intense experience. It does not consist only in evoking personal knowledge or experience. As we saw in the discourse analyzed, it rather means using the visitor's psychological capacities (mental operations) to manipulate knowledge and experience in an articulate way, so they add up something new and valuable to the first perception of the work of art, enrich this perception, but also enrich the mere significance of the work. Seen this way, one can consider creativity as an essential aspect of the intensive experience.

11. Discussion

Collecting information on the visitor's experience while he is living it helped to explain the feeling of being fully absorbed, surrendered to, or consumed by the activity to the point of forgetting one's self and one's surroundings (Hansen and Mossberg, 2013). The intense experience is totally absorbing because it so much summons up the psychological capacities of the visitor in a creative production of meaning, and of course his attention, that nothing is left to care about something else.

This explanation being based on data collected accidentally, it should be compared to the results of a systematic investigation. However, it does not lose its capacity to generate new questions regarding art work presentation in museums. For lack of space, I shall suggest only the following. How could the fine arts museum encourage their visitors' creative production of meaning? In other words, how could they play with their collections, the way they display them and the texts that they are offering to better facilitate this production? Some current research going on now at the École du Louvre points out to giving more contextual information as a potential efficacious means. Although, there remains to find out how and where to do that?

References

- Belaën, F. (2003). Les expositions d'immersion. *La Lettre de l'OCIM, No 86, 27-31*.
- Bitgood, S. (2002). Environmental Psychology in Museums, Zoos, and Other Exhibition Centers. In R. Bechtel and A. Churchman (Eds.), *Handbook of Environmental Psychology* (p. 461-481). New York, NY: John Wiley & Sons.
- Chabot, P. (2012). *De l'immersion à l'engagement, la perspective des concepteurs de jeux vidéo sur l'expérience de jeu*. Mémoire de Maîtrise déposé à la Faculté des arts et des sciences de l'Université de Montréal.
- Csikszentmihályi, M. (1990). *Flow: The Psychology of Optimal Experience*. New York, NY: Harper Perennial.
- Dewey, J. (1934). *Art as Experience*. New York, NY: Perigee.

- Dufresne-Tassé, C. (2011). Learning and Meaning Making. Which One is the Most Relevant to Deal with the Benefits of an Adult's Visit to the Museum? In G. Junying and M. Fung Wang (Eds.) *Museums for Social Harmony. Public Education and Museums* (p. 28-37). Guang Zhan Shi, Guang Dong: Jinan University Press.
- Dufresne-Tassé, C. (2014). Experiencia intensa e experiencia de imersão: Relatório de observações diretas. *Museion, Revista do Museu e Arquivo Histórico La Sallem*, 19, 27-42.
- Dufresne-Tassé, C., Barucq, H. et Trion, E. (2013). The Museum Visitor and its Affective Functioning. In A. Avagian (ed.), *ICOM CECA Yerevan 2012* (p. 225-229). Yerevan: Research Methodological Annual (texte publié en arménien).
- Dufresne-Tassé, C., O'Neill, M.C., Lepage, Y., Weltzl-Fairchild, A., Émond, A.M. et Marin, D. (2004). Comment des visiteurs occasionnels traitent-ils les objets d'une exposition permanente de peintures et de sculptures? *Giornale Italiano di Pedagogia Sperimentale, An International Journal of Education Research*, XII, 35-65.
- Dufresne-Tassé, C., O'Neill, M.C., Sauvé, M. et Marin, D. (2014). Un outil pour connaître de minute en minute l'expérience d'un visiteur adulte. *Revista Musologia & Interdisciplinaridade*, 3, 6, 187-204.
- Dufresne-Tassé, C., Sauvé, M., Weltzl-Fairchild, A., Banna, N., Lepage, Y. et Dassa, C. (1998 a). Pour des expositions muséales plus éducatives, accéder à l'expérience du visiteur adulte. Développement d'une approche. *Canadian Journal of Education*, 23, 3, 302-316.
- Dufresne-Tassé, C., Sauvé, M., Weltzl-Fairchild, A., Banna, N., Lepage, Y. et Dassa, C. (1998 b). Pour des expositions muséales plus éducatives, accéder à l'expérience du visiteur adulte. Élaboration d'un instrument d'analyse. *Canadian Journal of Education*, 23, 4, 421-438.
- Ericsson, K.A. and Simon, H.A. (1993). *Protocol Analysis*. Cambridge, MA: The MIT Press.
- Grau, O. (2003). *Virtual Art. From Illusion to Immersion*. Cambridge, MA: The MIT Press.
- Guelton, B. (dir.) (2014). *Les figures de l'immersion*. Rennes: Presses Universitaires de Rennes.
- Hansen, A.H. and Mossberg, L. (2013). Consumer Immersion: A Key to Extraordinary Experiences. In J. Sundbo and F. Sorensen (Eds.), *Handbook on the Experience Economy* (p. 209-228). Cheltenham, UK: Edward Elgar Publishing.
- Jancert, C. (2015). *La réalité virtuelle au service d'une meilleure immersion des visiteurs d'exposition?* Paris: Mémoire d'étude présenté à l'École du Louvre.
- Jantzen, C. (2013). Experiencing and Experiences: A Psychological Framework. In J. Sundbo and F. Sorensen (Eds.), *Handbook on the Experience Economy* (p. 146-171). Cheltenham, UK: Edward Elgar Publishing.
- Jeudy, H.P. (2005). La culture en trompe l'oeil. *Culture et Musées*, No 5, 159-167.
- Latham, K.F. (2007). The Poetry of the Museum: A Holistic Model of Numinous Experiences. *Museum Management and Curatorship*, 22, 3, 247-263.
- May, R. (1994). *The Courage to Create*. New York, NY: Norton.
- Montpetit, R. (1996). Une logique d'exposition populaire: Les images de la muséographie analogique. *Public et Musées*, 9, 1, 55-103.
- Pranskūnienė, R. (2013). *Submerging Interactivity in Museum Education: Grounded Theory*. Doctoral Thesis, University of Klaipėda.
- Savard, N., Savard, C. et Dufresne-Tassé, C. (1994). Comparaison de deux façons d'identifier les questions et les hypothèses formulées par le visiteur de musée. *Canadian Journal of Education*, 19, 3, 94-99.

EXECUTIVE FUNCTIONS AND OPERATIVE REASONING IN THE SET GAME® SOLUTION

Sandreilane Cano da Silva & Lino de Macedo

Institute of Psychology, University of São Paulo (Brazil)

Abstract

The components of executive functions are four and are expressed in the following domains: volition, planning, purposive action, and effective performance. Recently researchers propose that the executive functions develop in parallel to the growth of the child, with significant changes between 6 and 9 years, when it comes to self-regulate behavior, formulates strategies, and understands the reciprocal basis of relations. In Piaget's theory, these changes match the development of operations. The objective of the present study is to analyze the hypothesis that these functions are required to perform well in the task proposed by the SET Game®. The game is composed of cards having a variation of four features (symbol, color, number of symbols and symbol's shading) each one with three different characteristics or features' parts. The objective of the game is to identify sets of three cards whose features are either identical or distinct. In this work it is assumed that the practice of this game exercises the executive functions supported on the following arguments: (1) the player should behave intentionally to avoid mistakes, formulate goals, and formulate hypotheses. He/she must exercise their inhibitory control to perform all of these behaviors (volition); (2) the player must identify the features' parts, organize a search strategy, and decide whether the group of three cards forms a Set or not (planning); (3) the player must develop an intentional action to find a Set that complies with the game rules (purposive action); and (4) the player must be able to monitor his/her action to avoid mistakes, self-correct, and self-control (effective performance). In the SET Game these domains, or operations/reasoning as they are designated in Piaget's theory, allow the subject to identify the three cards that meet the conditions to form a Set. For this, the player needs to recognize the different object observables (features' parts), as well as to classify, connect and identify these observables according to the objective (subject observable). These observables presume coordination in a double way – in the subject scope (understanding) and in the object (game structure). Ascribing a structure to the game means to consider the logic underlying the composition of the cards and the Sets.

Keywords: *executive functions, epistemology, cognitive development, play.*

1. Introduction and objective

We are facing a major challenge, namely, to think and perform well, i.e., we have to master procedures which enable us to observe, analyze, conclude and make decisions that lead us to learn and develop cognitively. Games can be a place to learn how to think well. The valorization of active work in a game environment enables the subject to realize the real possibility of practice the Executive Function indispensable for the acquisition of knowledge. This work intends to present a conceptual analysis about the play actions and face challenge proposed by the SET Game from the perspective of Piaget's theory and Executive Functions.

2. The SET Game®

It is a card game composed of 81 cards each one having a variation of four features and three features' parts: (1) Symbols: squiggles, diamonds or ovals; (2) Color: red, green or purple; (3) Shading: solid, striped or outlined; and (4) Number of symbols: one, two or three symbols

The cards are unique in the combination of their features' parts. The goal is to identify a trio of cards, called SET, in the twelve cards laid out on a table. In a SET their features' parts must be all the same or all different from each other at the same time. Possible Kind of SET can be seen in Figure 1 The players should to pay attention on not grouping 2 features' parts obeying the rule and one not. This mistake is called "2 against 1" (2x1), which is shown in the Figure 2.

Figure 1. Set Example: all features' parts are different

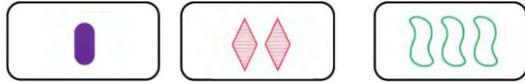


Figure 2. Trio with 2x1 mistake



3. Empirical research

The participants were 40 volunteers coming from a Brazilian government educational program. The participants were adolescents ($N = 18$) being from 14,10 to 16,7 years old¹; adults ($N = 12$) being from 25,5 to 54,10 years old; and elderly people ($N = 10$) being from 63,3 to 80,3 years old (Silva, 2013).

It was organized 15 workshops of 30 minutes each, where the participants, distributed in groups, played the game in a single session. The workshops were patterned after the work developed by the Laboratory of Psychopedagogy and Laboratory of studies on Development and Learning (LEDA/LaPp) (Macedo, Petty & Passos, 1997, 2000).

The results show there are two kinds of Sets: Possible Sets and Selected Sets. The formers are the Sets available in each cast and the cards are those selected by the subjects. It was investigated the possibilities to combine the features' parts according to their similarities and differences.

There is no possibility to form Sets with four similar features (0x4), because each card is single. There are four possibilities to combine these features: 4x0 – 4 features joined by difference; 3x1 – three features joined by difference and one by similarity; 2x2 – two features joined by difference and two by similarity; and 1x3 – one feature joined by difference and three by similarity.

Initially, each group is analyzed separately in order to identify the trends and the most frequent combinations inside them. In the 3x1 group, there were 25 SETs, the most selected feature was the shading appearing in more than half of the cases (52%). The other features appeared approximately with the same frequency (16%). Despite the difference between the relative frequencies of each feature, the tendency followed that predicted for the Possible Sets. The “Color-Shading” combination is the most selected among the Possible Sets in the 2x2 group, as expected (27% in possible SETs and 29% in selected SETs). Besides that, all combinations followed the predicted trend. It is worth to mention, however, that the “Color-Symbol” combination remained considerably below the expected (13% against 21%). The 1x3 group followed the predicted trend for the Possible Sets. The most frequent combination was the “Color-Symbol-Shading”, as expected. Nevertheless, its relative frequency in the Selected Sets was a little higher than in the Possible Sets (53% against 46%). On the other hand, the “Color-Number-Shading” combination was selected with half of the expected relative frequency (9% against 18%).

Concerning all the combination groups, it was verified that the combination with far more selected sets from the possible sets was the 1x3, there were 47 (82%). It was followed by 2x2 (21%), 3x1 (18%), and 4x0 (9%).

Finally, regarding all the Selected Sets (102) and all the Possible Sets (380) according to the kind of combination, it was verified that the results did not follow the expectations. The Sets characterized by the 3x1 and 2x2 combinations were the most probable to be selected with probabilities of 37% and 30%, respectively. On the other hand, the less probable Sets were those with 4x0 and 1x3 combinations (15% and 18%). However, the most frequent selected Set was the 1x3 (43%), followed by 3x1 and 2x2, with 25% and 24% respectively. The less selected one was the 4x0 (6%).

4. SET Game and Piaget's theory

The practical or sensory-motor intelligence, in the first two years of life, enables subject-object interactions and is composed by action schemes, expressed by the functional continuity between assimilation and accommodation. Such schemes are constituted by the functioning of nine cognitive coordinators, which are in turn subdivided into three groups.

The first two coordinators of each group characterize the correspondences whereas the others characterize the transformations. Establishing correspondences and achieving transformations are two ways to acquire knowledge, according to Piaget. The symbolic, operative and reflective intelligence, which succeed the practical or sensory-motor intelligence, also makes use of the cognitive coordinators for the construction of symbolic, conceptual or operative schemes through which expresses, achieves, understands, becomes aware, abstracts, and finally builds knowledge.

The first group characterizes the definition of scheme, according to Piaget (1982). It is composed by the coordinators of *Repetition*, *Identification* and *Substitution*. Repeating actions is the first condition

¹The age is presented by using two numbers separated by a comma, the left number corresponding to the years and the right one, to the months.

that constitutes the scheme that structures the actions. Through repetition, one can gradually identify or recognize the elements that compose the actions. As the scheme is constituted by the repetition and identification, it is abstracted as form and it is transformed in a scheme applicable in different situations. In the game, as stated by Piaget (1958), repetition is given by the functional pleasure in exercise play, in reviving a situation in symbolic play and in the possibility of a second match in a rule play. Adding to this, according to Macedo (2010) the experience that was generated by repetition generates necessary regularities to proceed well on playing. In the Set Game the subject uses the repetition coordinator in every casts. It is done the repetition of the form rather than of the content. In other words, it is the repetition of the form for the reason that in each cast the player has to set three cards in which the feature's parts are similar and/or different. It does not happen with the content since all cards are single in their features.

The second coordinator of this group is the Identification. This coordinator enables the subject to identify an object in a specific position in the space. In other words, the subject is able to distinguish the cognoscible. Coordinators of Identification enable the subject to recognize and to name things present in a specific place and time (Piaget, 1982). Regarding the Set Game, the player has to identify in twelve cards laid out on a table, the possibilities to make a Set, in which the form is repeated whether by the similarity or the difference of the features' parts. For this identification to occur, the subject needs to observe. Such a coordinator demands the subjects to be "active, not neutral, sentient and constructor of his own actions" (Macedo, 2009, p.55), so allowing them to recognize the better way to proceed to play well.

The third cognitive coordinator is the Substitution, which is considered by Piaget (1982) a change coordinator because it allows that anything or any situation can be transformed. This transformation can be of form or content. In the Set Game substitution is linked to the content not to the form. The way of finding a Set will always be the same because it depends on the rule. On the other hand, the contents change in each cast. After the Set has been identified, the cards are replaced by new ones creating new possibilities for combining them.

These three cognitive coordinators enable players to gain experience. The reason is that they repeated the match several times; identified successes, failures, good and bad casts; understood and organized players' procedures with substitution; to finally be able to apply the action schemes to new contents.

The second group is composed by the cognitive coordinators of *Similarity/Difference*, *Grouping* and *Succession*. Piaget (1982) stated that these coordinators characterize the logic form of action schemes. Noticing similarity and difference between objects is the condition to the subject to be able to compare and attribute values to the things. Thereto, the subject needs to think in a discontinue way. This coordinator is essential to play the Set Game. The reason is that the subject has to compare the features' parts of each card, then to identify their similarities and differences and to be able to relate the features to gather the cards. The Grouping coordinator enables the subject to coordinate the same actions schemes in different situations. Merely grouping is not enough, the order is essential. In this case, the third cognitive coordinator, Succession, is considered as an important factor to solve this problem. With this coordinator the subject can recognize – in each specific situation – that exists a necessary order that must be obeyed. Such recognition is possible only after the subject has identified the similarities and differences between objects. This cognitive movement is named *Opening to the Possibles* by Piaget (1982).

Making an analysis of the procedures of playing Set, in the light of this second group, initially the players has to establish relations of similarity and differences between the features' parts of each card. This means that they will identify, in the context of the twelve cards on the table, which feature has the similar or different qualities. The next step is to gather, mentally, three cards to find a Set. Gathering cards is not enough, since the subjects have to succeed them. Succession means that as the players choose the first card, they open a range of possibilities for the second one. As soon as the second card is selected, there is only one option for the third one. This is because the features' parts of the third card are connected with the first and second ones simultaneously.

The third cognitive coordinator group proposed by Piaget (1982) characterizes the infralogic form of action schemes. *Involvement* is the first coordinator in this group. This is an integration coordinator that organizes the parts of a set, considering each peculiarity to form a whole (Piaget, 1982). In other words, Involvement is to join parts, making relations among them to form a set. *Direction* is the second coordinator. It can be expressed in three ways: (1) spatial – related to a trajectory; (2) teleonomic – the ways to achieve the end; and (3) mental – corresponding to the projects to achieve the end. The last cognitive coordinator, *Position/Dislocation*, enables the subject to reconstruct internally the spatial relations between objects. When the subject plays the Set Game®, he uses the coordinators of this third group to make relations between the parts – the features' parts – of a dynamic whole – the cards laid out on the table that change in each cast. He also needs to coordinate the similarities and differences of the features' parts. The cards are arranged in a 3x4 matrix and the player, to reach his goal, has to map the

cards by looking at the rows, columns and the diagonals of the matrix. In this observation work, the subject moves his view in various directions in the matrix searching for three cards that are complementary. When a set is found, the cards are then removed from the matrix.

As stated by Piaget (1982), the source of the correspondences is linked to the externalization of the actions development as the coordinators orientation is orientated to the object assimilation. On the other hand, the source of the transformations are established by an interiorization of the actions, i.e., through an internal activity in which the coordinators are orientated to the scheme assimilation. The author also asserts that the fate of the correspondences is to be subjected to transformations. In this context, playing Set is a task of establishing correspondences and has as condition to perform transformations.

5. SET Game and executive function

Executive functions (EFs) are mental functions that allow us to solve problems that emerge from facts and new information. They are required when the impulse, intuition and automatic response is not sufficient to face a situation that requires concentration and reasoning. For this reason and also due to the game structure we assume that the practice of the SET Game exercise executive functions. The activities of EFs depend predominantly on neural circuit are concentrated in the prefrontal cortex (Miller & Cohen, 2001). The term Executive Function was coined by Lezak (1982) and thenceforward it has been used to refer to the four areas of mental functions, which were named as *volition*, *planning*, *purposive action* and *effective performance*.

Volition concerns about the motivation, intention and intentional behavior to achieve certain goal (Lezak, 1995). Toward this domain, the player should: behave intentionally to form a SET, avoiding the mistake two against one; formulate goals by analyzing the different modes of relation among the figures and finding those that establish a SET; have initiative formulating hypotheses supported by the observation of the cards; be aware that the player is who searches and finds a SET.

Planning refers the steps to be followed to solve a problem or achieve a goal. For effective planning it is not enough a sequence of steps. The subject must be able to think alternatives and choose the one that seems to be more effective (Lezak, 1995). To play the SET game, setting priorities by observing the prevalent features' parts is necessary and indispensable to organize the steps in a search strategy. Only planning is not enough to reach the goal, it is also necessary that the set and the chain of actions to be carried out. The domain responsible for this process is the *purposeful action* (Lezak, 1995). In the SET Game, the cards distribution is done in a random fashion, but the way to form a SET is not, i.e. the player must initiate and maintain what was planned to find the SET.

The *effective performance* refers to the monitoring skills and self-correcting of the action when it is not being effective as planned (Lezak, 1995). To meet the challenge proposed by the SET Game the player must know how to monitor to avoid the mistake two against one, and self-correct undoing a hypothesis of forming a trio if not confirmed in the second or third card.

Diamond (2006) presented an approach about the development of the basic components of EFs. The core of EFs is: *working memory*, *inhibitory control* and *cognitive flexibility*.

Working memory (Davidson, Amso, Anderson & Diamond, 2006) concerns about the temporary storage of information that is accessed and managed for use in a short time. It also enables integration between environmental stimuli and temporary information to the knowledge previously developed. For this reason it is also responsible for organizing the information in a timeline, thus making it possible to know what came before and what came after. As a consequence of that, there is constant updating of data in working memory. To play SET, the player stores in his memory the features-parts (color, symbols, number and shadings of figures) of the cards laid out. This type of memory stores the cards information temporarily and integrates them with the game and the composition rules of the cards. Then, the player uses this features part information to search the three cards that form a SET.

Inhibitory control is related to self-control capacity, i.e. the ability to resist or partially control impulses, thoughts or distractions that interrupt the course of an action or response (Davidson, Amso, Anderson & Diamond, 2006). Such distractions can be the result of either external or internal causes like emotions and mental or behavioral habits. The time of play is inserted in the middle of other activities of the day and also in an environment full of information, so being the inhibitory control a mechanism which inhibits the distracting stimuli, such as objects and thoughts, that hinder the search for joining the features-parts for their equality or difference to form a SET. In activities, when there are the same cards to form different SETs, inhibitory control is also responsible for making the player delete in his search the SETs that have already been found. Another important aspect in inhibitory control is discipline. It is the responsible for making the player not only do the activity, but remain doing the activity even having other activities in the environment

Cognitive flexibility is the ability to adapt or change the strategy for solving a problem by changing the attention focus as the requirement of the task (Lezak et al, 1995). "Being flexible Involves being able to take advantage of serendipity though you had other plans, being able to switch between your perspective and another's, and being able to change your mind our course of action based on new information" (Diamond, 2014, p. 208). To play Set Game, every time three cards are removed and three other are added and players must adapt to new configuration of the array. With this you should regulate his behavior, ie change your SET search procedure for this new environmental demands which is a new array of 12 cards. When the player has the rule to join the features parts for equality or difference already established. He makes the search in order to form a SET one more element that is the possibility of repetition of cards to form new Sets.

These three components that form the core of the EFs make it possible to apprehend, select and relate portions of information. As a result, it presents sophisticated higher-level EFs called: *reasoning, problem solving* and *planning*.

Acknowledgment

This research was supported by CAPES – Coordination for the Improvement of Higher Education from Brazil.

References

- Davidson, M. C., Amso, D., Anderson, L. C., & Diamond, A. (2006). Development of cognitive control and executive functions from 4-13 years: evidence from manipulations of memory, inhibition, and task switching. *Neuropsychologia*, 44, 2037-2078.
- Diamond, A. (1985). Development of the ability to use recall to guide action, as indicated by infants' performance on AB. *Child Development*, 56, 868 -883.
- Diamond, A. (2006). The early development of executive functions. In E. Bialystock & F. I. M. Craik (Eds), *The early development of executive functions. Lifespan cognition: mechanisms of change.* (70-95). England: Oxford University Press.
- Diamond, A. (2014). Want to optimize executive functions and academic outcomes? In P. D. Zelazo, & M. D. Sera. (Eds). *Minnesota Symposia on Child Psychology. Developing Cognitive Control Processes: mechanisms, implications, and interventions.* Vol. 37. (205-203). New Jersey: Wiley
- Lezak, M. D. (1982). The problem of assessing executive functions. *International Journal of Psychology*, 17 (1-4), 281-297.
- Lezak, M. D., Howieson, D. B., Loring, D. W., Hannay, H. J., & Fischer, J.S. (1995). *Neuropsychological assessment* (3rd ed). New York: Oxford University Press.
- Macedo, L. (1997). Capítulo V: Os jogos e sua importância psicopedagógica. In: L. Macedo, A.L.S. PETTY, & N.C. PASSOS (Eds) Quatro cores, senha e dominó: oficinas de jogos em uma perspectiva construtivista e psicopedagógica (145-163). São Paulo: Casa do Psicólogo.
- Macedo, L. (2010). *Ensaio Construtivistas*. São Paulo: Casa do Psicólogo.
- Macedo, L.; Petty, A.L.S. e Passos, N.C. (2000) Aprender com jogos e situações-problema. Porto Alegre: Artes Médicas Sul.
- Miller, E. K., & Cohen, J. D. (2001). An integrative theory of prefrontal cortex function. *Annual Review of Neuroscience*, 24, 167-202.
- Piaget, J. (1958/1994), *O juízo moral na criança*. São Paulo: Summus
- Piaget, J. (et all). (1982) Investigaciones sobre las correspondências. Madri: Alianza Universidad.
- Silva, S. C. (2013). *Teenagers, Adults and Elderly People on Playing Set Game: Cognitive Aspects.* (in Portuguese) Master Dissertation. Institute of Psychology. University of São Paulo.

A QUALITATIVE FOLLOW-UP STUDY OF THE FAMILIES FEELING SAFE: PROTECTIVE BEHAVIOURS PROGRAMME

Isabella McMurray & Patricia Roberts

Department of Psychology, University of Bedfordshire (United Kingdom)

Abstract

The Families Feeling Safe programme is based on two themes. First, we all have the right to feel safe all of the time. Second, that everyone should have the opportunity to discuss any topic regardless how insignificant it may seem. Over a ten week period parents work through a detailed training manual and are taught to acknowledge the feelings that they and their children are experiencing. Also the programme aims to build upon parents' own strengths to develop parenting skills and strategies to help keep themselves and their families feeling safe. A previous evaluation of this programme showed that the programme had a significant positive effect on parents' own well-being, their sense of competence, managing their child's emotional behaviours and communication skills. Using phone interviews and an online survey this study explored the longer-term impact of the programme with 28 parents, nine months to a year after completion of the programme. Parents' reflections highlighted that their well-being, parental self-efficacy and style of communication with their children had continued to improve, which parents attributed to the programme. Also, parents reported an understanding of the link between emotions, thoughts and behaviours for both themselves and their children. In recognising these connections parents felt more in control of challenging situations. Some parents who had initially used different parenting strategies after completion of the programme had slowly reverted back to familiar ways of interacting within the family. Others were aware of strategies but had not put them into practice. Parents commented that the programme had given them the opportunity to share their experiences with other parents in similar situations. The programme should continue but consideration could be made to tailoring courses for specific target audiences, for example children in similar age groups or with similar physical or emotional difficulties. Furthermore, to offer a refresher course and online support materials so that the strategies learnt can be reinforced in the longer term.

Keywords: *parenting, parental self-efficacy protective behaviours.*

1. Introduction

How parents are attuned and respond to their child's needs impacts on the quality of the child's attachment to their parents and acts as a blue print for future relationships (Bowlby, 1969). For parents to be able to protect themselves and their children, an understanding and recognition of what the potential risks and signs of harmful behaviours are, is essential. The quality of the parent-child relationship can have an impact on children's outcomes, with an inconsistent parenting environment associated with negative child outcomes and positive parenting as one of the factors that can promote resilience in children (Zakeri, Jowkar and Razmjoe, 2010).

Research in the UK has found that early intervention in families with difficulties is essential to improving outcomes for children and young people (Gibbs, Underdown, Stevens, Newbery, and Liabo, 2013; Hutchings, Bywater, Daley, Gardner, Whitaker, Jones, Eames and Edwards, 2007). The Allen Report (2011) highlighted the need for early intervention programmes to support child well-being (Allen, 2011). Once parents have the knowledge and confidence to parent effectively it can improve their own well-being and parental self-efficacy, which in turn improves child outcomes (Lindsay, Strand, Cullen, Cullen, Band, Davis, Conlon, Barlow, and Evans, 2011). Randomised controlled trials have been conducted with parents of younger children. Parents were randomly allocated to take part in parenting programmes alongside a control group where parents did not participate in any programme. The findings indicate the programmes positively influence parenting behaviours (Hutchings et al, 2007). A randomised control trial of the Family Links Nurturing Programme in Wales found no statistically significant difference on a variety of parent and child outcome measures between an intervention group and a control

group over a nine month period (Simkiss, Snooks, Stallard, Kimani, Sewell, Fitzsimmons, Stewart-Brown, 2013). There is a need to explore if parenting programmes are effective in the long-term.

1.1. Families feeling safe: a protective behaviours programme

The Families Feeling Safe (FFS) programme was developed in the UK to enhance parents and carers well-being and self efficacy. Using an empowering approach the programme aims at providing parents with practical strategies to keep themselves and their children safe. The programme is made up of nine sessions and a 10th follow up session usually 3-4 months later. The sessions are organised in a small group format and facilitated by two trained professionals. There are two themes that form the underlying basis of the programme. First, 'we all have the right to feel safe all the time', and second, 'we can talk with someone about anything even if it's awful or small'. Details of the ten sessions and the goals of each session can be found in Table 1.

Table 1. Families Feeling Safe Programme

Week Number	Description of the Session
1	Welcome and introduction to the theme one of the programme
2	Exploring the link between feelings, thoughts and behaviours and theme two
3	Finding help and support
4	Helpful and unhelpful ways to communicate
5	To raise awareness of how Unwritten Rules influence feelings, thoughts and behaviour
6	Problem solving
7	Exploring personal stressors and strategies
8	Behaviour as a choice with an effect
9	Summarising the programme and exploring resources
10	Reunion - Opportunity to share how they are doing

1.2. Previous evaluations of the families feeling safe programme

An evaluation was undertaken of the programme (McMurray, Roberts and Lamb, 2013). One hundred and forty-nine parents completed pre- and post-intervention standardised measures of mental well-being and parental competence, along with questions relating their views of the programme. The findings showed that the FFS programme had a significant positive effect on parents' 'well-being' and their 'parental sense of competence'. Furthermore, the parental 'well-being' and 'parental sense of competence' scores at the end of the FFS were comparable to published normative scores. It was found that parents' short-term emotional behaviours and communication skills were significantly enhanced. After taking part in the FFS programme parents considered that they would use a range of different practical strategies to help keep themselves and their children safe.

1.3. Aims of the current evaluation study

The aims of the current evaluation study were:

- To gain reflective accounts of parents' experiences of taking part in the Families Feeling Safe programme.
- To examine the long-term impact of the programme on parents' well-being, confidence, parental self-efficacy and their communication with their children.
- To explore any additional long-term changes within families since taking part in the programme.

2. Methods

2.1. Design

A qualitative research design was employed. This included a telephone interview or an online survey for parents that were unable to take part in the telephone interview.

2.2. Participants

Twenty-eight parents who had attended the FFS programme agreed to take part in a follow-up evaluation between nine to twelve months after completion of the programme. Twenty of parents undertook a telephone interview and eight parents completed an online survey. Twenty-seven parents were mothers and one was a father.

2.3. Materials and procedure

The interview schedule contained 23 questions designed to explore if there were any continued benefits of taking part in the programme to both parents and children, whether participants had made any changes to their parenting since attending the programme and if these could be attributed to the programme. Furthermore to gain an understanding of participants' experiences and views of the programme.

Examples of questions included in the questionnaire are: 'Has the programme provided you with any new ideas or strategies to share with your child/ren about keeping themselves feeling safe?' and 'What are you doing differently now in your parenting that you learnt from this programme?' Also parents were asked to rate how confident they felt in their parenting since completing the FFS programme and responding to a three-point Likert scale of 'confident', 'neither confident or not confident' or 'not confident'.

3. Findings and discussion

A thematic analysis (Braun and Clarke, 2006) was conducted to explore themes from the interviews and online survey and are presented under each aim below.

3.1. To gain reflective accounts of parents' experiences of taking part in the Families Feeling Safe programme

3.1.1. Inclusive nature of the programme. Parents who attended the programme were keen to make changes to themselves, their relationships with their (ex) partners and with their children and to build confidence and competence in keeping themselves and their children safe. Reflecting on the programme parents enjoyed the inclusive nature of the programme, although parents may have come from different backgrounds they were able to empathise with each. The way the programme was delivered meant that they did not feel alone or stigmatised by the issues they were facing.

"I was surprised by the different mix of people in the group," and "there were people in the group that I wouldn't normally have contact with, some had severe issues different to mine but others had similar issues." The inclusive nature of the programme was highlighted by parents who expressed their view that sharing their parenting struggles reduced their preconceived thoughts and feelings of stigma that seem attached to admitting the need for help. For many parents asking for help had previously been perceived as a weakness, "I can now accept that we all struggle at times and it is okay to ask for help."

Parents commented that they would be less judgemental of someone else's situation as this experience had provided an opportunity to understand the personal experience of an individual's struggles, thereby fostering a sense of empathy beyond the lifespan of the group.

3.1.2. Resources and ideas for future programmes. The workbook that accompanied the programme was referred to by many parents as being very "user friendly", "easy to understand" and a "very useful tool". "I have attended two courses for parents of children with special needs and the FFS programme had the most user friendly resources and can be used by adults and children with very little/no adaptation." This workbook enables parents to revisit topics and can be used as a refresher tool.

Additional suggestions were as follows:

- That the programme could be offered to parents alongside their children, "I don't know if it exists but mother and child counselling together or a group we could both attend."
- Online resource with the topics on that could be revisited along with further practical parenting strategies.
- To target specific group such as children of different ages or those with specific difficulties.
- To provide information on the internet and social media.
- As some children were entering into adolescence several parents were eager to help their children recognise an emotionally intimate relationship.

3.2. To examine the long-term impact of the programme on parents' well-being, confidence, parental self-efficacy and their communication with their children.

3.2.1. Parents' well-being. Parents expressed an improvement in their well-being attributed to taking part in the programme. This included the ability to not to be so negative, and take time to think about how to react in stressful situations which in turn helped their home to be "a happier place to be now."

Some parents stated that they now recognised that it was important to take time to relax so that they could be strong for their family, “I can now acknowledge that I need downtime and am aware of the cost to my mental well-being when I don’t acknowledge that I’m not coping and do things differently.” Furthermore, there was a sense of reappraisal of what was important and there was more of a balance in expectations of one’s self, “accepting that I don’t have to be perfect” and “realising I can’t do it all and the housework can wait.”

3.2.2. Parents’ confidence and parental efficacy. Most parents stated that they felt confident with their parenting (21) in a range of different circumstances as the following quotes show. Taking part in the programme “made me feel more confident and positive about things” and “I feel more confident as I don’t tend to fall to bits at the slightest thing like I used to as I now use the tools learnt on the course.” Seven parents responded that they were ‘neither confident nor not confident.’ They stated they were confident in their day-to-day parenting but some new challenges had “yet to be mastered”, as they did not always feel confident in their ability to cope. In developing self-belief in their ability to deal with the varied challenges arising parents commented that “I’m much more confident as a mum and find it so much easier to deal with situations.”; and “I know I can find resources either within myself or go looking outside - always confident in my ability to find a solution.”. No parents noted they were not confident in their parenting.

3.2.3. Parental communication with their children. Some parents reported that their previous communication styles were obstructive and unhelpful and that taking part in the programme had helped them to adopt a more effective and helpful way of communicating with their children. Some parents recognised the detrimental effects of negative behaviour and that sitting down and listening to their children was something that they had not always been able to do and that listening was the first step towards effective communication, “ If they want to tell me something I stop what I’m doing now and notice. If it’s something I’m doing that is important I get them to help me and we talk at the same time”.

As well as listening parents acknowledged that the power of their own words on their child’s feelings and behaviour and were more aware of how they spoke to their children.

3.3. To explore any additional long-term changes within families since taking part in the programme

It was evident that some parents, prior to attending the programme did not always acknowledge their child’s feelings and their own; “Feelings are okay to have and to acknowledge, something I didn’t realise before.” Also that expression of angry feelings in naughty behaviour was a “warning sign, a cry for help that something was wrong”

After attending the programme some parents stated that they now had an understanding of the link between emotions, thoughts and behaviours. In recognising these connections parents expressed feeling more in control of challenging situations. There was more awareness about how feelings can be an “early warning sign” providing an opportunity to think about the situation and consequently consider their emotional reaction to it. Some parents reported now feeling less anger and anxiety in these situations;

The majority of parents described continuing to use the practical strategies they had learnt in the programme in their everyday lives. These included strategies in relation to feelings such as using the ‘Anger Chart’ and ‘Feelings Thermometer.’; Parents comments included, “I certainly try to name all my feelings and emotions as I am experiencing them in the moment - it doesn’t always work but I think it’s helping them (children) to name their own feelings to,” “I realise now that feelings are feelings and there is nothing wrong with how you feel,” “We’re all individuals and have different feelings and react differently” and “I used the writing exercise detailing feelings to step outside of the situation and get a different perspective.”

Parents reported that they generally considered that their relationships with their children had improved since taking part in the programme. Parents felt confident that their children were now able to talk to them if they were feeling unsafe. This had led to improved behaviour in their children. Furthermore, parents stated that they had been able to equip their children with ideas to use in situations where their children felt anxious or unsafe. Many parents recognised that their children have a right to learn how to take responsibility for their own feelings and safety and face the consequences of their behaviour. Some parents described their children as being “more independent” and “resilient” and were better equipped to cope with any future life experiences where they may feel unsafe.

4. Conclusion

Parents expressed overall satisfaction with the programme with comments including: “Just a massive thank you it was a huge step in our healing process,” “110% improvement – attending this programme solved our problem – couldn’t have asked for anymore” and “I have complete admiration for who put this together, we were in a really bad place...this has made such a difference to our lives.”

This evaluation has shown that the FFS programme has had some impact on parents’ relationship with their children, parents’ confidence in their parenting and the way that they parented in the long-term. The addition of online resources may help to reinforce parenting strategies. The programme should continue but consideration could be made to tailoring courses for specific target audiences, for example, for parents with children in similar age groups or with similar physical or emotional difficulties. Furthermore, to offer a refresher course and online support materials so that the strategies learnt can be reinforced in the longer term. Consideration should be made to how this programme can be expanded to other authorities and cultures.

References

- Allen, G. (2011). *Early intervention: The next steps*, London: Cabinet Office. Department for Education
- Bowlby, J. (1969). *Attachment. Attachment and Loss: Vol. 1. Loss*. New York: Basic Books.
- Braun, V., and Clarke, V (2006) Using Thematic Analysis in Psychology, *Qualitative Research in Psychology*, 3 (2) 77-101.
- Gibbs, J., Underdown, A., Stevens, M., Newbery, J. and Liabo, K. (2003) Group-based parenting programmes can reduce behaviour problems of children aged 3-12 years. What Works for Children group Evidence Nugget April 2003. <http://www.whatworksforchildren.org.uk/docs/Nuggets/pdfs/parenting%20nugget.pdf>
- Hutchings J., Bywater T., Daley D., Gardner F., Whitaker C., Jones K., Eames C., Edwards R. (2007). Parenting intervention in Sure Start services for children at risk of developing conduct disorder: pragmatic randomised controlled trial. *British Medical Journal* 334: 678–682.
- Lindsay, G., Strand, S., Cullen, M.A., Cullen, S., Band, S., Davis, H., Conlon, G., Barlow, J and Evans, R (2011) Parenting Early Intervention Evaluation. Department for Education.
- McMurray, I., Roberts, P and Lamb, G (2013). Families Feeling Safe: A Protective Behaviours Programme. An Evaluation.
- Simkiss, D. E., Snooks, H. A., Stallard, N., Kimani, P. K., Sewell, B., Fitzsimmons, D., Stewart-Brown, S. (2013). Effectiveness and cost-effectiveness of a universal parenting skills programme in deprived communities: multicentre randomised controlled trial. *BM J Open*, 3(8), e002851. <http://doi.org/10.1136/bmjopen-2013-002851>
- Zakeri, H., Jowkar, B., Razmjooe, M (2010) Parenting styles and resilience. *Procedia Social and Behavioral Sciences*. 5, 1067–1070

PARENTAL PROFICIENCY IN INTERNET USE FOR CHILD-REARING PURPOSES IN SPAIN AND PORTUGAL

Sandra Santos¹, Nuno Gago², Arminda Suárez³ & María José Rodrigo³

¹Universidade Portucalense Infante D. Henrique (Portugal)

²Associação ABC - António Bacelar Carrelhas (Portugal)

³Departamento de Psicología Evolutiva y de la Educación – Universidad de La Laguna (Spain)

Abstract

The present study aimed at evaluating the digital use divide and the skill divide in the parental use of Internet as a source of educational support. Our sample was composed of 282 Portuguese and 234 Spanish parents, who answered an online survey. Concerning the digital use divide, educational level, residence home and child age modulated the parental access to Internet in Portuguese parents, whereas Spanish parents' access to the Internet is largely free of social bias. Concerning the digital skill divide, parental gender, age, socioeconomic level and educational level are the factors that modulate the parental proficiency, which means, the ability to do efficient searches on the Internet. In Spain, mothers were more active in searching for information but felt less skilful than fathers, and the most educated parents searched for information and felt more proficient than the ones with a lower level. In Portugal the youngest parents, with high educational and socioeconomic level are the most proficient ones with searches. The results allowed us to understand the parental usage and proficiency towards online educational resources, which can help to develop new websites that seek to help parents in their task of parenthood. These findings can also help us to think of a way to outline the difficulties within the lower socioeconomic population in terms of access to Internet and the proficiency with which perform the searches and evaluate the results. Simultaneously, the results may inform us about initiatives of Internet literacy training, applied differentially for fathers and mothers and may provide guidelines for those who develop websites for parents.

Keywords: *child-rearing information, internet use, parent's proficiency, digital divide, parenthood.*

1. Introduction

The social changes of the past thirty years (separations/divorces, migrations, new typologies of family and family dispersion) contributed to the decrease of the physical social support perception related to parenthood (Plantin & Daneback, 2009). According to the literature, the increase of parents' awareness about the consequences of their child-rearing practices had led to a new phenomenon, the search for information outside their familiar context (Doty, Dworkin & Connell, 2012; Minuchin, 1990; Mondin, 2008; Patias, Siqueira & Dias, 2013; Plantin & Daneback, 2009; Salvador & Weber, 2005; Weber, Brandenburg & Viezzer, 2003; Weber, Prado, Viezzer & Brandenburg, 2004). Parents' begun to search for other sources of information (e.g. Internet, magazines, television shows or books) that could allow them to model their parental behaviour (Plantin & Daneback, 2009).

Due to this phenomenon, Internet is actually recognized as an important source of information and social support in terms of parenthood (LaCoursiere, 2001; Drentea & Moren-Cross, 2005; Sarkadi & Bremberg, 2005). The search of information about child-rearing assumes a relevant role for parents, because they seek information: to support their parenting role, to better promote their children development, to obtain information, exchange experience and create virtual communities around certain child-rearing topics (Dworkin, Connell, & Doty, 2013; Drentea & Moren-Cross, 2005; Madge & O'Connor, 2006; McDaniel, Coyne & Holmes, 2011; Nieuwboer, Fukkink & Hermanns, 2013; Plantin & Daneback, 2009;). Some authors consider the existence of differences in terms of access (digital use divide) and in terms of skills (digital skill divide) to search for this kind of information in the Internet (Atwell, 2001; Burrows, Nettleton, Pleace, Loader & Muncer, 2000; Hargittai, 2002; Hellwig & Lloyd, 2000; Linebarger & Chernin, 2003; Papadakis, 2001; Rice, 2002). However, little is known about parents' use of internet to search for child-rearing information (Dworkin, Connell & Doty, 2013).

While there are some opportunities of online support for Portuguese and Spanish parents, little is known about the way they face and take these offers, what kind of content they search, which are their skills to search and how satisfied they are with the results they get.

2. Objectives

In a moment where the online resources to promote positive parenting are increasing (Nieuwboer, Fukkink & Hermanns, 2013), there is a need to fill the lack of knowledge about the use of internet by Portuguese and Spanish parents. The main purpose of this research project is to verify if parents use Internet to help them in parenthood and how skilful are they to search and evaluate the content they find. For that we pretended to access five core aspects of parental proficiency: a) the time and frequency in which they use internet to search for child-rearing information, and which subjects they search; b) the comparison between the usage of internet by parents and their kids; c) the features of parents' knowledge and behaviour for internet searches; d) the criteria they use to evaluate the websites they visit; and e) their satisfaction with the results of the searches and the websites they find.

Once it has been referred in the literature some differences in the access to internet, the digital use divide, we intend to verify this aspect through the evaluation of the influences of parents' sociodemographic characteristics in the access to internet.

It is intended that this results can be mainly informative about the parental proficiency in the use of internet for educational purposes, in order to promote the access to reliable and impartial information.

3. Method

3.1. Sample

The total sample of this research project was composed of 516 individuals, in which 282 were Portuguese parents and 234 were Spanish parents. Both samples were collected in the corresponding country and are composed of national citizens who live in each country. Each participant was from a different family in order to avoid some possible interferences in the answers.

In which concerns to the Portuguese sample, 235 individuals are mothers (83.3%) and 47 are fathers (16.7%). The sample is composed by parents (mothers and fathers) with ages from 20 to 68, being 33% from age 20 to 33 years old, 33% from 34 to 40 years old, and 34.1% from 41 to 68 years old. Regarding the educational level, 6.4% of the sample has a lower level (without studies and Compulsory education), 24.1% has a medium educational level (High School, Vocational Training, Diploma programs). About the socioeconomic level, 26.5% has a lower socioeconomic level, 54.4% has a medium socioeconomic level, and 18.7% has a high socioeconomic level. To calculate the representative and closer socioeconomic level, we used the professional status (employed or unemployed) and the professional category. The parents' have children aged from 0 to 18 years old, being 45.4% of the parents' had kids from 0 to 5 years old, 31.9% had kids from 6 to 12 years old and 22.3% had adolescent kids from 13 to 18 years old.

The Spanish sample was composed of 158 mothers (67.5%) and 76 fathers (32.5%). The ages of the participants were between 25 to 62 years old, and they were placed into three age groups: 25 to 38 (35.9%), 39 to 45 (39.7%), and 46 to 62 (24.4%). Regarding to the educational level, 24.4% of the parents had a low educational level, 43.1% were in the middle group and 32.5% had a high educational level. About the socioeconomic level, 22.1% of Spanish parents had a low professional level, 51.6% a middle level and 26.2% a high level. The children's ages were from 0 to 18 years old, being 21.4% from 0 to 5 years old, 52.1% from 6 to 12 years old, and 26.5% adolescents from 13 to 18 years old.

This sample was collected from kindergartens, schools and parent's associations, through an advertisement. The collection was also made through the advertisement of the research purposes in social media (e.g. Facebook), blogs and web forums for parents, parent's associations and school webpages. This advertisement forwarded the participants to the online survey software (survey monkey).

3.2. Survey measures

The data of this research project was collected from the answers to an online survey, which included 21 forced-choice questions. Of the 21 forced-questions, 16 of them were selected from the study carried out in the USA by Rothbaum, Martland & Janssen (2008). The questions were adapted to Spanish and Portuguese population. After the elimination of some questions related to general online activities, 5 more questions were added, concerning to parental skills and family impact of Internet. The questions of this survey were gathered in 6 analysis levels: 1) sociodemographic data; 2) web usage; 3) search practices; 4) parental skills and family impact expertise of internet; 5) satisfaction; e 6) evaluation criteria.

4. Results

To each question 8 qui-square analysis were conducted with variables like parental age, gender, educational and socioeconomic level, district of residence, and child age, gender and number of children. The corrected typified residuals (r_z) were used to explore the statistically significant differences in the contingency tables (Haberman, 1973). For the results about evaluation of the webpages and satisfaction were used ANOVAS One-Way. Due to the exploratory nature of this research we report all effects in $p < .10$ and $p < .05$, being considered further replication of the research. The results are separated by country and divided in digital use and digital skill divide.

4.1. Portuguese results

In what concerns to the digital use divide, educational level ($\chi^2 = 53.35$, $p < .000$) and the residence area ($\chi^2 = 19.86$, $p < .001$) modulate the access to Internet. Parents' with a high educational level and who live in urban areas are the ones who access to the internet in a daily basis ($r_z = 3.1$ and $r_z = 4$, respectively), whereas parents with a low educational level access weekly ($r_z = 3.7$) or monthly ($r_z = 5.8$) and the one who live in a rural area access 3 to 4 times a week ($r_z = 3$). The educational level ($\chi^2 = 17.51$, $p < .000$) and the child age ($\chi^2 = 30.10$, $p < .000$) modulate the search of child-rearing information. It is verifiable that parents with a high socioeconomic level and with younger kids (≤ 5 years old) tend to search more this kind of information ($r_z = 3.1$ and $r_z = 3.7$, respectively) than parents with a low socioeconomic level and with older kids (13 to 18 years old) ($r_z = -3.7$ and $r_z = -5.4$, respectively). Parents' gender also modulates the search of child-rearing information in what concerns to child developmental information ($\chi^2 = 26.83$, $p < .000$), parenthood advices ($\chi^2 = 14.76$, $p < .001$) and information about family's health ($\chi^2 = 7.21$, $p < .027$). It is verifiable that mothers are the ones who search more for child developmental information ($r_z = 5.1$), parenthood advices ($r_z = 3.8$) and information about family's health ($r_z = 2.6$) than fathers ($r_z = -5.1$, $r_z = -3.8$ and $r_z = -2.6$, respectively).

About the digital skill divide, it is possible to verify that the parental age ($\chi^2 = 23.17$, $p < .026$), educational level ($\chi^2 = 25.15$, $p < .014$) and socioeconomic level ($\chi^2 = 12.10$, $p < .017$), are playing an important role in parental proficiency. The younger parents ($r_z = 2.5$), with a high educational level ($r_z = 2.1$) are more proficient than the older ones ($r_z = -2.4$), and the ones with a low educational level ($r_z = -3.8$). The ones with a high socioeconomic level ($r_z = 2.2$) consider themselves more skilful than the ones with a low socioeconomic level ($r_z = -2.7$). Despite the higher proficiency presented by these parents, they feel less satisfied ($F(2, 241) = 2.34$, $p \leq 0.10$) with the information they get, considering it less helpful (low socioeconomic level: $M = 4.10$, $SD = 0.53$; medium socioeconomic level: $M = 3.96$, $SD = 0.54$; high socioeconomic level: $M = 3.9$, $SD = 0.65$).

4.2. Spanish results

In what concerns to the digital use divide, the parental age ($\chi^2 = 30.56$, $p < .001$) and child's age ($\chi^2 = 15.74$, $p < .05$) modulate the duration of each connection. Younger parents are less time connected than middle-age parents and older parents ($r_z = -9.0$, $r_z = 3.7$ and $r_z = 5.2$, respectively). Parents with adolescents children are more time connected online ($r_z = 7.6$). The parental gender modulates the search of child-rearing information, like seeking information about knowledge of child development ($\chi^2 = 4.84$, $p < .05$), information about children's behaviour problems ($\chi^2 = 29.1$, $p < .01$) and about educational tips ($\chi^2 = 6.60$, $p < .01$). Mothers search more child-rearing information than fathers ($r_z = 2.2$, $r_z = 2.7$ and $r_z = 2.6$, respectively). The Parental educational level modulate the search of child-rearing information like seeking information about Play activities ($\chi^2 = 7.22$, $p < .05$), child development ($\chi^2 = 6.77$, $p < .05$) and Family leisure ($\chi^2 = 7.38$, $p < .05$). Parents with high educational level search more child-rearing information than parents with middle-level and low educational level ($r_z = 2.6$, $r_z = 2.3$ and $r_z = 2.3$, respectively).

About the digital skill divide, parents' gender ($\chi^2 = 12.15$, $p < .001$) and parental age ($\chi^2 = 6.1$, $p < .05$) are playing an important role in parental proficiency. The fathers ($r_z = 8.5$), older ($r_z = 2.5$) and middle-aged ($r_z = 3.4$) are more proficient than the younger ones ($r_z = -5.9$). Satisfaction with the searches significantly increased according to the parental age ($F(2,214) = 4.85$, $p < .001$), as the older parents feel more satisfied (young: $M = 3.67$, $SD = .72$; middle-age: $M = 3.87$, $SD = .72$; old: $M = 4.04$, $SD = .47$). Parental educational level moderates the results on the usefulness of the information they find on Internet ($F(2,214) = 4.11$, $p < .01$), as the perception of usefulness decreases in the parents with high educational level (low educational level: $M = 3.91$, $SD = .63$; middle educational level: $M = 3.95$, $SD = .59$; high educational level: $M = 3.66$, $SD = .78$).

5. Discussion and conclusions

Regarding to the existence of a digital use divide our results are in line with the Eurobarometer (2008), where is verified that despite the sociodemographic and socioeconomic influences (as educational and socioeconomic level, area of residence, parental age and gender) an improvement in parental access to Internet has occurred. However, there is a wider social divide in terms of parental proficiency in Internet (Atwell, 2001; Hargittai, 2002). Our results indicate that both parents are very active in searching for educational support online on a variety of topics: information about children's schools, child-rearing tips, family leisure, normative child development, family health, play activities and child behavioral problems, consistent with other studies (Bernhardt & Felter, 2004). Despite that it is shown that mothers are the ones who search for more information about child-rearing and family health. According to Cotton and Gupta (2004) the online behaviour of the mothers confirms their offline behaviour, where they usually take the main responsibility in family care. In this research sample mothers are in a greater number, and this is a tendency also in other researches (Sarkadi & Bremberg, 2005; Madge & Connor, 2006).

Beyond the knowledge about the digital use divide, today we have a second level related with the skill to use the Internet. In this matter, differences between Parental gender and ages were found. Fathers feel more skillful and experienced and think that they obtain more benefits from the Internet than their children, as compared to mothers. Fathers were also able to find a new website using links from other pages, whereas mothers found new pages by chance. Either way, younger parents spend more time surfing the Internet and are more skilful than the older ones, these results can be explained by Hargittai (2010), who sustains that the younger parents are the first generation of digital natives. They have changed their search method with the rise of search engines, what left them less exposed to exhaustive searches of reliable information. The same author explains that youngsters (18-30 years old) are spending more time in Internet, are more skilful surfing it, and can easily take advantage of the available resources (Hargittai, 2002).

It is noticed that the struggle in getting online information and social support is promoted by parents' lack of skills to search in Internet, and by the limited opportunities and educational resources available for them. For some authors these parents are at risk of losing some learning positive parenting opportunities, which influence the education and behaviour of their kids (Davis-Kean, 2005; Dearing, McCartney & Taylor, 2001; Nagin & Tremblay, 2001). In consequence of these results, there is an urge to evaluate to quality the resources parenting and increase online parenting programs, to promote the positive parenting, parents' searching skills and the access to reliable information.

This research project presents some limitations regarding to the sample, as mothers are in a larger number. It is important to include more fathers in the future, in order to have other results and to promote gender equality. Despite these limitations, the results found are important and can give some clues for future investigations. Having in mind the descriptive nature of this research, we highlight the need of having more researches about the way Internet can be used to help in parenthood.

References

- Atwell, P. (2001). The first and the second digital divide. *Sociology of Education*, 74(3), 171-191.
- Bernhardt, J. M., & Felter, E. M. (2004). Online Pediatric Information Seeking Among Mothers of Young Children: Results From a Qualitative Study Using Focus Groups. *Journal of Medical Internet Research*, 6(1), e7.
- Burrows, R., Nettleton, S., Pleace, N., Loader, B. & Muncer, S. (2000). Virtual community care? Social policy and the emergence of computer mediated social support. Information. *Communication & Society*, 3(1), 95-121.
- Cotten, S. & Gupta, S. (2004). Characteristics of online and offline health information seekers and factors that discriminate between them. *Social Science & Medicine*, 59(9), 1795-806
- Davis-Kean, P. (2005). The influence of parent education and family income on child achievement: the indirect role of parental expectations and the home environment. *Journal of Family Psychology*, 19(2), 294.
- Dearing, E., McCartney, K., & Taylor, B. (2001). Change in family income-to-needs matters more for children with less. *Child Development*, 72(6), 1779-1793.
- Doty, J., Dworkin, J. & Connell, J. (2012). Examining digital differences: Parents' online activities. *Family Science Review*, 17(2), 18-39.
- Drentea, P., & Moren-Cross, J. L. (2005). Social capital and social support on the web: the case of an internet mother site. *Sociology of health & illness*, 27(7), 920-943.

- Dworkin, J., Connell, J., & Doty, J. (2013). A literature review of parents' online behavior. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 7(2), 1-10.
- Eurobarometer (2008). *Towards a safer use of the Internet for children in the EU - a parent's perspective*. From: http://ec.europa.eu/public_opinion/flash/fl_248_en.pdf
- Haberman, S. J. (1973). The analysis of residuals in cross-classified tables. *Biometrics*, 9(1), 205-220.
- Hargittai, E. (2002). Second-Level Digital Divide: Differences in People's Online Skills. *First Monday*, 7(1). From: <http://journals.uic.edu/ojs/index.php/fm/article/view/942/864>
- Hargittai, E. (2010). Digital na(t)ives? Variation in internet skills and uses among members of the "net generation." *Sociological Inquiry*, 80(1), 92-113.
- Hellwig, O. & Lloyd, R. (2000) *Sociodemographic Barriers to Utilisation and Participation in Telecommunications Services and Their Regional Distribution: A Quantitative Analysis*. National Centre for Social and Economic Modelling Search. University of Canberra: Australia. From: <http://www.natsem.canberra.edu.au/pubs/netaccess%2Dbarriers.html>
- LaCourse, S. (2001). A theory of online social support. *Advances in Nursing Science*, 24(1), 60-77.
- Linebarger, D. & Chernin, A. (2003). Young children, parents, computers and the Internet. *IT & Society*, 1(4), 87-106.
- Madge, C. & O'Connor, H. (2006). Parenting Gone Wired: Empowerment of New Mothers on the Internet? *Social & Cultural Geography*, 7(2), 199-220.
- McDaniel, B. T., Coyne, S. M., & Holmes, E. K. (2012). New mothers and media use: Associations between blogging, social networking, and maternal well-being. *Maternal and child health journal*, 16(7), 1509-1517.
- Minuchin, S. (1990). *Familias: funcionamento & tratamento*. Porto Alegre: Artes Médicas.
- Mondin, E. M. (2008). Práticas educativas parentais e seus efeitos na criação dos filhos. *Psicologia Argumento*, 26(54), 233-244.
- Nagin, D. & Tremblay, R. (2001). Parental and early childhood predictors of persistent physical aggression in boys from kindergarten to high school. *Archives of General Psychiatry*, 58(4), 389.
- Nieuwboer, C., Fukink, R., & Hermanns, J. (2013). Online programs as tools to improve parenting: A meta-analytic review. *Children and Youth Services Review*, 35(11), 1823-1829.
- Patias, N., Siqueira, A. & Dias, A. (2013). Práticas educativas e intervenção com pai: a educação como proteção ao desenvolvimento dos filhos. *Mudanças – Psicologia da Saúde*, 21(1), 29-40.
- Papadakis, M. (2001) *The Application and Implications of Information Technologies in the Home: Where are the Data and What Do They Say?* National Science Foundation: Arlington, USA.
- Plantin, L. & Daneback, K. (2009). Parenthood, information and support on Internet. A literature review of research on parents and professional online. *BCM Family Practice*, 10(1), 1-12. From: <http://www.biomedcentral.com/content/pdf/1471-2296-10-34.pdf>
- Rice, R. (2002), 'Primary issues in Internet use: access, civic and community involvement, and social interaction and expression', in Lievrouw, L., Livingstone, S. (eds.) *The handbook of the new media. The social shaping and consequences of ICTs*, pp. 105-129. London: Sage.
- Rothbaum, F., Martland, N., & Janssen, J. B. (2008). Parents' reliance on the Web to find information about children and families: Socio-economic differences in use, skills and satisfaction. *Journal of Applied Developmental Psychology*, 29, 118-128.
- Sarkadi, A., & Bremberg, S. (2005). Socially unbiased parenting support on the Internet: a cross-sectional study of users of a large Swedish parenting website. *Child: Care, Health and Development*, 31(1), 43-52.
- Salvador, A. & Weber, L. (2005). Práticas educativas parentais: um estudo comparativo da interação familiar de dois adolescentes distintos. *Interação em Psicologia*, 9(2), 341-353.
- Weber, L., Brandenburg, O. & Viezzer, A. (2003). A relação entre o estilo parental e o otimismo da criança. *Psico-USF*, 8(1), 71-79.

ANALYSIS OF SUPERVISION RECORDS AMONG THE PRESCHOOL PRACTICUM TEACHERS THROUGH HERMENEUTIC METHOD

Suppiah Nachiappan & Seri Zaitum Jusoh

Faculty of Education and Human Development, Sultan Idris Education University (Malaysia)

Abstract

This study aimed to identify the strengths and weaknesses of practicum teachers based on the analysis of teachers' supervision records. It is a qualitative research comprising seven supervision records of preschool practicum teachers. The study involved four 'KEMAS' preschools in Jerantut and Temerloh, Pahang. The study used Hermeneutics Method to interpret records of seven preschool practicum teachers. The researcher analysed 42 supervision records of the practicum teachers. Based on the findings, the supervisor has emphasized on several aspects due to the strengths and weaknesses of the practicum teachers. The practicum teachers have performed well in the aspects pertaining to i) writing daily lesson plans, ii) set induction, and iii) personality. However, there are three aspects that still need to be improvised by the practicum teachers, such as i) applying knowledge in life, ii) applying creative and critical thinking skills, and iii) conveying knowledge. So, to address these problems, the lecturers and advisers need to provide proper guidance to the practicum teachers. In fact, seminars and lectures should be held by certain parties to improve teachers' practical skills and this step should be implemented to produce qualified future teachers.

Keywords: practicum teacher, supervision records and hermeneutics method.

1. Introduction

Trainee teachers play important and strategic roles in education as agents of social change, altering patterns of thinking, attitudes and behaviour of society towards a better, more dignified and more independent life. Structural studies in teaching institutions focus more on practical programs to provide opportunities for trainees to get real experience of teaching in the classroom. According to Syed Ismail (2013), there are some aspects that are emphasized in the practicum program but the most important thing that need to be done by the practicum teachers is designing effective learning. Alvestad and Sheridan (2015) said that daily lesson plan in preschool is based on things that happen to the children individually, in groups, and their games. Previous research showed that teachers are still in the stage of practical, simple in their teaching plans. Abdul Rasid et al., (2015) studies showed that trainees are still poor in some aspects such as choosing teaching aids, planning appropriate activities that are suitable for students, writing lesson plans and organizing the content of lessons. This is due to lack of experience in real situation that makes teachers faced some difficulties performing their regular tasks.

In the aspect of nurturing creative and critical thinking, Norsita and Zainal (2014) stated that the preschool teachers' attitudes of too much controlling their pupils, resulting children's creative thinking declines because the students are not able to learn exclusively through authoritarian direction. In fact, previous studies also showed that preschool teachers are still lack of knowledge both in the context of implementation and their content of teaching. Ehrlin and Wallerstedt's studies (2014) showed that preschool teachers are still lack of knowledge about the contents of their teaching in the classrooms. However, they feel comfortable with their teaching methods. Kuong and Hasnah's studies (2010) showed similar findings in terms of the implementation of the teaching which found that preschool teachers' perception towards the importance of the implementation of creative arts activities do not have any impact on the understanding of its implementation. It was found that preschool teachers failed to cultivate good ideas in designing teaching method as they have limited knowledge.

In teaching profession, attitude and personality are the factors that determine teachers' quality. Syed Ismail's studies (2013) shows that the attitude and personality of the trainee teachers are the highest aspects in measuring teachers' quality. Based on the findings of Abdul Rasid et al. (2015), they found that professionalism and good characters showed by the trainees in carrying out routine tasks as teachers,

which include writing lesson plans, adapting to the pupils, earnest teaching practice, well-dressed and comply with the instructions of teachers, or administrator. Hence this study is to identify the strengths and weaknesses of preschool practicum teachers based on the aspects that are assessed by their supervisors and advisers.

2. Objectives

The main objectives of this study are to analyze the records of supervision among seven preschool practicum teachers through hermeneutic method. The objectives identified in this study:

- i. Identifying the aspects of supervision practice among practicum teachers.
- ii. Knowing the strengths of practicum teachers based on the analysis of supervision records.
- iii. Knowing the weaknesses of practicum teachers based on the analysis of supervision records.

3. Research methodology

This study is based on the results of supervision records that have been assessed by a supervisor and advisers towards seven practicum teachers of early childhood education. Therefore, the analysis of the practicum teachers' supervision records cannot be generalized to all schools. The researcher analyzed the supervision records of seven practicum teachers, where 42 records were analyzed using Hermeneutic Method. The researcher analyzed each supervision record from the adviser and lecturer based on the teachers' comments in the preparation, development and practicum teachers' personality implicitly and explicitly. According to Suppiah (2014), the text is anything produced by humans in the form of written or oral used for expressing anything intended, such as feelings, thoughts and people's behaviour. The text contains implicit and explicit content to be interpreted.

This text reflects the cultural characteristics, social, feelings, thoughts of the present and the past, as well as the knowledge of the author, who was born in the form of the content called 'episodes'. Attributes such as assumptions, prejudice or 'bias' should be avoided during the process of interpreting texts. When the researcher began to interpret the essay, the researcher had 'ontoenigma' which means ambiguity or lack of clarity about the content of the text. Next, when the researcher started to find an explanation to deepen the meaning of the text, that researcher began to find external structure and internal structure of the text along the process. The combination of these two structures helped the researchers to transfer the situation of 'ontoenigma' to 'ontopretation' which is the process of deep understanding of text composition. This in-depth analysis of the subconscious element that is implied in the texts will allow researcher to understand its meaning. This understanding is 'metatexts', which brings meaning to the original text. 'Metatexts' means interpretation of the text of the findings (essay). An essay has a point to be understood which refers to the usage of language by the individual and information processing aspects experienced by individuals when writing the essay. The interpretation of the text of this essay will be analyzed in the style that gives strength to the essay writing.

4. Findings

The findings of this study are elaborated based on the strengths and weaknesses of practicum teachers. In addition, the aspects taken into account in the supervision practice among practicum teachers are also discussed.

4.1. Daily lesson plan (RPH)

All practicum teachers have written and provided a complete RPH in every teacher's teaching and learning process.. The RPH writing contains the objectives to be achieved, the title, audio visual aids to be used, content from step one to three or more and the value(s) listed by the practicum teacher. Practicum teachers have followed each implementation strategy in the teaching and learning process on a regular basis and structured according to the RPH that had been written.

4.2. Set induction

In the set induction used by practicum teachers 2, 3, 4, 6 and 7 at the beginning of the lesson, teachers who are good and interesting are also praised by lecturers and teacher advisers. This is because their set induction has led to the involvement of children in teaching which is very encouraging and active. Meanwhile, practicum teachers 1 and 5 embarked on a set of common induction like saying hello to children and recalling past learning experiences.

4.3. Communication

This study has found that practicum teachers 1, 2, 3, and 4 have been communicating clearly, are outspoken and possess good rapport with children. Children were also found to have actively responded to the question and answer session on topics that have been taught. Meanwhile, it was observed that practicum teachers 4, 5 and 6 did not speak loudly at the start of the lesson. They were also unclear and indecisive when giving instructions during teaching and learning sessions. This has resulted in difficulty pertaining to the control and discipline of children in class.

4.4. Class control

In the first supervision on practicum teachers 3, 4 and 6, it was observed that the level of class control exercised were moderate. Teachers were not able to control the children who were noisy, naughty and hyperactive in class. However, there is an improvement in the teachers' class control in the second supervision. Meanwhile, practicum teachers 1, 2, 5 and 6 portrayed good class control through the implementation of various strategies using AVA which impressed the children, speaking firmly, giving task-based activities to the naughty children and others.

4.5. AVA

The AVA used by practicum teachers 1, 2, 3, 4, and 6 are exciting and creative, as it involves the use of puppetry, dice, charts, pictures, flash cards and many more in their teaching and learning sessions. As for practicum teachers 6 and 7, lecturers, supervisors and teacher advisors advise practicum teachers to diversify their usage of interesting teaching aids. This involves the need of teaching aids to be big and bold, so that the children can see them clearly.

4.6. Application of knowledge in life

In the findings derived from the first and second supervision by lecturer supervisors, it was deduced that each practicum teacher did not focus on the application of knowledge in the life of the child. The supervisor exemplified via the teaching and learning topics from number one to ten, whereby teachers can make use of the real-life situations children encounter, such as going to the market or a shop and counting the number of candies they've bought there.

4.7. Creative and critical thinking skills (CCTS)

The findings from the first and second supervision by lecturer supervisors illustrates that each practicum teacher is not focused on the CCTS requirements for children.

4.8. Knowledge conveying

The findings from the first and second supervisions by the supervisors indicate that the practicum teachers lacked enough concern for the children's development of knowledge.

4.9. Personality

The findings show that during the supervision, all practicum teachers has shown immaculate style, care towards children and also possess the teachers' characteristics of high professionalism. However, teacher advisers advise the practicum teacher 5 to be fair in paying attention and concern to all children.

5. Discussion

The findings bring to light some aspects that are often judged and seen by the lecturers and teacher advisers during the practicum supervision, namely in terms of i), daily lesson plan ii) set induction, iii) teachers and children communication, iv) class control, v) teaching aids, vi) application of knowledge in life, vii) creative and critical thinking skills, viii) presentation of knowledge and ix) teacher's personality. In terms of using teaching aids, it is in turn closely linked to the application of knowledge in life. This will make the teaching and learning process more effective if teachers are able to use creativity, harness the use of BBM because learning is human nature. Other aspects that are assessed include Critical and Creative Thinking Skills (CCTS). The presentation of knowledge and personality of teachers. CCTS and delivery of knowledge are interconnected. Through the knowledge that teachers have, they are able to gauge CCTS preschool students. While the aspect of the personality of the teacher is seen from the point of immaculate style, the concern for children also possesses the characteristics of high teachers' professionalism.

Some of the aspects identified as strengths of the practicum teacher is based on the analysis of records of supervision. This includes i) Writing good daily lesson plan ii) a creative Set Induction, and iii) high teacher personality. Through these records, it was discovered that the lessons by practicum teachers were well-planned when daily lesson plan contains objectives to be achieved, the title, AVA to be used and content complete with measures for the activities planned.

Other aspects of the strength of this study also looks at aspects of disadvantage based on the practicum teachers supervision record. Based on findings obtained, teachers are still seen to be weak in three aspects, namely i) applications of knowledge in life, ii) CCTS, and iii) development presentation of knowledge. Teachers should prove to pupils about the importance of knowledge by showing how knowledge or learning in the classroom applied in their daily lives. The weakness of the teachers show students how knowledge applied in life is closely the second aspect, namely, the delivery of practicum teacher weaknesses and knowledge. Based on the results of these findings practicum teachers teach only in accordance and with the standard of teaching and learning in National Standard Preschool Curriculum only, there are no developments in the presentation of knowledge. In addition, through the interpretations of data carried out, there is less attention in the CCTS aspect by the practicum teacher. In the context of education in Malaysia, CCTS is a process using the mind either to find meaning and understanding of something, making judgements and decisions or solving problems (Sharifah et al., 2012). The outcomes of the studies show that practicum teachers do not focus on CCTS in children. According to Norsita and Zainal (2014), teacher must play a central role in fostering creative thinking in preschool children. Creative and critical thinking skills of pre-schoolers can be encouraged by asking open questions, tolerance of ambiguity, becoming a model of creative thoughts and behaviours, encouraging experiments and perseverance and appreciating children who give unexpected answers (Al-Thani, 2010). These three aspects of weaknesses is interconnected with the fact that practicum teachers lack knowledge and experience in teaching preschool children. Teachers with no teaching experience focus more on teaching to the contents of the subjects and technical aspects while teaching. However, their teaching had less impact in learning.

6. Conclusion

This study found that practicum teachers are still poor in term of the implementation of teaching in the classroom. Lack of knowledge and experience in actual teaching situation is seen as a contributing factor to the weaknesses of the practicum teachers while undergoing teaching training program. Therefore, to ensure effective teaching and learning practices, practicum teachers themselves should try to overcome weaknesses often reprimanded by the teacher advisers and supervising lecturers during the process of supervision. Appropriate guidance and assistance should be given by the teacher advisers and supervising lecturers to the practicum teachers in order to produce qualified, innovative, competent, high personality, creative and critical minded teachers. It is hoped that the recommendations set out by the researchers, could be used as a guide to certain parties.

Acknowledgement

I would like to extend my gratitude to Sultan Idris Education University Malaysia for sponsoring this paper presentation.

References

- Al-Thani, T. J. (2010). Investigating Teachers' Practices of Creative thinking Skills in Qatari Preschools. *The International Journal of Learning, Vol 17: 5*.
- Alvestad, T. & Sheridan, S. (2015). Preschool teachers' perspectives on planning and documentation in preschool. *Early Child Development and Care, 185:3, 377-392*
- Abdul Rasid, J., Nurul Nadiah, R., & Shamsudin, O. (2015). Keupayaan Guru Pelatih Terhadap Pelaksanaan Aktiviti Semasa Latihan Mengajar dalam Pembentukan Guru Novis. *Jurnal Pendidikan Malaysia 40(1): 75-81*
- Ehrlin, A. & Wallerstedt, A. (2014). Preschool teachers' skills in teaching music: two steps forward one step back. *Early Child Development and Care, 184:12, 1800-1811*
- Kuong, L. K. & Hasnah T. (2010). Pelaksanaan aktiviti seni kreatif dalam pendidikan prasekolah Malaysia. *Educationist, Vol:4, 35-47*

- Norsita A. & Zainal M. (2014). Tinjauan Awal Interaksi Guru - Kanak-Kanak dalam Pemupukan Pemikiran Kreatif Kanak-Kanak Prasekolah. *Proceeding of the Social Sciences Research, 9-10 June 2014*, pp735-746, Kota Kinabalu, Sabah.
- Sharifah Nor, P., Nor Adibah, G., Mohd Mahzan, T. & Aliza, A. (2012). Keprihatinan Guru Bahasa Melayu Dalam Melaksanakan Kemahiran Berfikir Secara Kritis dan Kreatif. *Jurnal Pendidikan Bahasa Melayu, Vol 2:2*, 19-31
- Syed Ismail, S. (2013). Amalan Bimbingan Pengajaran Pensyarah dan Guru Pembimbing Dalam Program Mentoring Praktikum Serta Impaknya Terhadap Kualiti Guru Pelatih. *Jurnal Pendidikan Malaysia*, 38 (1), 71-78.
- Suppiah Nachiappan. (2014). *Gaya Bahasa dan Proses Kognisi: Kaedah Pedagogi Hermeneutik dan Interpretasi*. Tanjung Malim: Penerbit Universiti Pendidikan Sultan Idris.

A COMPARATIVE STUDY OF EFFECT OF FORMAL MUSICAL TRAINING ON ACADEMIC PERFORMANCE AND EMOTIONAL INTELLIGENCE AMONG CHILDREN

Vidhya Shenoy¹ & Vaishnavi Verma²

¹ *Counselling Psychologist (India)*

² *Department of Psychology, Smt Maniben M P Shah Women's College of Arts and Commerce (India)*

Abstract

The aim of the research was to have a comparative study of the effect of formal musical training on Academic Performance and Emotional Intelligence among children. The present study hypothesizes that children with formal musical training have better Academic Performance and Emotional Intelligence than children with no formal musical training. For this study, 100 children (50 formally trained in music and 50 not formally trained in music) in the age group of 13-17 years formed a part of the sample were asked to take —The Academic Performance Rating Scale and the — Trait Emotional Intelligence Questionnaire – Adolescent Short Form (TEIQue-ASF) measured by Petrides, K. V., Sangareau, Y., Furnham, A., & Frederickson, N. to indicate how well they academically perform and their level of emotional intelligence. In case of statistical analysis, t-test was computed. Together, the findings revealed that the t value obtained for Emotional Intelligence was 7.260 which was significant at 0.05 level and for Academic Performance was -4.389 which was significant at 0.05 level respectively which meant that the differences between children with formal training in music and without formal training in music with respect to Emotional Intelligence and Academic Performance were significant.

Keywords: comparison, academic performance, emotional intelligence quotient, formal musical training.

1. Introduction

Music, historically, claims to have many beneficial effects on behavior and development, but there has been little empirical work to verify them (Susan Hallam, John Price, 1998). From past so many years there are many children who take up formal training in music and the researcher was interested in finding out whether this has any effect on their academic performance and emotional intelligence. Many researchers have tested and found that the children who undergo musical training have a greater tendency to have a higher academic performance and emotional intelligence quotient. Most of the researches have either effect of music on academic performance or effect of music on emotional intelligence. So to this research made an attempt to find the effect of music on both academic performance and emotional intelligence together on the same sample. The research has looked into the positive aspects that formal musical training can have on the children.

Music, its strong power over humans, its origin and cognitive function have been a mystery for long time. One of the researches mentioned that among current evolutionary psychologists some argue that music plays no adaptive role in human evolution also it spoke about Kant, Pinker who suggested that music is an “auditory cheesecake,” a by-product of natural selection that just happened to “tickle the sensitive spots.” The research also mentioned other contemporary scientists who suggest that music clearly has an evolutionary role, and point to music’s universality.

When it comes to children their academic performance is always something which plays an important role in the lives. Academic performance may be defined as excellence in all academic disciplines, in class as well as co-curricular activities. It includes excellence in sporting behavior, confidence, communication skills, punctuality, arts, culture and the like which can be achieved only when an individual is well adjusted. Trow (1956) individual is well adjusted refers to academic achievement as “knowledge attaining ability or degree of competence in school tasks usually measured by standardized tests and expressed in a grade or units based on pupils’ performance”. Good (1959) defines academic achievement as, “The knowledge obtained or skills developed in the school subjects usually designed by test scores or marks assigned by the teacher”. Mehta K.K. (1969) referred academic achievement as

“academic performance includes both curricular and co-curricular performance of the students. It indicates the learning outcome of the students. In class rooms students performs their potentials efficiently, as a result of it, learning takes place”. The learning outcome changes the behavior pattern of the student through different subjects.

Emotional intelligence defined by Cooper (1996) is an “ability to sense, understand and effectively apply the power and acumen of emotions as the source of human energy, information, trust, creativity and influence”. Freedman (1998) defined emotional intelligence as “the way of recognizing, understanding and choosing how we think, feel and act. It shapes our interactions with others and our understanding of ourselves. It defines how and what we learn, it allows setting priorities, it determines the majority of our daily actions”. Singh (2003) explains emotional intelligence as “an ability of an individual to appropriately and successfully respond to a vast variety of emotional stimuli drawn from the inner self and immediate environment”.

2. Method

2.1. Variables

In this study, there is one Independent Variable with two levels -

- Children with formal training in music
- Children without formal training in music

The researcher will attempt to study Academic Performance and the level of Emotional Intelligence among children formally trained in music versus children formally not trained in music from. Thus, there are two Dependent Variables of importance in the present study.

2.2. Operational definitions of variables

The independent variable here was formal musical training having two levels namely, first level being the children who are undergoing formal musical training, that is, training in vocal or any musical instrument for more than 3 years and the second level being the children who are not undergoing formal musical training, that is, no training in vocal or any musical instrument.

The dependent variables were Academic Performance and Emotional Intelligence. Academic Performance was gauged in terms of the ratings given by the respective teacher on the Academic Performance Rating Scale and the Emotional Intelligence was gauged with the help of the Trait Emotional Intelligence Questionnaire done by the children between the ages 13 to 17 years.

2.3. Hypotheses

The hypotheses framed by the researcher are as follows-

1. The Academic Performance would be comparatively higher among children formally trained in music and children formally not trained in music
2. The level of Emotional Intelligence would be comparatively greater among children formally trained in music and children formally not trained in music.

2.4. Participants

The participants included males and females between the ages of 13-17 as well as about 30 teachers. There were mixed representation of each gender in the sample. Education of the sample equated with the notion that each of them would have the basic capacity to read, write and comprehend. The sample sizes were 50 for each level of I.V. 10 teachers because some of them were be common to the children thus only a rough estimate can be given at present.

2.5. Instrumentation

Academic Performance Rating Scale (APRS) was used to measure the academic performance. The APRS is a 19-item scale that was developed to reflect teachers' perceptions of children's academic performance and abilities in classroom settings. Teachers answer each item using a 1 (never or poor) to 5 (very often or excellent) Likert scale format. The test-retest reliability was found with a subsample of 25 children (with both genders and all grades represented). The reliability coefficient was found to be uniformly high for the total APRS (.95). The APRS total and subscale scores were found to have acceptable internal consistency, to be stable across an interval of 2 weeks, and it has significant levels of criterion-related validity.

Trait Emotional Intelligence Questionnaire-Adolescent Short Form (TEIQue-ASF) is a simplified version, in terms of wording and syntactic complexity, of the adult short form of the TEIQue. The ASF comprises 30 short statements, two for each of the 15 trait EI facets, designed to measure global trait EI. It is also possible to derive factor scores from the TEIQue-ASF, but these tend to be somewhat

less reliable. The internal consistency of the global score usually exceeds .80. The form has been used successfully used with children as young as 11 years old.

2.6. Procedure

The teachers were personally given APRS to rate the participants using Likert Scale. They were told to read carefully the instructions that were at the beginning of the APRS questionnaires and then follow the instructions while they do the test. The participants' participate alone and not in groups. The informed consent was obtained by given them the informed consent form to fill. They were told to read carefully the instructions that were at the beginning of the TEIQue-ASF questionnaires and then follow the instructions while they do the test. They were given 10mins to do the test.

2.7. Research design and data analysis plan

The study has applied quasi experimental design. After administration of the tests, the raw scores were obtained. Thereafter, the appropriate scoring procedures for both tests were followed in order to obtain an accurate measure of the dimensions of Academic Performance and Emotional Intelligence as well as of the extent of emotional expression allowed in the workplace.

Further analysis of the data collected involved the use of Inferential Statistics. Student's t - test was the statistic of choice since there is one independent variable with two levels and two dependent variables. The t – test was conducted twice to get a measure of the significance of differences between children with formal training in music and children without formal training in music in terms of Academic Performance and Emotional Intelligence. SPSS student version was used to compute t – test.

3. Results

Table 1 shows the mean differences in academic performance among children formally trained in music and children not formally trained in music. An independent-samples t-test was conducted to compare academic performance of children with formal training in music and without formal training in music. The mean and SD obtained for children with formal musical training with respect to their academic performance were 63.04 and 19.46 respectively. Similarly the mean and SD obtained for children without formal training in music with respect to their academic performance were 93.92 and 45.78 respectively. The degree of freedom is equal to the total group size (100) minus 2 (98). The t value obtained was -4.389 and the p value obtained was .000. Looking at the values we can say that the p value .000 is less than .05 thus there was a significant difference in the scores of children with formal training in music and children without formal training in music.

Table 1. The comparison of Means, t value, SD and p value of Academic Performance of Children Formally Trained in Music and Children Formally not Trained in Music

Variable	Mean	SD	t	Sig. (one tailed)
Formally trained in music	63.04	19.462	-4.389*	.000*
Formally not trained in music	93.92	45.782	-4.389*	.000*

Note. *p > 0.05
*0.05

Similarly there was another independent t-test computed to understand the mean emotional intelligence differences between children formally trained in music and children formally not trained in music. The mean and SD obtained for children with formal musical training with respect to their Emotional Intelligence were 138.52 and 19.05 respectively. Similarly the mean and SD obtained for children without formal training in music with respect to their Emotional Intelligence were 94.44 and 38.47 respectively. The degrees of freedom are equal to the total group size (100) minus 2 (98).

The t value obtained was -7.260 and the p value obtained was .000. Looking at the values we can say that the p value .000 is smaller than .05. Thus there was significant difference in the scores of children with formal training in music and children without formal training in music.

Table 2. The comparison of Means, t value, SD and p value of Emotional Intelligence of Children Formally Trained in Music and Children Formally not Trained in Music

Variable	Mean	SD	t	Sig. (one tailed)
Formally trained in music	138.52	19.050	7.260*	0.000*
Formally not trained in music	94.44	38.475	7.260*	0.000*

Note. *p < 0.05
*0.05

4. Discussion

According to the means it can be seen that the children without formal training in music perform better academically. Though the results of the t – test for the first hypothesis, significant difference was found in the means of the academic performance of children with formal training in music and without formal training in music. One of the possible reasons, according to Kraus et al., 2014, for the better academic performance among children without formal training in music could be the absence of active and meaningful engagement in music.

Stoesz et al. (2007) mentioned that past experiments from their laboratory revealed advantages for participants with music training on a number of non-music, perceptual, and cognitive abilities including auditory temporal processing, verbal and visual memory, and certain executive functions. What Stoesz et al. mentioned is true but Patel et al. explained that brain plasticity results from experiences which engage the brain through emotion, are repetitive, and which require full attention. Experiences such as playing music. Thus without complete involvement in music the benefits cannot be met. Therefore there could have been a possibility that the sample of children with formal training in music in this research may have not had an opportunity to engage meaningfully in music during the training period which resulted in the training not having a positive impact on their academic performance.

For the second hypothesis, with respect to the mean obtained it can be seen that there is higher level emotional intelligence in children having formal training in music. Some of the reasons why the emotional intelligence in children with formal musical training was found to be higher could be possible as revealed in a study, of the relationship between emotional intelligence in pianist and experiences of “flow” (defined as “an extremely focused state of consciousness that occurs during intense engagement in activities”), those with high emotional intelligence had more frequent and more intense experiences of flow. The experience of flow or the extremely focused state of consciousness that is prevalent in the people with higher trait of emotional intelligence tells us that musical training does play a role in attention, planning and memory which was also proved in another study where researchers mapped the brain areas that emotional intelligence were associated with. This study mentioned the brain areas, namely frontal cortex (behind the forehead) and parietal cortex (top of the brain near the back of the skull), to be associated with emotional intelligence. The functions of the frontal and parietal cortex interesting are similar to the functions of the oscillatory connections in the brain which are related to the executive functions that are affected by musical training which further affirms the potential positive impact that musical training can have on emotional intelligence and vice versa.

5. Conclusion

In this study the researchers shows that formal training in music has an effect on Academic Performance and Emotional Intelligence among children. Although this effect would be significant if the formal training in music is given in the early and formative years of childhood, if the training persists more than 3 years and during the training there is a significant amount of engagement in music and not mere attending the classes. In the life of a child, the importance of having to make a mark in academics and interact sufficiently well socially is very high and having known the fact that music does shape a child’s mind the schools nowadays plan to eliminate rather don’t mind substituting the music classes with extra classes for other subjects. It is time that parents and educational professionals realize the potential positive effect that musical training can have on children. This research is a small attempt in building awareness among the significant adults who are responsible in shaping a child’s life. A quote by Plato where he says “I would teach children music, physics and philosophy; but most importantly music, for the patterns in music and all the arts are the keys to learning”.

5.1. Limitations of the study

Some of the limitations of the research were first the socioeconomic background of the participants could have been the same, age group studied could have been larger, the sample size could have been increased, it was assumed or taken for granted that the participants are equally able to read and write also are giving honest responses which may not be necessary. Also there can be biases that can take place like education, grasping power, musical ability etc.

And some of the improvements that can be done are the sample chosen was chosen only with age specification so there could have been other specifications made to choose the participants to avoid influence of other factors influencing the D.V.’s other than the I.V. taken into consideration.

5.2. Practical application of the study

The research can be used to help education systems build in a compulsory subject or class on music. Nearly everyone enjoys music, whether by listening to it, singing, or playing an instrument. But despite this almost universal interest, many schools have given away their music education programs. Students who have early musical training will develop the areas of the brain related to language and reasoning. Introducing music in the early childhood years can help foster a positive attitude toward learning and curiosity. Learning music also promotes craftsmanship, and students learn to want to create good work instead of mediocre work. This desire can be applied to all subjects of study. Students who practice with musical instruments can improve their hand-eye coordination. Just like playing sports, children can develop motor skills when playing music. Students of music can be more emotionally developed; with empathy towards other cultures. They also tend to have higher self-esteem and are better at coping with anxiety.

Children can develop their math and pattern-recognition skills with the help of musical education. Students who have experience with music performance or appreciation score higher on the SAT. Students can learn team work; they become more responsible, better at risk-taking abilities and have better self-confidence. Thus, the results of the study have important implications for parents, teachers and care givers as it was seen that music influenced the academic performance in children, to the group of low as well as upper socio-economic strata.

References

- Barbey .A. (2013). Researchers map brain's emotional intelligence. *Earthsky*. Retrieved on December 26 2015, from <http://earthsky.org>
- Catterall J.S , Chapleau .R. , Iwanaga .J., (1999). *Involvement in the arts and human development general involvement and intensive involvement in music and theatre arts*. 1st ed. Los Angeles: e.g. Houghton Mifflin.
- Dedman, R., (2014). The Long Term Effects of Childhood Music Instruction on Intelligence and General Cognitive Abilities. *Applications of Research in Music Education*.
- DuPaul, G. , Rapport, M., (1991). Teacher Ratings Of Academic Skills: The Development Of The Academic Performance Rating Scale. *School Psychology Review*. 20 (2), pp.284-300
- Hicks G, How playing music affects the developing brain. *Common Health*. Retrieved from <http://commonhealth.wbur.org>
- Jakobson, L. S., Lewycky, S. T., Kilgour, A. R., & Stoesz, B. M. (2008). Memory for verbal and visual material in highly trained musicians. *Music Perception*, 26, 41-55
- Kraus. N, Hornickel.J, Strait. D L., Slater.J and Thompson. E (2014, December) This is how music can change your brain. *Time*. Retrieved from <http://time.com>
- Marin M M. and Bhattacharya. J. (2013, November). Getting into the musical zone: trait emotional intelligence and amount of practice predict flow in pianists. *Front Psychol*, 4, 853.
- Miendlarzewska EA and Trost WJ (2014). How musical training affects cognitive development: rhythm, reward and other modulating variables. *Front. Neurosci*. 7:279. *Doi:10.3389/fnins.2013.00279*
- Nauert PhD, R. (2010). Upper-Class Low on Emotional Intelligence. *Psych Central*. Retrieved on April 12, 2015, from <http://psychcentral.com>
- Petrides, K. V., Sangareau, Y., Furnham, A., & Frederickson, N. (2006). Trait emotional intelligence and children's peer relations at school. *Social Development*, 15, 537-547.
- Resnicow J. E. , Salovey P. & Repp B. H., (2004). Is recognition of music in music performance an aspect of emotional intelligence? *Music Perception*. 22 (1), pp.145-158
- Schellenberg, E. G. (2009). Music training and nonmusical abilities: Commentary on Stoesz, Jakobson, Kilgour, and Lewycky (2007) and Jakobson, Lewycky, Kilgour, and Stoesz (2008). *Music Perception*, 27, 139-143.
- Schellenberg, E. G. (2006b). Long-term positive associations between music lessons and IQ. *Journal of Educational Psychology*, 98, 457-468
- Stoesz, B. M., Jakobson, L. J., Kilgour, A. R., & Lewycky, S. T. (2007). Local processing advantage in musicians: Evidence from disembedding and constructional tasks. *Music Perception*, 25, 153-165.
- Wlassoff .V. (2015, January). Musical training makes you smarter. *Brainblogger*. Retrieved on December 26, 2015, from <http://brainblogger.com>

THE RELATION BETWEEN FILIPINO ADOLESCENTS' SCHOOL BELONGINGNESS AND AUTONOMY: MEDIATION THROUGH PERCEPTION OF ROLE FULFILLMENT

Madelene Sta. Maria & Shayne Polias

Department of Psychology, De La Salle University Manila (Philippines)

Abstract

The research examined the relationship between school belongingness, perceptions of role fulfillment and autonomy. These variables were measured as these were perceived by 2,450 Filipino adolescents within their school contexts. A model in which the perception of role fulfillment in school mediated the association of school belongingness and autonomy was examined. Consistent with the model, results of conducting an ordinary least squares path analysis indicated that a sense of belongingness indirectly influences autonomy through its effect on the young person's perception of role fulfillment in the school setting. Findings suggest that students' sense of being accepted in the school environment contributes to a role identity and perception of being able to fulfill roles in school. The research provides support for propositions conceptualizing the school from the adolescents' perspective in terms of how the school environment provides support for their need for autonomy.

Keywords: *school belongingness, sense of role fulfillment, autonomy, self-determination theory, Filipino adolescents.*

1. Introduction

Aside from the family context, the school is a significant context for young person's development (Denham, Bassett & Wyatt, 2007; Turner, Piquero & Pratt, 2005). Adolescents' ability to do well and thrive within the school context is said to be due to the opportunities and resources available to fulfill their needs, which are a sense of competence, being socially connected, and being in control of their destiny (Eccles & Roeser, 2011).

The present research seeks to investigate the school as a development context by determining the association of school connectedness to the youth's sense of autonomy as this is mediated by the student's perception that he or she is successfully fulfilling his or her role within the school community.

1.1. Autonomy

Autonomy is defined as consisting of "actions that are self-endorsed and based on one's integrated values or interests" (Chirkov & Ryan, 2001, p. 619). According to Ryan & Deci (2000), having a sense of autonomy influences a person to be more self-motivated, to have greater well-being, and to persist more within a given sphere of activity. Ryan & Deci argue that if contexts, such as schools, are able to provide the conditions for autonomy to be experienced, "they provide the appropriate developmental lattice upon which an active, assimilative, and integrated nature can ascend" (Ryan & Deci, 2000, p. 76).

1.2. School belongingness

School belongingness refers to the feeling of psychological connection to the school, a sense of school membership (Vaz et al., 2015). School belongingness has been found to account for much of the relationship between student motivation and academic success (Faircloth & Hamm, 2005), and between academic motivation and effort, as well as academic and psychological adjustment (Pittman & Richmond, 2007). The SDT explains the relationship between sense of belongingness and positive academic outcomes by proposing that individuals who experience a sense of belongingness in a given group or community are more likely to internalize and accept the group's or community's values and practices (Niemic & Ryan, 2009). Niemic & Ryan report that students who experience a sense of belongingness in school are able to exhibit greater capacities for self-regulation in learning tasks.

1.3. Sense of belongingness and autonomy

Osterman (2000) notes the controversy about the influence of supportive relationship on autonomy, which consist of the idea that there seems to be the need for lessening emotional involvement in relationships in order for a child to experience autonomy. However, by citing the works of Deci & Ryan, Osterman argues that autonomy does not mean detachment from others. Rather, stronger social connections facilitate the internalization of goals valued by those one feels connected with. In line with the premises of SDT, Osterman contends that autonomy develops more effectively in contexts where the individual experiences relatedness or a sense of belongingness.

1.4. Role fulfillment and autonomy

We argue that the sense of belongingness in the school is likely to influence a perception of having been able to fulfill the role one is socialized in the school setting. This sense of role fulfillment then leads to autonomy. The basis for this contention comes from two lines of argument. The first finds its basis on the theory of role identity; the second is based on the discussion on culture and motivation. Studies show that understanding the role of being a student leads to greater agency (Shanahan & Nieswandt, 2011). Success in college entails students having to master the "student role" in order to understand what is expected of them and apply their skills to fulfill these expectations (Collier & Morgan, 2008). The positive association between obligated and agentic motivation was observed to be most evident among members of collectivistic cultures (Buchtel, 2009). Previous work have provided evidence that agentic and obligated motivations can indeed simultaneously be experienced by an individual (e.g., Wentzel, 1998). Furthermore, the less well-internalized a cultural practice, the more its enactment is dependent on external regulation, whereas the more fully internalized a norm is, the more one identifies with its value and thus experiences its enactment as autonomous (Chirkov, Ryan, & Willness, 2005).

2. Objective

The present research seeks to determine the mediating influence of perceptions of role fulfillment in the school context on the relationship between the adolescents' sense of belongingness in school and autonomy.

3. Method

3.1. Participants

The participants of the present study came from the pool of 2, 829 students from the Youth and Poverty research project of the Psychology Department of De La Salle University. Since the interest of the study focused on the developmental outcomes in a school setting, out-of-school youth participants were excluded in the present study. The sample consisted of 2,450 Filipino adolescents (Male = 927, Female = 1,522) ages 14 to 22 (mean age = 17.04, SD = 2.05) from different educational institutions around the Philippines.

3.2. Measures

The measures that were used for this study were taken from the Multicontext Assessment Battery for Youth Development of De La Salle University of Department of Psychology (2011).

Sense of Belongingness. To assess sense of belongingness in school, the participants were asked to rate themselves using a 6-item scale in terms of how they feel accepted by people in their school and how much they enjoy being with others in school. The items were based on previous work on how the need for relatedness or connection is fulfilled in a given context (Ryan & Deci, 2000; Wentzel, 1998). The scale items were rated on a 5-point scale with response options ranging from not at all true to very true. Sample items were "In my school, we enjoy spending time together" (spending time together) and "I feel that I am accepted by people from my school" (belongingness). The items formed a one-dimensional scale (explained variance of 12%), with a Cronbach's alpha of .70 ($M = 23.33$, $SD = 3.44$).

Perception of Role Fulfillment. The scale is a five-point Likert Scale (1 – not at all true; 2 – not true; 3 – somewhat true; 4 – true; 5 – very true) that evaluates the awareness, acceptance and attitude towards the roles they play in their schools. The items measured the extent to which the young person accepts and perceives an adherence to the expectations and norms in the school context. The items in this scale were constructed based on previous work on perceived value of task engagement in a context, and the recognition and adherence to acceptable behaviors in a context (Eccles & Wigfield, 1995). Sample items include "The role I play in school is clear to me" and "I accept wholeheartedly the roles I play in

school". The items formed loaded on one factor (explained variance of 22%), with a Cronbach's alpha of .91 ($M = 32.35, SD = 4.72$).

Autonomy. To assess autonomy, participants were asked the extent to which they are able to rely on themselves for their needs and in making their own decisions using an 11-item scale. The items were based on definitions on the construct in Social Determination Theory (e.g., Reeve, Nix, & Hamm, 2003; Deci & Ryan, 1991). The items were rated on a 5-point scale with response options ranging from not at all true to very true. Sample items from this scale are "I am responsible for the consequences of my actions" and "I have my own convictions". The items formed a one-dimensional scale (explained variance of 26%), with a Cronbach's alpha of .82 ($M = 39.49, SD = 5.06$).

3.3. Procedure

Data were gathered at school during a regular class period and course credit was given to those who successfully completed the battery of questionnaires. Each participant received a packet which contains a letter describing the nature and purpose of the research, informed consent forms, and a battery of questionnaires. The participants were also informed verbally that taking part in the study was voluntary, and the anonymity of their identity and responses was also ensured. Informed consent forms were also obtained from the parents of participants who are below 18 years.

3.4. Data Analysis

Primarily, the variables were correlated in order to know the degree of association. The test of the direct and indirect effect of sense of school belongingness to autonomy through perception of role fulfillment which are quantified through OLS regression. In addition, bootstrap confidence interval was also conducted for inferential test of the indirect effect.

4. Results

Descriptive statistics and correlation coefficients for each of the variables are presented in Table 1. Based from the table, the variables showed moderate positive correlation, and sense of school belongingness and perception of role fulfillment has the highest coefficient.

Table 1. Descriptive statistics and correlations of sense of belongingness, perception of role fulfillment and autonomy

Variable	M	SD	2	3
Sense of School Belongingness (1)	3.88	.58	.536	.301
Perception of Role Fulfilment (2)	4.05	.59	1	.419
Sense of Autonomy (3)	.97	.50	-	1

Note: $p < .05$

Analysis to determine whether perception of role fulfillment mediated relations between sense of school of belongingness and autonomy followed procedures recommended by Hayes (2013). The result of the OLS regression for the direct and indirect effect is in Table 2.

Table 2. Model Coefficients for the indirect effect of sense of belongingness on autonomy through perception of role fulfillment

	Consequent							
		Perception of Role Fulfillment			Autonomy			
		Coeff.	SE	p	Coeff.	SE	p	
Sense of Belongingness	<i>a</i>	0.548	.0174	$p < .001$	<i>c</i> ²	0.093	0.019	$p < .001$
Perception of Role Fulfillment		-	-	-	<i>b</i>	0.305	0.018	$p < .001$
Constant	<i>i</i> ₁	1.918	0.0685	$p < .001$	<i>i</i> ₂	2.378	0.071	$p < .001$
		$R^2 = .287$ $F(1, 985.781), p < .001$			$R^2 = .184$ $F(2, 274.910), p < .001$			

The results showed that sense of belongingness indirectly influences autonomy through its effect on perception of role fulfillment. Figure 1 shows the mediation model which indicates that participants who feel that they are accepted and who enjoy being part of their respective groups have the awareness and positive attitudes towards the roles that they play and the tasks they do in their schools ($a = 0.534$). Being able to seriously enact and perform tasks lead the participants to be independent, be assertive and be able to decide on their own ($b = 0.305$).

Figure 1. The mediating role of perception of role fulfillment in the relation between sense of school belongingness and autonomy

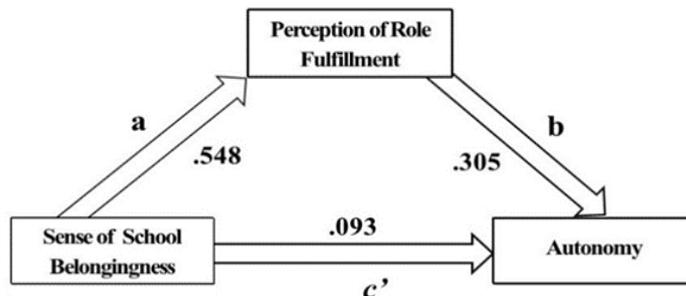


Table 3. Direct and Indirect Effects of School Belongingness on Autonomy

	Effect	SE	P	LLCI	ULCI
Direct Effect of School Belongingness on Autonomy	.093	0.187	p<.001	.057	.130
Indirect Effect of School Belongingness on Autonomy through Perception of Role Fulfillment	.167	0.14	-	.139	.197

Note: p < .001

5. Discussion

Consistent with the Self-determination theory, our results suggest that individuals who feel a sense of belongingness show greater self-regulation in their learning tasks (Niemic & Ryan, 2009). This is said to occur when the person has fully internalized group values and norms (Chirkov, Ryan, & Willness, 2005). Our findings provide evidence for a process by which autonomy supportive conditions can be formed through facilitating the adoption of student roles, which, signifies a mechanism for the internalization of a group’s practices, values and norms. Moreover, role identity and clarity seem to be best communicated in a context of relatedness or connectedness with others.

The possibilities of being a student (i.e., performing the student role) provide the student with self-scripts imbued with agentic qualities and cognitive representations of feelings of mastery (Markus & Nurius, 1986, p. 962). Moreover, positional labels and the expectations attached to them are internalized as identities that make up the self (Burke, 2007). Having a role identity of being a good student results in an ability to control resources that will sustain the identity (Burke, 2007).

Our findings demonstrate the significance of providing the students with meaningful roles in their social context in order for them to achieve autonomy as learners. We recommend that school administrators and teachers develop structured experiences where students are provided with opportunities to see themselves as fulfilling roles valued in the learning community. Indeed, school authorities will be able to derive benefits from future research on internalization of values in the school context. However, the present study is limited in its use of a cross-sectional design. The concurrent collection of data does not allow us to establish causality and rule out alternative explanations to the observed relations between variables (Sedgwick, 2014).

6. Conclusion

This study presents one of the initial attempts at exploring the mediating effect of sense of having fulfilled a role in a context on the relationship between social connection and autonomy. The significant finding supports interventions in the university setting that help enhance school belongingness and a clear articulation of students’ role, i.e., what are expected of them and their social responsibilities, in the contexts of learning.

References

- Buchtel, E. E. (2009). *A sense of obligation: culture and the subjective experience of meeting expectations* (Doctoral dissertation, University of British Columbia).
- Burke, P. J. (2007). Identity control theory. *The Blackwell encyclopedia of sociology*, 2202-2207.
- Chirkov, V. I., Ryan, R. M., & Willness, C. (2005). Cultural Context and Psychological Needs in Canada and Brazil Testing a Self-Determination Approach to the Internalization of Cultural Practices, Identity, and Well-Being. *Journal of Cross-Cultural Psychology*, 36(4), 423-443.
- Chirkov, V. I., & Ryan, R. M. (2001). Parent and teacher autonomy-support in Russian and US adolescents common effects on well-being and academic motivation. *Journal of cross-cultural psychology*, 32(5), 618-635.
- Collier, P. J., & Morgan, D. L. (2008). "Is that paper really due today?": differences in first-generation and traditional college students' understandings of faculty expectations. *Higher Education*, 55(4), 425-446.
- Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.), *Nebraska Symposium on Motivation: Vol. 38. Perspectives on motivation* (pp. 237-288). Lincoln: University of Nebraska Press.
- Denham, S.A., Bassett, H.H., & Wyatt, T. (2007). The socialization of emotional competence. In J.E. Grusec & P.D. Hastings (Eds.), *Handbook of socialization: Theory and research* (pp. 614-637). New York: Guilford Press.
- Eccles, J. S., & Roeser, R. W. (2011). Schools as developmental contexts during adolescence. *Journal of Research on Adolescence*, 21(1), 225-241.
- Eccles, J. S., & Wigfield, A. (1995). In the mind of the actor: The structure of adolescents' achievement tasks values and expectancy-related beliefs. *Personality and Social Psychology Bulletin*, 21, 215-225.
- Faircloth, B. S., & Hamm, J. V. (2005). Sense of belonging among high school students representing 4 ethnic groups. *Journal of Youth and Adolescence*, 34(4), 293-309
- Markus, H., & Nurius, P. (1986). Possible selves. *American psychologist*, 41(9), 954-969.
- Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice. *Theory and Research in Education*, 7(2), 133-144.
- Osterman, K. F. (2000). Students' need for belonging in the school community. *Review of Educational Research*, 70(3), 323-367.
- Pittman, L. D., & Richmond, A. (2007). Academic and psychological functioning in late adolescence: The importance of school belonging. *The Journal of Experimental Education*, 75(4), 270-290.
- Reeve, J., Nix, G., & Hamm, D. (2003). Testing Models of the Experience of Self-Determination in Intrinsic Motivation and the Conundrum of Choice. *Journal of Educational Psychology*, 95(2), 375-392.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, 55(1), 68-78.
- Sedgwick P. (2014). Cross sectional studies: advantages and disadvantages. *British Medical Journal*, 348:2276.
- Shanahan, M. C., & Nieswandt, M. (2011). Science student role: Evidence of social structural norms specific to school science. *Journal of Research in Science Teaching*, 48(4), 367-395.
- Turner, M. G., Piquero, A. R., & Pratt, T. C. (2005). The school context as a source of self-control. *Journal of Criminal Justice*, 33(4), 327-339.
- Vaz S, Falkmer M, Ciccarella M, Passmore A, Parsons R, Black M, et al. (2015) Belongingness in Early Secondary School: Key Factors that Primary and Secondary Schools Need to Consider. *PLoS ONE* 10(9): e0136053. doi:10.1371/journal.pone.0136053. 7
- Wentzel, K. (1998). Social relationships and motivation in middle school: The role of parents, teachers, and peers. *Journal of educational psychology*, 90(2), 202-209.

ACADEMIC SELF-EFFICACY IN TRANSITIONS TO HIGH SCHOOL

Simona Hoskovicová & Lenka Krejčová

Department of Psychology, Faculty of Arts, Charles University in Prague (Czech Republic)

Abstract

Bandura's theory of self-efficacy is a theoretical framework of a concept of academic self-efficacy, which is one of the predictors of school achievement. Academic self-efficacy is defined as an option of self-efficacy. The focus of our research is a description of the academic self-efficacy development from the beginning of the first grade at elementary school till the end of high school with the emphasis on transition moments. In this paper we want to present results of an adolescent group entering a senior high school.

We were interested whether academic self-efficacy and self-esteem change during the transition from the last grade of junior high school to the 1st grade of senior high school, or if these characteristics are stable. As the main research method self-report questionnaires compiled into an assessment battery were used. The assessment tools focused on academic efficacy, self-control of homework and experience of the transition between the educational levels. The questionnaires were administered three times per the data collection to each child - once in April 2015 before the transition and then after the transition in September 2015 and November 2015. The first part of the questionnaire battery included MALS (Myself-As-a-Learner Scale) focusing directly on students' perceptions of their learning abilities and skills (Burden, 1998). Children's self-efficacy was measured with a modification of the Children's Perceived Self-efficacy scales (CPSE; Pastorelli et al. 2001). We asked also 3 direct questions on expectations before the transition and experience after the transition.

Our first outcomes (N= 322) show a significant correlation between the MALS and expectations from the transition (Pearson correlation 0,572; $p < ,001$) and on a similar level Child Self-efficacy and expectations from the transition (Pearson correlation 0,513; $p < ,001$). Around 6% of children express very low expectations of coping with the transition. This group seems to be a risk group and requires intervention. The self-efficacy theory and the sources of self-efficacy (mastery experience, social modeling, social persuasion and control of emotional states) can be an inspiration for the intervention. The whole group of student in their last year of junior high school has levels of academic efficacy (MALS and Child Self-efficacy) above the statistically expected average.

Keywords: *academic self-efficacy, transition, high school, adaptation.*

1. Introduction

Bandura (1997) describes self-efficacy as an individual belief that one is able to use one's abilities and skills and reach given goals. Furthermore, Tsang, Hui and Law (2012) refer to self-efficacy as a personal belief to perform at various situations. The level of self-efficacy depends on a level of difficulty of a task/goal. Fröhlich-Gildhoff, Becker and Fischer (2012) then specify self-efficacy as self-confidence that one has abilities, skills and means to gain a target despite possible obstacles. An important point is whether an individual expects that his/her activities will lead to efficient results. Such expectations are developed via previous mastery experiences, social persuasion, observation learning, and emotional and physical reactions (Bandura et al., 2003; Pajares, 2006; Schunk, & Meece, 2006; Schunk, & Zimmermann, 1997), and thus self-efficacy affects and manages further attitudes toward new tasks and situations. A level of self-efficacy is also tightly connected with one's motivation (Fröhlich-Gildhoff et al., 2012).

Academic efficacy is a specific variation of self-efficacy which is tightly connected with school environment and academic career. It can be defined as an individual belief that one is capable to master educational tasks and requirements (Doll, Zucker, & Brehm, 2004; Zimmerman, 1995). It has a direct impact on school achievements and school motivation (Jinks & Morgan, 1999). Apart from the content of learning, teachers' instructions and educational styles, classmates, and school climate play an important role in the process of academic self-efficacy development (Zuffiano, Alessandri, Gerbino, Kanacri, Di

Giunta, Milioni, & Caprara, 2013). Academic self-efficacy not only predicts school results and success but also academic career. Students with high academic self-efficacy at primary school gain higher achievements at secondary schools (Caprara, Vecchione, Alessandri, Gerbino, & Barbaranelli, 2001). They even choose different study strategies which may also affect their further post-educational career (Bong, & Skaalvik, 2003; Zimmerman, 1995). Such students experience more positive learning-related emotions (Putwain, Sander, & Larkin, 2013) and their self-regulated learning and performance are enhanced by the level of academic self-efficacy (Zimmerman, & Schunk, 2011).

Research shows a decrease of academic self-efficacy after the change of school levels. Vanlede, Little and Card (2006) describe more negative feelings among students in the first year of a further school level than in the previous year. Gillison, Standage and Skevington (2008) refer about less than a quarter of students who declared better quality of life and life satisfaction after moving to higher level of education. On the other hand, school results of students in their study did not change remarkably. Most of the students “only” did not show satisfaction but their achievements were rather same as in earlier years of their education. Even observations of students with high academic self-efficacy emphasize an importance of academic self-efficacy in students’ development. Those with high academic self-efficacy at the age of 12-15 showed more satisfaction with work career, goal-oriented motivation and lower percentage of unemployment in adulthood (Pinquart, Juang, & Silbereisen, 2003).

Smooth transition to secondary school provide primary schools in several ways, one example is to teach students how to allocate time to study, hobbies, sports, school events and friends. Pupils who are confident about their organizational skills and study skills feel effective at school. High school can support their future students by providing them with mentors or educational advisors who are familiar with the schedule and life at school (Schunk & Meece, 2006). In the Czech republic high school organize quite often at the beginning of the school year and introductory course, which aim it is to promote mutual learning of students in the newly formed classes, which means giving adolescents the opportunity to present themselves and to discover what they have in common with their classmates. Other goal of introductory courses is to introduce teachers and, not least, to provide information about the school. Successful introductory courses create a stable foundation for social groups development and communication in the classroom. These are the first steps to ensure that teachers and students have created a good class climate. Students have to be confident enough to contact the class teacher or another person in case of failure or troubles. (Mertin & Krejcova, 2013). A welcoming atmosphere in the classroom minimizes anxiety and students can then develop their perceived academic efficacy (Joët et al., 2011). Some high schools offer a buddy program, within which the student becomes a higher grade student as a guide. The buddy introduces to the school environment and helps the new student when it is needed. The familiarity of the environment and availability of assistance, if necessary, supports an increase in perceived academic efficacy in students entering the first grade. The buddy program improves relations across different ages of students, reduces the incidence of bullying and truancy. (Schunk & Meece, 2006).

2. Methods

We used in our research self-report questionnaires compiled into an assessment battery. We used the same battery for 5th-graders (Hoskocova and Krejcova, 2015) and for 9th-graders. The questionnaires focused on academic efficacy, self-control of homework and expectations about the transition from the 9th grade to the higher educational level. The questionnaires were administered three times per the data collection to each adolescent - once in April 2015 before the transition and then after the transition in September 2015 and November 2015. The adolescents answered our questionnaires on-line or in paper-pencil form at their school. After their transition, they either received an e-mail with the link to the questionnaire or were contacted via the participating high schools.

The first part of the questionnaire battery included MALS (Myself-As-a-Learner Scale) which focused directly on students’ perceptions of their own learning abilities and skills (Burden, 1998). The scale is simple to administer and to score, whilst containing sufficient items to ensure that different aspects of the learning self-concept were taken into account. For this reason, a twenty-item scale providing five optional responses, leading to a maximum possible score of 100 and a minimum score of 20, was constructed. The scale is comprehensible to pupils and students across a fairly wide age range, and standardized so that comparisons could be made between those with average, high and low self-concepts. MALS is applicable to students between the ages of 8 and 16 (Burden, 2012).

Children’s self-efficacy was measured with a modification of the Children’s Perceived Self-efficacy scales (CPSE; Pastorelli et al. 2001). The full CPSE has 37 items representing seven domains of functioning that formed the three fundamental factors: Perceived Academic Efficacy includes 19 items; Perceived Social Efficacy includes 13 items; Self-Regulatory Efficacy includes 5 items. For

each item, children rated their belief in their level of capability to execute the designed activities using a 5-point response format. After a pilot stage of the project, we had to reduce the questionnaire with respect to the capacity of the children's ability to complete them. We then selected 17 items which covered all three factors – Perceived Academic Efficacy - 9 items, Perceived Social Efficacy - 4 items and Self-Regulatory Efficacy - 4 items (the abbreviation used for the shortened version is ChSE). (Hoskovcova and Krejcova, 2015)

We asked three questions about students' expectations on the transitions (school demands, different requirements of teachers, finding friends) where participants expressed their efficacy in percent (%SE). In connection with these three questions, we asked about related emotions: 5 positive and 5 negative (ECh). After the transition the sentence of the question was changed and we asked about the current state. Example: Question in April "You will change to a new school. You will meet new classmates, make new friends and build up your position in the classroom. How confident you feel about coping with this situation?"; Question in September and November "You did change to a new school. You did meet new classmates, made new friends and you build up your position in the classroom. How do you cope with this situation?"

3. Sample

In this study, we present outcomes from the first data collection. In April 2015 the sample contained 322 adolescents (142 girls and 180 boys) from different junior high schools throughout the Czech Republic, 136 from towns with less than 30,000 inhabitants and 186 from larger cities. Age of the adolescents was 14-17 ($M=14.85$). The adolescents were recruited at time of their entrance examinations to senior high school. The consent forms signed by their parents were collected.

4. Results

We see a decrease of MALS and ChSE scores after the transition. The results are presented in Table 1. For MALS the maximum is 100, the minimum 20, where a lower score means a higher academic self-esteem. For ChSE the maximum is 85 and the minimum 17, the higher score means a higher self-efficacy.

Table 1. Means and standard deviations for MALS and ChSE

	MALS		ChSE	
	Mean	SD	Mean	SD
April	70.40	10,8	66.60	9,0
September	65.90	11,0	64.99	9,7
November	65.22	10,1	64.15	10,1

Our first outcomes ($N= 340$) show a significant correlation between the MALS and expectations from the transition (Pearson correlation 0,572; $p < ,001$) and on a similar level Child Self-efficacy and expectations from the transition (Pearson correlation 0,513; $p < ,001$). Around 6% of children express very low expectations of coping with the transition. This group seems to be a risk group and requires intervention.

Expectations about the transition and emotions do not undergo a big change after the transition. The perceived efficacy about the transition is on the same level as the perception of the adaptation after the transition (%SE). Emotions connected with the transition get a little bit more negative they were before the change.

Table 2. Means and standard deviations for %SE and Ech

	%SE		ECh	
	Mean	SD	Mean	SD
April	21,69	5,33	87,17	11,33
September	22,44	5,07	85,15	11,96
November	22,75	4,86	84,45	11,79

5. Discussion

Our outcomes show a decrease of the academic efficacy even if the perception of the transition does not change dramatically. The more general Child Self-efficacy scale scores does decrease milder than the MALS scores. It seems, that adolescents face a challenge in the high school environment, which

influences especially the decrease of academic efficacy measured by MALS. This outcomes are similar to the outcomes of Vanlede, Little and Card (2006). Further analysis of data is needed; especially the predictive model can bring more information.

Acknowledgements

The paper is supported by the Czech science foundation GACR grant no. 13-28254S „Transient moments in the life path of the child and adolescent“.

References

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Bandura, A. et al. (2003) Role of Affective Self-Regulatory Efficacy in Diverse Spheres of Psychosocial Functioning, *Child Development*, vol. 74, no. 3, pp. 769-782.
- Bong, M., & Skaalvik, E. M. (2003). Academic self-concept and self-efficacy: How different are they really?. *Educational psychology review*, 15(1), 1-40.
- Burden, R. L. (1998) 'Assessing children's perceptions of themselves as learners and problem solvers. The construction of the Myself-As-a-Learner Scale', *School Psychology International* 19 (4), 291-305.
- Caprara, G. V., Vecchione, M., Alessandri, G., Gerbino, M., & Barbaranelli, C. (2011). The contribution of personality traits and self-efficacy beliefs to academic achievement: A longitudinal study. *British Journal of Educational Psychology*, 81(1), 78-96.
- Doll, B., Zucker, S. and Brehm, K. (2004) *Resilient Classrooms*, New York: The Guilford Press.
- Fröhlich-Gildhoff, K. (2012). Resilienzförderung in der Jugend- und Erziehungshilfe. In K. Fröhlich-Gildhoff, J. Becker & S. Fischer (Hrsg.). *Gestärkt von Anfang an. Resilienzförderung in der Kita* (S. 81-87). Weinheim: Beltz
- Gillison, F., Skevington, S., & Standage, M. (2008). Exploring response shift in the quality of life of healthy adolescents over 1 year. *Quality of Life Research*, 17(7), 997-1008.
- Hoskovicová, S. and Krejčová, L. (2015) 'Changes of Academic Efficacy in the Course of Education Levels Transition', in Krejčí, I., Flégl, M. and Houška, M. (eds.) *Efficiency and Responsibility in Education 2015: Proceedings of the 12th International Conference*. Praha: Czech University of Life Sciences.
- Jinks, J., & Morgan, V. (1999). Children's perceived academic self-efficacy: An inventory scale. *The Clearing House*, 72(4), 224-230.
- Joët, G., Usher, E.L., & Bressoux, P. (2011). Sources of Self-Efficacy: An Investigation of Elementary School Students in France. *Journal of Educational Psychology*, 103(3), 649-663. DOI: 10.1037/a0024048
- Mertin, V., Krejčová, L., Pekárková, M., Dosoudil, P., Čáp, D., Beranová, A., & Feřtek, T. (2013). *Problémy s chováním ve škole-jak na ně (Individuální výchovný plán)*. Wolters Kluwer.
- Pajares, F. (2006) 'Self- Efficacy during Childhood and Adolescence: Implications for Teachers and parents', in Pajares, F. and Urdan, T. (eds.) *Self-Efficacy Beliefs of Adolescents*, Greenwich: Information Age Publishing.
- Pastorelli, C. et al. (2001) 'The Structure of Children's Perceived Self-Efficacy: A Cross-National Study', *European Journal of Psychological Assessment*, vol. 17, no. 2, pp. 87-97.
- Pinquart, M., Juang, L. P., & Silbereisen, R. K. (2003). Self-efficacy and successful school-to-work transition: A longitudinal study. *Journal of Vocational Behavior*, 63(3), 329-346.
- Putwain, D., Sander, P., & Larkin, D. (2013). Academic self-efficacy in study-related skills and behaviours: Relations with learning-related emotions and academic success. *British Journal of Educational Psychology*, 83(4), 633-650.
- Schunk, D. H. and Meece, J. L. (2006) 'Self-Efficacy Development in Adolescence', in Pajares, F. and Urdan, T. (eds.) *Self-Efficacy Beliefs of Adolescents*, Greenwich: Information Age Publishing.
- Schunk, D. H. and Zimmermann, B. J. (1997) 'Social Origins of Self- Regulatory Competence', *Educational Psychologist*, vol. 32, no. 4, pp. 195-208.
- Tsang, S. K. M., Hui, E. K. P., & Law, B. C. M. (2012). Self-Efficacy as a Positive Youth Development Construct: A Conceptual Review. *The Scientific World Journal*, 2012, 452327. <http://doi.org/10.1100/2012/452327>
- Vanlede, M., Little, T. D., & Card, N. A. (2006). Action-control beliefs and behaviors as predictors of change in adjustment across the transition to middle school. *Anxiety, stress, and coping*, 19(2), 111-127.

- Zimmerman, B. J. (1995). Self-efficacy and educational development. *Self-efficacy in changing societies*, 202-231.
- Zuffianò, A., Alessandri, G., Gerbino, M., Kanacri, B. P. L., Di Giunta, L., Milioni, M., & Caprara, G. V. (2013). Academic achievement: The unique contribution of self-efficacy beliefs in self-regulated learning beyond intelligence, personality traits, and self-esteem. *Learning and individual differences*, 23, 158-162.
- Zimmerman, B. J., & Schunk, D. H. (Eds.). (2011). *Handbook of self-regulation of learning and performance*. Taylor & Francis.

EXTENUATING CIRCUMSTANCES AND MORAL JUDGMENT: A LIFE-SPAN PERSPECTIVE

Sandra Lepeltier, Veronique Salvano-Pardieu & Roger Fontaine

Laboratory EA2114 "Psychologie des Ages de la Vie", Université François-Rabelais de Tours (France)

Abstract

Aim. In this study we analyzed moral judgment in order to determine how an aggressor's emotional state is taken into account at different ages, and how it could reduce the severity of a sanction.

Introduction. Moral judgment, especially judgment of blame, is composed of two factors (Fontaine et al., 2004). The first one is the perspective-taking ability; it is linked to the ToM. It allows taking intentions into account and not only consequences when a person has to judge an aggression for example. The second one refers to deontic reasoning, which is defined by the knowledge of social rules (Manktelow, 2012). Previous research (e.g., Bersoff & Miller, 1993; Darley & Zanna, 1982) showed that some contextual factors (e.g., self-defense, provocation) could mitigate a judgment to the point where it reduces the severity of a sanction. In the present study, another contextual factor was manipulated; the perpetrator was angry before he/she met the victim, his/her emotional state was distorted by an aggression he/she previously lived. Is this factor an extenuating circumstance? What is the impact of age?

Based on the above mentioned previous research, we assumed that the ability to take the perpetrator's emotional state into account was linked to cognitive abilities at play during developmental phases. As a matter of fact, children and teenagers have to be able to understand others' point of views to base their judgment on intentions and less on consequences, and to put themselves in the aggressor's shoes (Piaget, 1932). Development of the perspective-taking ability overbears at these ages. However, from early to late adulthood, individuals' judgment is tainted by social norms. Adults emphasize social relationships (Van der Keilen & Garg, 1994): aggressive behaviors tend to not be accepted, no matter what their explanations are. This is even more pregnant when such behaviors threaten the social relationship, which, when damaged, has to be restored. Therefore, adults grant more importance to deontic reasoning and are less prone to reduce their sanction towards someone who loses control and attacks someone else.

Participants. Six groups of participants differing in age were formed, as presented in table 1. They were tested using Anderson's method (Anderson, 1981, 1996, 2013), in order to highlight developmental effects with a life span perspective.

Table 1. Means and Standard-Deviation for each group of participants

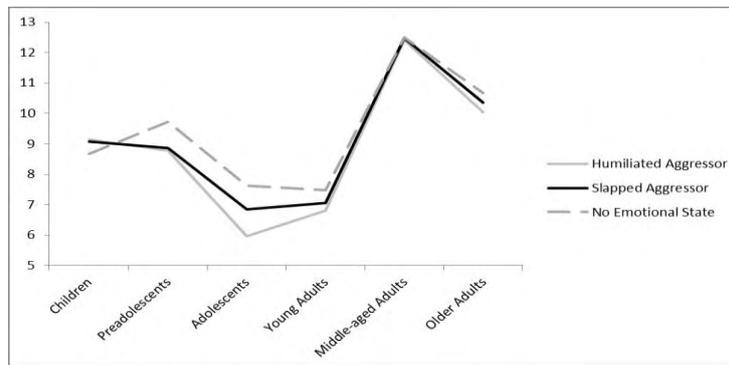
	<i>N</i>	<i>M</i>	<i>SD</i>
Children	30	6.63	0.50
Preadolescents	30	11.82	0.43
Adolescents	30	15.76	0.46
Young Adults	30	20.07	0.64
Middle-aged Adults	30	45.19	2.98
Older Adults	30	77.65	3.51

Methods. Each participant had to complete a booklet containing 12 vignettes which described, with a few short lines, different situations involving several characters: an aggressor and a victim. Each vignette referred to a real-life situation, and did not introduce confusion with hypothetical dilemmas, instead it reflected as accurately as possible moral judgment values (Levine, 1976). For ecological validity, each story was simple and described a daily school event for children and adolescents or a protest situation for adults. In each story, different information was manipulated: the type of aggression, the type of damage undergone by the aggressor, and the gravity of the action's consequences. A 16 cm scale accompanied each story (left anchor = "no sanction" and right anchor = "very severe sanction". Each participant had to put a cross on the scale to indicate the severity of the sanction they wanted to give to the aggressor. Each cross was converted to a numerical value by measuring the distance (in cm) between the origin (0) and the applied cross. The vignettes and scale had been created by Fontaine et al. (2002) and were adapted for this experiment.

Previous results. A 2 (scenarios context: push vs. punch) x 3 (previous aggression: slapping vs. humiliation vs. without) x 2 (consequences: low vs. high) ANOVA was conducted on the entire responses of participants. These three factors were within participant factors. Age (6.6, 11.8, 15.7, 20, 45, 77.6) was a between participant factor. To present our previous results, we will focus only on the effect of age and

aggressor's emotional state. The global analysis showed an effect of age ($F(5, 174) = 16.63, p < .001$). In other words, adolescents and young adults were the less strict when it came to sanctioning, while middle-aged and older adults were the most severe. An effect of aggressor's emotional state was found ($F(2, 348) = 9.73, p < .001$): a humiliated aggressor was judged less severely than a slapped perpetrator. Both these situations were less severely judged than an unmotivated aggression. The interaction between these two factors was statistically significant ($F(10, 348) = 2.71, p < .01$) as shown in Figure 1. Only preadolescents' ($F(2, 173) = 4.88, p < .01$) and adolescents' ($F(2, 173) = 12.17, p < .001$) judgments were significantly reduced because of the perpetrator's emotional state.

Figure 1. Interaction between age and aggressor's emotional state



Discussion/Conclusion. Our previous analyses showed that the aggressor's emotional state is taken into account in different ways according to the participants' age. Only preadolescents and adolescents took emotional state into account as an extenuating circumstance, more specifically adolescents made a distinction between both types of previous aggression (i.e., slapping versus humiliation). Young children and adults' judgment did not seem to be affected by this factor. These preliminary results are consistent with our hypothesis. Taking this factor (i.e., previous aggression) into account is allowed by the development of the perspective-taking ability: children were not cognitively able to take this factor into account but preadolescents and adolescents reduced the severity of their judgment when the perpetrator's emotional state was distorted. However, for all three adults groups, judgment was not impacted by this factor. Social rules seem to take over from early adulthood on (Van der Keilen & Garg, 1994): whatever the situation, society expects self-control and adults are not supposed to aggress somebody else.

Keywords: Moral judgment, extenuating circumstances, life-span perspective, information integration theory.

References

- Anderson, N. H. (1981). Foundations of information integration theory. New York: Academic Press.
- Anderson, N. H. (1996). A functional theory of cognition. Mahwah, N.J.: L. Erlbaum Associates.
- Anderson, N. H. (2013). Unified psychology based on three laws of information integration. *Review of General Psychology*, 17(2), 125–132. <http://doi.org/10.1037/a0032921>
- Bersoff, D. M., & Miller, J. G. (1993). Culture, context, and the development of moral accountability judgments. *Developmental Psychology*, 29(4), 664–676. <http://doi.org/10.1037/0012-1649.29.4.664>
- Darley, J. M., & Zanna, M. P. (1982). Making moral judgments. *American Scientist*, 70(5), 515–521.
- Fontaine, R., Salvano-Pardieu, V., Cruzet, S., & Pulford, B. D. (2002). Physically Abused and Nonmaltreated Boys' Moral Judgments of Violence. *Child Study Journal*, 32(4), 215–30.
- Fontaine, R., Salvano-Pardieu, V., Renoux, P., & Pulford, B. (2004). Judgement of Blame in Alzheimer's Disease Sufferers. *Aging, Neuropsychology, and Cognition*, 11(4), 379–394. <http://doi.org/10.1080/13825580490521313>
- Levine, C. (1976). Role-taking standpoint and adolescent usage of Kohlberg's conventional stages of moral reasoning. *Journal of Personality and Social Psychology*, 34(1), 41–46. <http://doi.org/10.1037/0022-3514.34.1.41>
- Manktelow, K. (2012). *Thinking and Reasoning: An Introduction to the Psychology of Reason, Judgment and Decision Making*. New York, NY, US: Psychology Press.
- Piaget, J. (1932). *Le jugement moral chez l'enfant*. Paris: Presses universitaires de France.
- Van Der Keilen, M., & Garg, R. (1994). Moral Realism in Adults' Judgments of Responsibility. *The Journal of Psychology*, 128(2), 149–156. <http://doi.org/10.1080/00223980.1994.9712718>

AGE-RELATED DIFFERENCES IN SHORT-TERM MEMORY, EXECUTIVE FUNCTIONS AND PROBLEM SOLVING IN MIDDLE AND LATE ADULTHOOD

Sara Mičič & Karin Bakracevic Vukman

Department of Psychology, Faculty of Arts; University of Maribor (Slovenia)

Abstract

The aim of the present study was to research age-related changes in cognitive functioning in the field of short-term memory, planning and problem solving. We used a set of tasks that apply to aforementioned cognitive functions to test a group of middle-aged and a group of older adults. The middle-aged adults showed significantly higher results in short-term verbal and non-verbal memory in comparison to older adults, the same applies to planning task, although there was higher negative correlation between age and task performance for the non-verbal memory task, which could mean that non-verbal memory performance declines stronger with aging in comparison to a verbal memory performance. Regarding problem solving performance, the difference between age groups (in favour of middle-aged adults) was significantly higher in abstract problems than in everyday-life problems. We could conclude that performance on verbal short-term memory task shows less age-related decline than short-term non-verbal memory performance. There is also evidence that the ability of solving everyday-life problems is better preserved with older adults in comparison to the ability of solving abstract problems.

Keywords: *middle adulthood, late adulthood, short-term memory, planning, problem solving.*

1. Introduction

Age-related decline in short-term memory manifests itself in the form of forgetting the occurrence of recent events and in difficulties related to retaining information over short period of time (Fournet et al., 2012). Simple memory tasks, where the subject is expected to recall recently presented stimuli, are a tool predominantly used to measure the capacity of short-term memory. Studies have demonstrated that ageing affects performance in visual-spatial tasks to a greater degree in comparison to verbal tasks. (Jenkins, Myerson, Joerding, and Hale, 2000; Park et al., 2002; Verhaeghen et al., 2002; Fournet et al., 2012). Fournet et al. (2012) ascribe this difference in memory decline to a stronger interaction between visual-spatial tasks and executive functions.

The executive functions are the control processes in charge of planning, coordinating and monitoring other cognitive operations (Salthouse, Atkinson and Berish, 2003). According to Salthouse et al. (2003), age-related differences in cognitive functioning thus arise also as the consequence of age-related decline in the executive functions. Executive function errors in older adults consist of the following: erroneous choice, the selection of irrelevant information to be processed in the working memory, incapacity to divert attention from irrelevant information and ineffectiveness in task-switching (Park and Reuter – Lorenz, 2008, in Cavanaugh and Blanchard – Fields, 2011). Task-switching allows us to regulate our behaviour in accordance with the changing requirements of the environment and is often measured by the Trail Making Test (TMT) (Kelty-Stephen, Stirling and Lipsitz, 2016). TMT is also used to measure the ability to plan. Planning is a complex cognitive function, enabling us to successfully confront situations which require anticipation of a goal (Ward and Morris, 2005; in Köstering, Stahl, Leonhart, Weiller and Kaller, 2014).

Age-related decline appears in problem-solving in a similar manner to other cognitive functions. Older adults achieve poorer results in solving problems compared to younger ones, especially when it comes to abstract problems, distant from everyday life situations. Research-based evidence shows that younger and middle-aged adults achieve the best results in solving well-defined problem tasks, while those in middle and late adulthood on the other hand tend to provide the best responses to everyday problems (Bakracevic Vukman, 2005). Research by Cornelius and Caspi (1987) suggests somewhat different results, that performance on everyday life problems linearly increases with age.

2. The Method

2.1. Participants

40 individuals between 45 and 92 years of age participated in the research. Those between 45 and 65 years of age were classified as middle-aged adults and those between 66 and 92 as older adults. The average age was 52.2 years in middle-aged adults and 80.3 years in older adults. The entire sample consisted of 14 male participants (35% of the sample) and 26 female participants (65% of the sample), whereby gender division in the group of middle-aged adults was 6 male and 14 female participants, and 8 male and 12 female participants for the group of older adults. All the participants were healthy individuals free of any illness affecting their cognitive functioning.

2.2. Data-collecting procedures

A battery of 7 tasks was used to assess different cognitive abilities. The participants solved all tasks individually in the presence of a testing staff member; the paper and pencil method was employed. Most of the older adult testing took place in a retirement home and the rest was performed in the participants' homes. The testing of middle-aged adults took place in their work places – individually and during break time, or in their homes.

1. Short-term verbal memory: recalling a list of words (Repeatable Battery for the Assessment of Neuropsychological Status – RBANS, Randolph, Tierney, Mohr and Chase, 1998). The list consists of ten words, which the individual attempts to remember and then recall in any given order.

2. Short-term non-verbal/spatial memory: abstract figure with several elements (Repeatable Battery for the Assessment of Neuropsychological Status – RBANS, Randolph, Tierney, Mohr and Chase, 1998). Participants are first expected to observe a figure and then draw it according to memory.

3. Task-switching, planning: Trail making test (Arbuthnott and Frank, 2000). The task consists of parts A and B. In part A participants are expected to connect numbers in circles from 1 to 25, whereas part B consists of making alternating connections between numbers (from 1 to 13) and letters (from A to L). We measured the time required for executing both tasks.

4. Everyday problem 1: instructions for taking cough medicine (Everyday problems test, Willis, 1990). The task consists of written instructions for taking a cough medicine and two questions related to the instructions.

5. Everyday problem 2: a cookie recipe (Everyday Problems Test, Willis, 1990). This task also consists of written instructions followed by two questions, both of which related to the recipe.

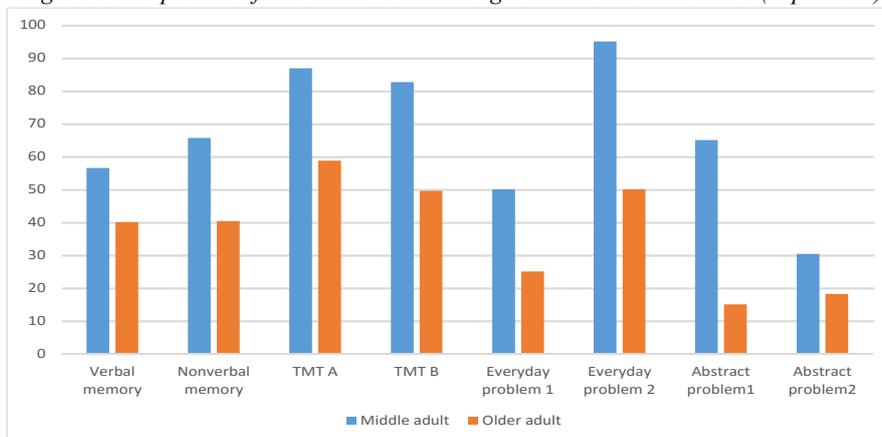
6. Abstract problem 1: The »water jug« problem (Atwood and Polson, 1976), a well-defined problem, which requires logical interpolation.

7. Abstract problem 2: »what would happen if ...« (Torrance, 1974), a problem which requires divergent production.

3. Results

Image 1 demonstrates the performance on all tasks in the sample of middle-aged and older adults. It is evident that middle-aged adults achieved better results in all tasks compared to older adults. The differences are particularly visible in the trail-making test and in abstract problem-solving, especially the abstract interpolation problem.

Figure 1. Comparison of task scores in middle-aged adults and older adults (in percents)



Note: The highest score in TMT test represents the best time (shortest time) and the lowest score represents the longest time.

The short-term verbal memory task was solved statistically significantly better by middle-aged adults when compared to older adults ($p = 0,016$). Extreme values in the group of middle-aged adults for solving the verbal memory task were $\text{min} = 3$, $\text{max} = 9$, and those in the group of older adults were $\text{min} = 2$, $\text{max} = 7$. Equally so, the task of short-term non-verbal memory was again solved statistically significantly better by the middle-aged adults compared to the older adults ($p = 0,001$). Extreme values in middle-aged adults for this task were: $\text{min} = 5$, $\text{max} = 15$, and $\text{min} = 3$, $\text{max} = 11$ in the group of older adults.

Table 1. Correlation between age and scores achieved in verbal and nonverbal memory task (** - significance level 0,01)

	1.	2.
1. Age	-	
2. Verbal memory	-0,483**	-
3. Nonverbal memory	-0,589**	0,298

Table 1 demonstrates the correlation coefficient between the scores achieved in the verbal memory task and age ($r = -0,483$) as well as the existing correlation between the results achieved in the non-verbal spatial memory task and age, which is $-0,589$.

Middle-aged adults achieved statistically significantly better results than older adults also in the trail-making task (executive functions testing). Middle-aged adults needed a minimum of 22s and a maximum of 55s to finish the task A, while older adults required a minimum of 39s and a maximum of 4 mins to complete the same task. Middle-aged adults finished the B task in a minimum time of 47s and a maximum time of 3 mins, while it took older adults a minimum of 1 min 10s and a maximum of 7 min 56s.

Table 2. Mean scores, standard deviation, t test for independent samples and Levene`s test for equality of variances for scores in everyday and abstract problem solving in middle-aged and older adults

	Age group	N	M	SD	Leven`s test for equality of variances		t-test for equality of means		
					F	Sig.	t	df	Sig. (2-tailed)
Everyday problem 1	Middle adults	20	1,00	0,80	0,00	1,00	2,13	38,00	0,04
	Older adults	20	0,50	0,69					
Everyday problem 2	Middle adults	20	1,90	0,31	19,19	0,00	4,41	38,00	0,00
	Older adults	20	1,00	0,86					
Abstract problem 1	Middle adults	20	0,65	0,49	9,16	0,00	3,66	38,00	0,00
	Older adults	20	0,15	0,37					
Abstract problem 2	Middle adults	20	4,85	3,22	6,66	0,01	2,60	38,00	0,01
	Older adults	20	2,90	0,97					

Middle-aged adults achieved statistically significantly better results in all problem-solving tasks when compared to older adults ($p < 0,05$), whereby the least significant difference was noted between the groups in the everyday problem task 1 (cough medicine).

Table 3. Correlation between scores on individual tasks (** - Significance level 0,01, * - significance level 0,05)

	1.	2.	3.	4.	5.	6.	7.
1. Verbal memory	-						
2. Nonverbal memory	0,30	-					
3. TMT A	-0,56**	-0,40*	-				
4. TMT B	-0,59**	-0,53**	0,92**	-			
5. Everyday problem 1	0,43**	0,27	*	-0,47**	-		
6. Everyday problem 2	0,40*	0,54**	-0,61**	-0,68**	0,40*	-	
7. Abstract problem 1	0,29	0,50**	-0,43**	-0,56**	0,20	0,45**	-
8. Abstract problem 2	0,30	0,40**	-0,31	-0,31	0,02	0,24	0,28

The results demonstrate a statistically significant correlation between the verbal and the non-verbal memory tasks on the one hand and the trail-making tests A and B on the other. Correlation coefficients between the short-term memory and the trail-making tasks were negative, which suggests that a better result achieved in the short-term memory tasks implies a shorter time required for the completion of the trail-making tasks and vice versa. The results in the short-term verbal memory task show a positive correlation with the results from both everyday problem-solving tasks, while the results achieved in the short-term non-verbal memory task attest to an existing correlation with results from both abstract problem-solving tasks and the everyday problem-solving task 2. Both trail-making tasks negatively correlate with the results achieved in the problem-solving tasks.

4. Interpretation

Middle-aged adults were generally better in all tasks in comparison to older adults. In terms of memory tasks, middle-aged adults were better at the non-verbal memory task in comparison to the verbal memory task, whereas older adults achieved roughly similar scores in both of the tasks. However, the difference between the older and the middle-aged group of adults is much bigger in the non-verbal memory task, which confirms the finding that verbal abilities are preserved further on into late adulthood in comparison to other abilities, especially to the spatial ability (Park et al., 2002).

In comparison to older adults, middle-aged adults were statistically significantly more successful at both trail-making tasks A and B. Several studies have demonstrated similar results (Salthouse et al., 2003).

Results have also demonstrated that middle-aged adults were statistically significantly better when compared to older adults at solving all problems apart from the everyday problem-solving task 1. The relevant difference between older and middle-aged adults in solving both of the abstract problem tasks indicates that older adults encounter greater difficulties when solving abstract problems in comparison to tackling everyday-life problems. The reason for poorer performance of older people in solving problems which require creative thinking may lie in greater rigidity of their thinking (Bakracevic Vukman, 2005).

Our results revealed that verbal memory performance shows stronger connection to success on everyday problems, whereas performance on non-verbal memory task was somewhat more related to abstract problem-solving. Both trail-making tasks negatively correlated with the results from the verbal and the non-verbal memory tasks as well as with the results from all the problem-solving tasks. The shorter time required for completing the TMT task (executive functions) therefore bears a connection with the effectiveness of short-term memory as well as with the success rate of solving everyday and abstract problems.

It is important, however, to remain cautious also with such conclusions, since factors additional to ageing may influence the results. Two groups may differ in terms of early educational histories, motivation, or other factors. Age-related differences in cognitive functioning may stem from various social and emotional factors, such as depression, stress or lower self-image (Cohen, 1988). A highly important factor that may also be additional reason for poorer cognitive performance in older adults is a decline in sensory abilities. Hence, one of the shortcomings of the present study is most certainly not having verified intelligence, cognitive reserve etc. in its participants. It would also be beneficial if the cognitive ability test was somewhat more substantial in terms of incorporating more tasks from the selected areas, which would subsequently render the test more reliable.

References

- Arbuthnott, K. and Frank, J. (2000). *Trail making test, part B as a measure of executive control: validation using a set-switching paradigm*. University of Regina, Canada.
- Bakračević Vukman, K. (2005). Developmental differences in metacognition and their connections with cognitive development in adulthood. *Journal of adult development*, 12 (4), 211-221
- Cavanagh, J. C. and Blanchard – Fields, F. (2011). *Adult development and aging*. Cengage Learning, Wadsworth, Belmont.
- Cohen, G. (1988). Memory and Aging. V M. M. Gruneberg, P. E. Morris in R. N. Sykes. *Practical Aspects of Memory: Current research and issues*. John Wiley&sons, Great Britain.
- Cornelius, S. W. and Caspi, A. (1987). Everyday Problem Solving in Adulthood and Old Age. *Psychology and aging*, 2 (2), 144 - 153.
- Eysenck, M. W. (1994). *The Blackwell Dictionary of Cognitive Psychology*. Oxford ; Cambridge, Massachusetts.

- Fournet, N., Roulin, J. L., Vallet, F., Beaudoin, M., Agrigoroaei, S., Paignon, A., Dantzer, C. and Desrichard, O. (2012). Evaluating short-term and working memory in older adults: French normative data. *Aging & Mental Health*, 16 (7), 922–930.
- Jenkins, L., Myerson, J., Joerding, J.A. and Hale, S. (2000). Converging evidence that visuospatial cognition is more age-sensitive than verbal cognition. *Psychology and Aging*, 15 (1), 157–175.
- Kelty-Stephen, D., G., Stirling, L. A. and Lipsitz, L. A. (2016). Multifractal Temporal Correlations in Circle-Tracing Behaviors Are Associated With the Executive Function of Rule-Switching Assessed by the Trail Making Test. *Psychological Assessment*, 28 (2), 171–180.
- Köstering, L., Stahl, C., Leonhart, R., Weiller, C. and Kaller, C. P. (2014). Development of Planning Abilities in Normal Aging: Differential Effects of Specific Cognitive Demands. *Developmental Psychology*, 50 (1), 293–303.
- Park, D. C., Lautenschlager, G., Hedden, T., Davidson, N. S., Smith Anderson, D. and Smith, P. K. (2002). Models of visuospatial and verbal memory across the adult life span. *Psychology and Aging*, 17 (2), 299-320.
- Randolph, C., Tierney, M.C., Mohr, E. and Chase, T.N. (1998). The Repeatable Battery for the Assessment of Neuropsychological Status (RBANS): Preliminary clinical validity. *Journal of Clinical and Experimental Neuropsychology*, 20 (3), 310–319.
- Salthouse, T. A., Atkinson, T. M. and Berish, D. E. (2003). Executive Functioning as a Potential Mediator of Age-Related Cognitive Decline in Normal Adults. *Journal of Experimental Psychology*, 132 (4), 566 – 594.
- Verhaeghen, P., Cerella, J., Semene, S.C., Leo, M. A., Bopp, K. L. and Steitz, D. W. (2002). Cognitive efficiency modes in old age: Performance on sequential and coordinative verbal and visuospatial tasks. *Psychology and Aging*, 17 (4), 558–570.
- Willis, S. L. (1990). *Everyday problems test*. State University, Pennsylvania.

DIFFERENT STREAMS IN TIME RIVER: RELATIONSHIP BETWEEN TOP-DOWN AND BOTTOM-UP TEMPORAL OBJECT-BASED ATTENTION

Jingjing Zhao, Qi Chen, Mengge Tan & Yonghui Wang*

School of Psychology, Shaanxi Normal University (China)

Shaanxi Provincial Key Laboratory of Behavior & Cognitive Neuroscience (China)

**Correspondence to: Yonghui Wang, School of Psychology, Shaanxi Normal University (China)*

Abstract

The current study examines the role of multi-model object-based effect on the allocation of top-down and bottom-up temporal object-based attention. Specifically, we were interested in situations in which concurrently presented top-down and bottom-up objects correspond temporally, and situations in which concurrently presented top-down and bottom-up objects conflict temporally. The Experiments 1 and 2 verify that the object-based effect initiated by top-down or bottom-up object was covered by participants' expectations in a modified two-rectangle paradigm. Basing on the Experiments 1 and 2, the Experiment 3 arranges top-down objects and bottom-up objects congruously, finding that response time was faster when targets were within the same object as the cue, verifying that the object-based effect occurred. This result indicated that when top-down and bottom-up information was congruent in an object, object-based effect was more effective than that in the top down-only or bottom up-only condition. In Experiments 4A and 4B, participants were presented with temporally conflicting top-down and bottom-up objects. Participants responded to targets that were within the temporal structure of either the top-down or bottom-up object. Response times were faster when target presented within the top-down object compared to the bottom-up object. Overall, this work suggests that when top-down and bottom-up objects do not share the same temporal structure, the attentional system favors the top-down parameters of the visual object.

Keywords: *temporal object-based effect, top-down process, bottom-up process.*

1. Introduction

A large body of literature on visual attention has amplified interest in how discrete objects that are present in the environment might guide selection and allocation of attention. The perspective has gained ground after several studies demonstrated that two or more features belonging to a single object are identified more quickly and more accurately than features belonging to different objects, even when the different objects are superimposed spatially (Duncan, 1984); this is called an object-based effect or benefit. This effect has been demonstrated in both the spatial (e.g., Egly, Driver, & Rafal, 1994) and temporal (De Freitas, Liverence, & Scholl, 2014) domains. Recently, there has been amplified interest in how might objects inform the allocation of attention across time.

Behavioral evidences have showed that temporal objects have the potential to entrain attentional processes, such that attention is enhanced at expected points in time (De Freitas et al., 2014). However, there are three possible shortcomings of the existing studies.

First, the temporal objects used in De Freitas et al. (2014) were normed musical rhythms. Given auditory attention is known to have superior temporal resolution compared to visual attention (e.g., Grondin, Meilleur-Wells, Ouellette, & Macar, 1998), it is unknown whether or not temporal object-based attention can be found in visual stimulus. And whether top-down or bottom-up processed objects can guide attentional allocation also need further study.

Second, it has been established that spatial object may affect the allocation of attention in a general manner, across multiple models (Liu, Wang, & Zhou, 2011; Shomstein & Behrmann, 2008; Zhao, Wang, Liu, Zhao, & Liu, 2015). That is, no matter the top-down and bottom-up objects were jointly presented or competitive with each other, attention deployment will tend to be influenced more by the object representation that has a higher strength. Furthermore, a large number of behavioral research have demonstrated that different mechanisms can contribute to spatial and temporal attention (e.g., Doherty,

Rao, Mesulam, & Nobre, 2005; Mackay and Juola, 2007). It makes inherent sense that the attentional system would differentially, at least partially differentially allocate attention based on temporal expectation.

Third, often, we are faced with a multitude of potential top-down and bottom-up information at a given point in time—any number of which may have object components. However, to date, research on the temporal object-based effect on the allocation of attention has focused on the effect of a single type of object on the allocation of attention. Thus, in order to explore more completely the processes behind temporal object-based attention, we must investigate the interplay between multiple, cross-model objects (both temporally corresponding and temporally conflicting).

The focus of the current work is to determine how top-down and bottom-up objects affect the allocation of attention across time using both temporally corresponding and temporally conflicting models. In Experiments 1 and 2, the effect of bottom-up and top-down objects on the allocation of attention was respectively examined. Experiments 3 examined the corresponding object-based effect on the allocation of attention by jointly presenting top-down and bottom-up objects. Experiments 4A and 4B explored the competing object-based effect on the allocation of attention by conflictingly presenting top-down and bottom-up objects.

2. Method

2.1. Participants

Eighty students (ages 17-25 years, mean age = 20.20) took part in the experiments. All of them were right-handed and had normal or corrected-to-normal visual acuity and color vision. All were naive as to the purposes of the experiment. Participants received an experimental fee for participation.

2.2. Apparatus and materials

Participants were tested individually in a dim and quiet room. All stimuli were presented on a 17-in. CRT monitor viewed at a distance of 57 cm. A custom keyboard was used to collect button-press responses. The screen resolution was set to 1,024×768 pixels, and the monitor had a refresh rate of 60-Hz (16.67-ms).

Displays in Experiment 1 consisted of red or blue square subtending $0.9^\circ \times 0.9^\circ$ on a gray background in the center of the screen. On each trial, the stimuli were four red squares and four blue squares which appeared one at a time. Squares of the same color were continuously presented. The order of presentation of colors was counterbalanced across subjects. The outlines surrounding the squares were turned into black during the presentation of the cue and white or green during the presentation of the target. The target appeared with equal frequency at each of the two colors.

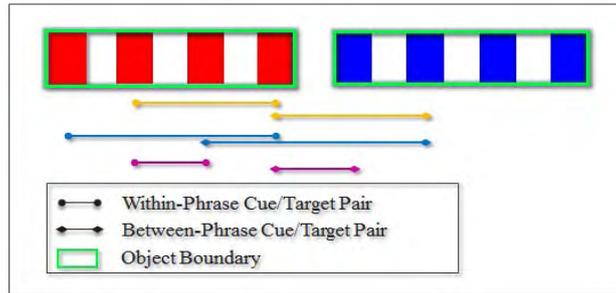
Displays in Experiment 2 consisted of black Chinese characters subtending $0.8^\circ \times 0.8^\circ$ on a gray background in the center of the screen. On each trial, the stimuli were two identical Chinese idioms (Chinese four-character words) “兴师动众” (selectmen) which appeared one character at a time. The frequency of this idiom was 13 per million words. All of the characters had 6 strokes in writing, with an average frequency of 546.57 (range, 157.34–1,051.94) per million characters. Radicals and word frequency had been counterbalanced between same-object and different-object conditions. None of the characters other than all of the four characters constituted a word. A character was turned into white during the presentation of the cue and red or blue during the presentation of the target.

Displays in Experiments 3 and 4 consisted of two identical Chinese idioms “兴师动众” in red or blue squares which appeared one character and one square at a time. The cue and the target were the same as that in Experiments 1 and 2.

2.3. Design and procedure

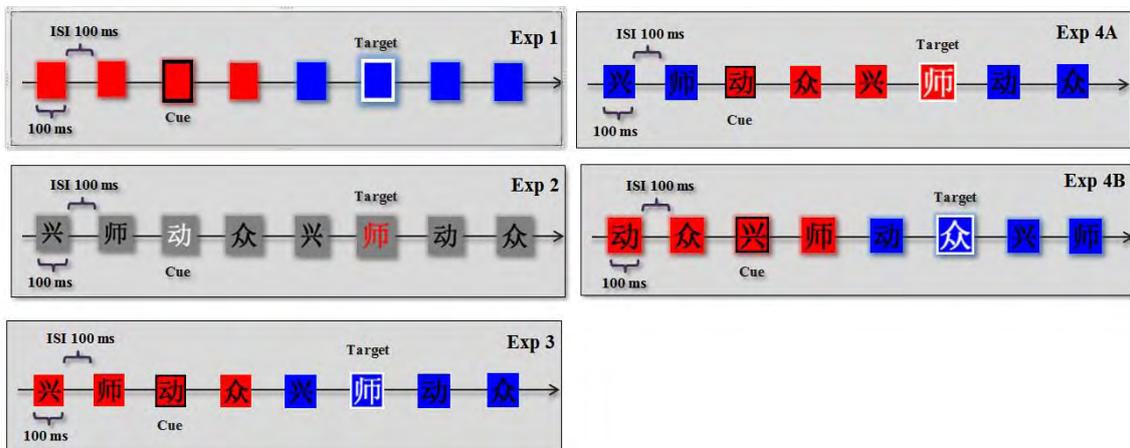
A 2×3 factorial design was used, with cue-target relation (same-object or different -object) and cue-target SOA (200, 400 or 600 ms) as within-subjects factors. The cue and target were considered within the same object if they occurred within a same color scope (Experiments 1, 3 and 4B) or in a same idiom and within different objects (Experiments 2, 3 and 4A) if they spanned an object boundary. Onset of the cue was randomly counterbalanced to occur equally often in Positions 1 through 4 in the stimulus stream. The delay between the cue and target was manipulated over 3 levels. Each of the six combinations of conditions occurred equally often. The exact timings of cues and targets are depicted in Figure 1 by rounds and diamonds (objects in Experiment 1, for example).

Figure 1. The objects used in Experiment 1. The green boxes indicate the object boundaries as defined intuitively in the design of the experiment. The rounds indicate the three possible same-object cue/target pairs, and the diamonds indicate the three possible different-object cue/target pairs, with matching colors indicating matched pairs in terms of brute duration



On each trial, subjects saw a stimulus stream composed of one instance of four red and four blue squares (Experiments 1, 3 and 4B) or two black idioms (Experiments 2, 3 and 4A). Each square or character was presented for 100 ms and was followed by a 100-ms blank (see Fig. 2). When a cue or a target appeared, it was shown for 100 ms, after the target, there was a blank screen for the participants to respond. The participants were instructed to respond to the colors by using their index or middle finger to press one of the two designated keys on the keyboard (the “Z” key if the target was white or red, and the “M” key if the target was green or blue). Each trial end with the gray background presented for a 1,000-ms intertrial interval (ITI). Each participant completed one 24-trial practice block and four blocks of 60 experimental trials in each experiment respectively, with short breaks in between. Each entire experiment took approximately 15 min to complete.

Figure 2. Sequence of events in a single trial (cue-target relation = between-object; SOA = 600 ms) in Experiments 1-4



3. Results

Figure 3 showed the RTs in Experiments 1-4. For analysis of reaction times, trials in which the participant made an error and reaction times that exceeded the participant’s mean by more than three standard deviations were excluded from analysis. The remaining RTs were entered into a 2×3 repeated measurements ANOVA within-participants factors cue-target relation (same-object or different -object) and cue–target SOA (200, 400 or 600 ms).

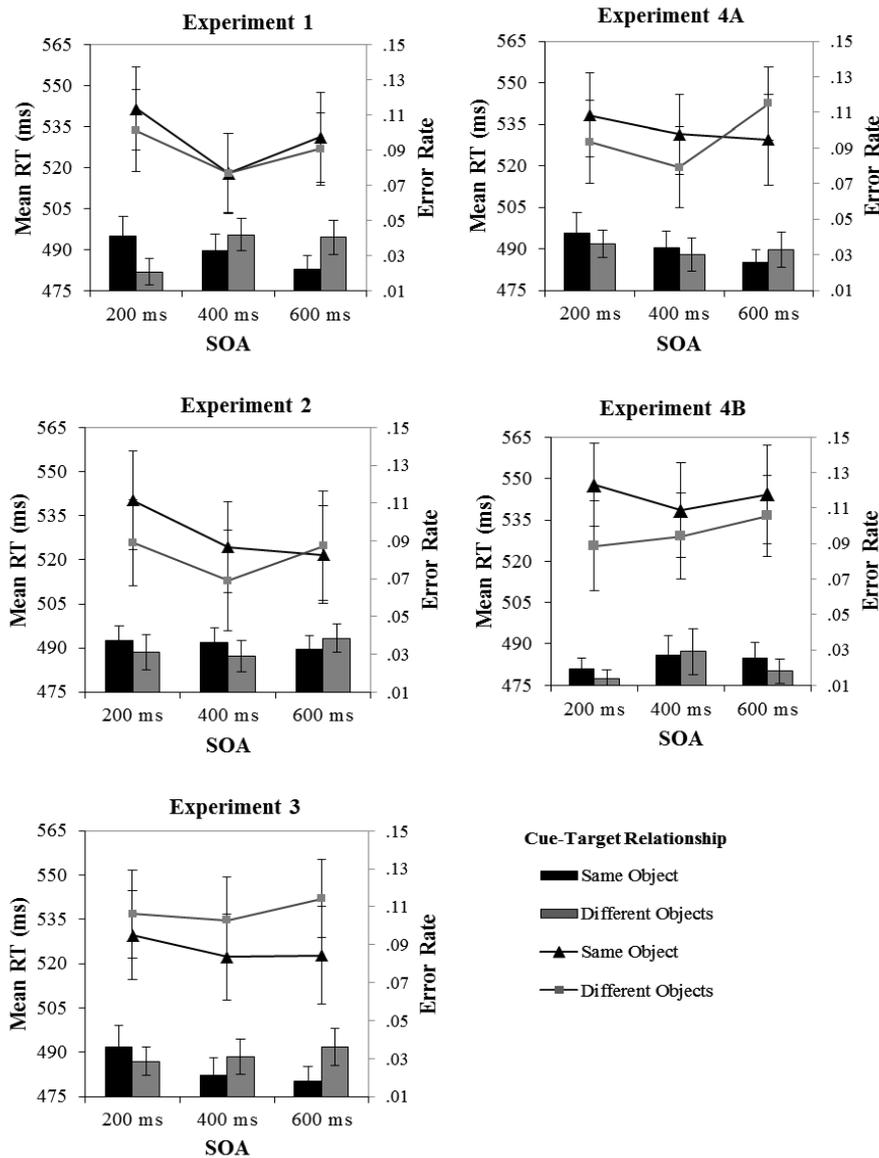
In Experiment 1, the only significant effect was SOA [$F(2, 38) = 12.32, p < .001, \eta_p^2 = .39$]: RTs for 400 ms SOA condition were faster than those for 200 ms SOA condition and 600 ms SOA condition. The difference of 8 ms between 200 ms SOA and 600 ms SOA trials was not significant. No other effects or interactions reached significance.

In Experiment 2, the ANOVA revealed a marginally significant main effect of SOA [$F(2, 38) = 3.01, p = .06, \eta_p^2 = .14$]: RTs for 400 ms SOA condition were faster than those for 200 ms SOA condition. There was no significant difference in RTs between 400 ms and 600 ms SOA conditions or 200 ms and 600 ms SOA conditions. The main effect of relation was also significant [$F(1, 19) = 5.96, p < .05, \eta_p^2 = .24$]: RTs for different objects condition were faster than those for same-object condition. More

importantly, the interaction between SOA and relation was also significant [$F(2, 38) = 3.13, p = .05, \eta_p^2 = .14$]. Further analysis of this interaction effect indicated that RT difference between same-object and different-object trials was significant in the 200 ms SOA condition [$t(19) = -2.55, p < .05, d = 0.57$] and in the 400 ms SOA condition [$t(19) = -2.32, p < .05, d = 0.52$], but not in the 600 ms SOA condition [$t(19) = .55, p > .05, d = 0.12$].

Forty additional subjects (mean age 22.4 years) were asked to perform a task similar to that in Experiments 1 and 2, except that no cues were presented. The results showed that RTs were faster in different objects condition than that in same object condition [$F(1, 19) = 31.19, p < 0.001, \eta_p^2 = 0.62$] [$F(1, 19) = 15.55, p = 0.001, \eta_p^2 = 0.45$]. These findings verified that the object-based effect initiated by top-down or bottom-up object was covered by participants' expectations.

Figure. 3 Mean correct reaction times and error rates in Experiments 1-4. Error bars indicate the standard errors of the means



In Experiment 3, the only significant effect was relation [$F(1, 19) = 5.99, p < .05, \eta_p^2 = .24$]: RTs for same-object condition were faster than those for different objects condition. No other effects or interactions reached significance. A $3 \times 2 \times 3$ ANOVA was conducted, with Experiment (Experiments 1, 2 and 3) as between-subjects factor. The main effect of relation was not significant. But the interaction between Experiment and relation was significant [$F(2, 57) = 7.30, p < 0.01, \eta_p^2 = 0.20$].

In Experiment 4, the main effect of relation was not significant ($F(1, 19) < 1$) in Experiment 4A, but it was significant [$F(1, 19) = 18.37, p < 0.001, \eta_p^2 = 0.49$] in Experiment 4B. Two $2 \times 2 \times 3$ ANOVA

was conducted, with Experiment (Experiments 2 and 4A or Experiments 1 and 4B) as between-subjects factor. The main effect of relation was significant [$F(1, 38) = 4.58, p < 0.05, \eta_p^2 = 0.11$] [$F(1, 38) = 13.80, p = 0.01, \eta_p^2 = 0.27$]: RTs for different objects condition were faster than those for same-object condition. The interaction between Experiment and relation was not significant in the first ANOVA, indicating that the top-down objects were not affected by the interference from bottom-up objects. The interaction was significant in the second ANOVA [$F(1, 38) = 3.87, p = 0.05, \eta_p^2 = 0.10$], indicating that the bottom-up objects were indeed affected by the interference from top-down objects.

An analysis of the error rates revealed no significant effects or interactions, and was not exhaustively reported here.

4. Discussion

The results from our Experiment 1-4 showed that a) temporal object-based attention can be found in visual stimulus. And top-down or bottom-up processed objects can guide attentional allocation in time; b) when top-down and bottom-up objects were jointly presented, object-based effect was more effective than that in the top down-only or bottom up-only condition and c) when these two types of objects were competitive with each other, attention deployment will tend to be influenced more by top-down objects. These results were inconsistent with that in spatial objects. The reason may be that temporal object, which are defined roughly as the temporal regularities, results in a series of attentional pulses that are gradually maximized at expected points in time. The entrainment of an attentional pulse results in anticipatory attending for target occurrences within the attending temporal object. Target onsets that occur outside of the anticipatory attending window (as defined by temporal object) result in reactive attending. This distinction can be considered as the difference between a stimuli occurring within versus out of the attending temporal object. The stronger the representations of temporal object, the narrower the focus of attention is for target occurrence. That is, the precision of the window for a target onset to be considered within versus between objects is determined by the strength of the temporal object.

Acknowledgments

This study was supported by a grant from Natural Science Foundation of China (31371026) to Yonghui Wang.

References

- De Freitas, J., Liverence, B. M., & Scholl, B. J. (2014). Attentional rhythm: A temporal analogue of object-based attention. *Journal of Experimental Psychology: General, 143*(1), 71-76.
- Doherty, J. R., Rao, A., Mesulam, M. M., & Nobre, A. C. (2005). Synergistic effect of combined temporal and spatial expectations on visual attention. *The Journal of neuroscience, 25*(36), 8259-8266.
- Duncan, J. (1984). Selective attention and the organization of visual information. *Journal of Experimental Psychology: General, 113*, 501–517.
- Egly, R., Driver, J., & Rafal, R. D. (1994). Shifting visual attention between objects and locations: Evidence from normal and parietal lesion subjects. *Journal of Experimental Psychology: General, 123*, 161–177.
- Grondin, S., Meilleur-Wells, G., Ouellette, C., & Macar, F. (1998). Sensory effects on judgments of short time-intervals. *Psychological Research, 61*(4), 261-268.
- Liu, D., Wang, Y., & Zhou, X. (2011). Lexical-and perceptual-based object effects in the two-rectangle cueing paradigm. *Acta Psychologica, 138*(3), 397–404.
- MacKay, A., & Juola, J. F. (2007). Are spatial and temporal attention independent?. *Perception & Psychophysics, 69*(6), 972-979.
- Shomstein, S., & Behrmann, M. (2008). Object-based attention: Strength of object representation and attentional guidance. *Perception & Psychophysics, 70*, 132–144.
- Zhao, J., Wang, Y., Liu, D., Zhao, L., & Liu, P. (2015). Strength of object representation: its key role in object-based attention for determining the competition result between Gestalt and top-down objects. *Attention, Perception, & Psychophysics, 77*(7), 2284-2292.

REM SLEEP IMPROVES DEFENSIVE FLEXIBILITY

Ingegerd Carlsson, Jan Samuelsson & Per Davidson

Department of Psychology, Lund University (Sweden)

Abstract

To think flexibly in a situation of challenge or threat is an important ability. This study hypothesized that flexibility would improve after sleep, particularly for those who got into REM sleep, since REM has been found important for higher mental functions and flexibility. In a between-subjects design with random conditions Sleep and Rest, participants ($N = 69$, mean age 23.9 years) slept in the day for (a maximum of) 120 minutes (or rested 90 m.). Sum of categories in a perceptual process test of defensive strategies constituted the measure of defensive flexibility, previously found related to creativity (Carlsson, 2002). Scoring was double-blind with two raters. An ANOVA showed a significant group difference ($F(2, 61) = 4.26, p = .019$). T-tests showed that the REM group ($n = 35$), compared to the Rest group ($n = 16$), had significantly higher flexibility ($p < .01$), while a comparison with the No-REM group ($n = 13$) showed a tendency. The No-REM and Rest groups did not differ. The importance of the REM stage for defensive flexibility was discussed. Future studies should test the flexibility also before sleep, since flexibility might be related to more REM in the sleep architecture.

Keywords: *day-time sleep, defense strategies test, defensive flexibility, perceptual process, REM sleep.*

1. Introduction

1.1. Aim

It was concluded by Pace-Schott and Hobson (2003) that the differentiation of sleep is a function of brain differentiation, which indicates functional links between sleep and other brain functions. One important cognitive function is flexibility, contributing to higher intellectual functions, and which may get restored by sleep. The present study aimed to see if flexibility would improve after sleep and especially after REM sleep, since REM sleep has been found amenable to flexibility (Walker, Liston, Hobson, & Stickgold, 2002).

1.2. Psychological functions of sleep and REM sleep

Sleep in general has been shown important for human cognition, for instance memory processing and consolidation (Hobson & Pace-Schott 2002; Maquet, Peigneux, Laureys, Desseilles, Boly, & Dang-Vu, 2003). Hobson and Pace-Schott (2002) argued that the Non-REM- and REM-stages interact. New memory traces from the waking state first get stored during active “off-line” Non-REM sleep and may get reactivated during REM sleep. During this hyper associative stage they get associated with other, previously stored, memories. For a review on sleep-dependent memory consolidation, see Diekelmann, Wilhelm, and Born (2009). Diekelmann et al. (ibid.) suggested that patterns of emotional arousal that are induced during learning via amygdale circuitry may become reactivated during REM sleep, thereby strengthening memory and connectivity within hippocampo-neocortical networks. REM sleep has been found important for emotional memory consolidation, when studied in animals, as related in Nishida, Pearsall, Buckner, and Walker (2009).

From another theoretical angle, Revonsuo (2000) earlier proposed that the REM stage evolved as a simulator to prepare for future threats, while Kramer (2007) viewed the REM stage as an emotion regulator.

A problem in certain studies of the functional significance of different sleep stages is that people may be differently sleepy when woken up in different sleep stages during the night. To avoid such problems, researchers have used designs with naps during the day. For instance, the restorative function of naps has been investigated (Mednick, Nakayama, Cantero, Atienza, Levin, Pathak, & Stickgold, 2002). In a study on humans using a nap design, amount of REM sleep was significantly related to memory consolidation of emotional items (Nishida et al, ibid). In another study (Payne, et al 2015) that investigated how information is coded and selected in memory, it was shown that a nap in the afternoon

improves the selection of useful emotional memories. Further, they claimed having preliminary evidence that a nap and a night's sleep are equal when it comes to the ability to select between emotional memories. Further, in a nap design, Carr and Nielsen (2015) showed an advantage for REM over NREM on a word association test using positive and negative words primed before sleep, but not for non-primed words.

1.3. Defense mechanisms

In modern psychodynamic theory for example Vaillant (2001) accentuates the double nature of the defense mechanisms. On one hand they occur automatically without our willing it and they distort reality as well as the relation between emotions and thoughts. But they also can contribute to creative syntheses and mature over time; thus they get adaptive rather than destructive. The defenses indicate that the mind has an adaptive response and a fully functioning brain. Defenses not only shield us from reality but enable us to adapt to it. Also Caligor and Clarkin (2010) claim that although defenses may result in a rigid personality and have effects on cognitive processes with negative results, they not always lead to strongly disruptive or pathological behavior. Benjamin (1995) even argues that defenses support the normal functioning in the individual and improve social relations. A way to understand the double nature is in degree of immaturity. Auchincloss (2015) as well as Vaillant, divide the defenses into groups according to how mature they are. According to Auchincloss, mature defenses, such as humor, sublimation or suppression, imply little cost for the ego functions. Neurotic defenses imply more distortion, such as displacement, idealisation, introjection, isolation of emotion, projection, and rationalising. Primitive defenses are for instance denial, projective identification, splitting and somatisation.

1.4. A perceptual process test of defense strategies

That the perception is the end-result of a very rapid, normally unconscious, construction process was suggested a century ago by Heinz Werner. This was point of departure for the so-called percept-genetic model (For a recent overview, see Smith & Carlsson, 2008). One of the principles in this frame-work is that when a perceptual process gets experimentally prolonged, this enables normally subconscious stages in the construction process to get visually reconstructed and verbally reported (an everyday comparison is when bushes seen vaguely in the evening at first are misperceived as something else). For recent overviews of research done within this frame-work, see Smith (2001) and Smith and Carlsson (ibid).

When coupled with the psychoanalytic theory of anxiety and defense, this principle resulted in a perceptual process test of defense strategies, developed in the early 60-ies for clinical diagnostics (Nyman & Smith, 1961; Smith & Johnson, 1961). Test validity and reliability were studied in many investigations from various clinical and non-clinical groups. A few examples are Hagberg (1973); Lilja, Smith, and Salford (1992); and Smith and Johnsson (1997). Since groups from the age 4-5 years and upwards have been studied, defense strategies occurring in normal childhood can be discerned. Two monographs compiling studies in clinical and normal groups are Smith and Carlsson (1990) and Smith and Danielsson (1982).

In this process test thus a person's defense strategies get measured in experimentally controlled conditions. Defensive strategies have earlier been found related to creativity in several studies, one of them investigating defensive flexibility (Carlsson, 2002). It therefore was deemed well suited for the present study.

1.5. Hypotheses

The following hypotheses based on previous research were formulated.

H1. A group that gets into REM sleep will have more defensive flexibility than a No-REM group or a group that is resting.

H2. A No-REM group will have more defensive flexibility than a group that is resting.

2. Method

The data collection was made within a larger project about sleep, creative problem solving and creativity (preliminary reported in Carlsson et al, 2014). As a control in the present study, the group means on a state and trait anxiety questionnaire are included in the results.

2.1. Participants and procedure

Participants ($N = 69$, mean age 24; 36 women) were university student at a Swedish university. Five people were excluded due to problems with the sleep recording. Information was given beforehand

on overall aim, anonymity, voluntariness and written consent. The project was approved by the local ethics committee. Everyone got lunch and the equivalent of approx. 55 Euros. They were screened for relevant medicines and required not to drink any alcohol or caffeine during 24 hours before testing and having slept no less than 6 hours on average per night during the preceding week. Debriefing was made immediately after the final testing.

The participant was informed on arrival about sleep or rest condition. The testing began 10.30 with tests unrelated to this study. Then the participant got lunch, followed by sleep (maximum 120 minutes), or rest (max 90 min., in upright position, listening to instrumental music, and checked for not sleeping). The sleep participant was equipped with a portable Sleep EEG apparatus (EMBLA) by hospital sleep laboratory staff, who also analysed the sleep data (Somnologica program). After sleep / rest followed a few forms and tests. The last one was the defense strategies test.

2.2. The defense strategies test

Defensive flexibility was calculated from data in the Meta-Contrast Technique, a perceptual process test of defense strategies. For all technical and laboratory specifications and full reference list, see the latest MCT manual (Smith, Johnson, Almgren, & Johanson, 2002). The computerized MCT uses two visual stimuli, a neutral picture and a threatening picture, both shown in series of rapid exposures on a TV screen.

Neutral series and defense series. Described briefly, the test procedure starts with a neutral series that stabilizes the perception of the neutral picture (a neutral person sitting behind a table with a window beside). The testing continues into the defense series. In this series both pictures are shown, the neutral always coming a few milliseconds after the threat (which depicts a monster-like face with big teeth). The neutral picture thus acts as a back-ward mask of the threat picture, in order to prolong the perceptual process of the threat. The neutral is exposed at a fixed time level. The threat picture initially is shown a few milliseconds and its exposure time is prolonged in a standardized way. The testing stops when the participant has reported the threat picture correctly according to the manual.

Scoring. The defense series enables the scoring of behavior and (foremost) verbally reported interpretations of the pictures. The manual lists types of interpretations scored as defense strategies. It contains 6 major defensive categories, namely repression, isolation, projection, regression, self-referential, and depression. Each major category includes sub-levels, from very immature, behavioral defense levels (one example is when a small child puts the hands on the screen trying to encircle the threat), to symbolic transformations of the threat (report of a lifeless object such as a stone, a white covering curtain, etc., is seen in the window).

Defensive flexibility. The protocols had code numbers and were scored by two independent raters, blind to group and sleep data. For the defensive flexibility variable, it was sufficient to get one point for defensive strategy in a major category, thus a score from 0 to 6 was calculated.

3. Results

A control for state and trait anxiety. Measured after sleep or rest, the state and trait anxiety questionnaire (Spielberger et al., 1983) showed that all groups were similar. The state anxiety mean range was from 34.0 in the REM group to 35.8 in the Rest group. The trait mean ranged from 37.8 in the REM group, to 39.5 in the Rest group.

3.1. REM and No-REM descriptives

Total group mean for time in sleep was 82 minutes ($SD = 24.82$). Thirty-five participants got into REM sleep. Their total sleep mean was 91 minutes ($SD = 16.85$) and their REM mean was 15.5 min. ($SD = 9.67$). The No-REM group contained 13 people, with a sleep time mean of 59 min. ($SD = 28.5$).

3.2. Defensive flexibility

The range in defensive flexibility was from 1 (11 participants) to 5 (4 participants). Total group mean was 2.6 ($SD = 1.11$).

Mean defensive flexibility. In the REM group the mean for defensive flexibility was 2.9 ($SD = 1.10$); in the No-REM group 2.2 ($SD = 1.19$) and in the Rest group it was 2.0 ($SD = 0.89$).

Analysis of group differences. An ANOVA showed a significant group difference ($F(2, 61) = 4.26, p = .019$). Subsequent t-tests showed that the REM group had higher defensive flexibility than the Rest group ($t = 2.81, p = .007$). The REM group tended to be higher than the No-REM group ($t = 1.61, p = .115$). The NREM and Rest groups did not differ ($t = .83, p = .415$).

4. Discussion

The results partly supported hypothesis one, since the REM group had significantly more defensive flexibility than the group that did not get any sleep. However, REM group flexibility only tended to be higher than in the group that slept without REM sleep. The results did not support hypothesis two, since the No-REM and rest groups did not differ.

To our knowledge the study is the first that investigates the sleep architecture in relation to defensive flexibility. According to Revonsuo (ibid), the REM stage functions a threat simulator, which may imply that new information gets processed and integrated in the REM sleep, resulting in a refreshed, more flexible mind after sleeping with REM. In the present study the REM group tended to be more flexible than the No REM group, thus gave inconclusive support to Revonsuo.

Hobson and Pace-Schott proposed that REM and Non-REM sleep interact, thus the entire sleep cycle ought to be most conducive to higher mental functions. However, although the present study points in this direction, the REM group which got a whole sleep cycle was only marginally more flexible than the No-REM group. It is a limitation in the study that the No-REM group only collected thirteen participants; a larger group would have made the results more reliable.

Sleep and naps are generally restorative. Earlier studies have shown that being woken up in the REM stage was conducive for cognitive flexibility, which is in line with REM sleep being strongly associative. Also, the value of REM for problem solving and as restoration have been shown. The present results did not support that a nap in general can improve defensive flexibility after sleep, only if it included REM sleep. However, it could be the case that the present No-REM group would have got higher on well-being than the group without sleep. A well-being test may be a more general measure, involving that the body feels restored. This may be accomplished without REM sleep, but was unfortunately not tested.

Another limitation in this study was that the participants were not pre-tested for defensive flexibility, thus there was no flexibility baseline to control for individual differences. It is possible that individual differences in the personality are related to differences in the sleep architecture. Several studies have shown trait-like differences in the distribution of the sleep stages, including the REM stage (for example Tan, Campbell, & Feinberg, 2001). A proneness for an associative state in the waking state might entail a proneness for REM sleep too. However, the trait and state anxiety measures were similar in the present groups, indicating that trait differences were not large. Since all participants were university students, this also contributed to homogeneity.

According to Auchincloss (2015), analysts today have broadened the manifest dream concept to include defensive modes of functioning revealed in the dream, in replacement of the Freudian concept of a dream censor "holding away" unacceptable latent dream thoughts. Empirically, Yu (2011) investigated a large cohort regarding connection between dream intensity and various defense mechanisms. The results showed that repression as a personality trait was inversely coupled to dream intensity. Thus, the more repression the less nightmares and multiple dreams during the night, and the person was moreover less aware of the dreams. Beside this, it indicated that the more repressive style, the less of splitting and immature defense.

The results in Yu (ibid) are interesting to compare to the repressor concept (Weinberger, Schwartz, & Davidson, 1979). In a previous study repressors, high trait and low trait anxiety groups were tested with the MCT (Carlsson & Neuman, 2008). In that study the repressors showed significantly more immature MCT defenses compared to low- and high trait anxiety groups. Repressors furthermore remembered fewer dreams. It was argued by Carlsson and Neuman that a predominance of immature defense contributes to being less open to subconscious processes, possibly resulting in low flexibility, flexibility was however not analyzed in Carlsson and Neuman. In the present study we did not analyze the MCT data regarding the distinction between immature and mature defenses, which will be of interest in a future study. However, having defensive flexibility means you are not "stuck" in only one way of perceiving the world. Most likely this is adaptive in the sense described by Vaillant (ibid) and others.

References

- Auchincloss, E. L. (2015). *The psychoanalytic model of the mind*. Washington DC: American Psychiatric Publishing.
- Benjamin, L.S. (1995). Good defences make good neighbors. I H. R. Conte & R.Plutchik (eds.), *Ego defenses: theory and measurement*. (p. 54). USA: John Wiley & sons, Inc.
- Caligor J. F, & Clarkin G.O. (2010). An object relations model of personality and personality pathology. In J.F.

- Clarkin, P. Fonagy & G. O. Gabbard (eds.), *Psychodynamic psychotherapy for personality disorders* (p. 21-22). Washington: American Psychiatric Publishing Inc.
- Carlsson, I. (2002). Anxiety and flexibility of defense related to high or low creativity, *Creativity Research Journal*, 14, 3-4, p. 341-349.
- Carlsson, I. & Neuman, F. (2008). Mature and immature defenses. A study of repressors and trait anxiety groups. In G. Smith and I. Carlsson (Eds.), *Process and Personality. Actualization of the personal world with process-oriented methods* (pp. 128-141). Frankfurt: Ontos Verlag.
- Carlsson, I., Davidson, P., Ors, M., Mednick, S., Jansson-Fröjmark, M. & Tellhed, U. (2014). *The importance of the rapid eye movement sleep stage for creativity and for creative problem solving*. Porto: Bial Foundation.
- Carr, M. & Nielsen, T. (2015). Morning REM sleep naps facilitate broad access to emotional semantic networks. *SLEEP* 2015;38(3), 433-443.
- Diekelmann, S., Wilhelm, I., & Born, J. (2009). The whats and whens of sleep-dependent memory consolidation. *Sleep Medicine Reviews*, 13, 309-321.
- Hagberg, B. (1973). A prospective study of patients in chronic hemodialysis. *Journal of Psychosomatic Research*, 18, 151-160.
- Hobson, J.A. & Pace-Schott, E. F. (2002). The cognitive neuroscience of sleep: neuronal systems, consciousness and learning. *Nature Reviews*, 3, 679-693
- Kramer, M. (2007). *The dream experience*. New York: Routledge.
- Lilja, Å., Smith, G.J.W., & Salford, L. (1992). Microprocesses in perception and personality. *Journal of Nervous and Mental Disease*, 180, 82 – 88.
- Maquet, P., Peigneux, P., Laureys, S., Desseilles, M., Boly, M. & Dang-Vu, T. (2003). Off-line processing of memory traces during human sleep: Contribution of functional neuroimaging, *Sleep and Biological Rhythms*, 1, 75-80.
- Mednick, S. C., Nakayama, K., Cantero, J. L., Atienza, M., Levin, A. L., Pathak, N., & Stickgold, R. (2002). The restorative effect of naps on perceptual deterioration. *Nature Neuroscience* 5 (7), 677-681.
- Nishida, M., Pearsall, J., Buckner, R.L., & Walker, M.P. (2008). REM sleep, prefrontal theta, and the consolidation of human emotional memory. *Cerebral Cortex*, 19, 1158-1166.
- Nyman, G. E & Smith, G. J. (1961). Experimental differentiation of clinical syndromes within a sample of young neurotics. *Acta Psychiatrica Scandinavia* 37, p. 14-31.
- Pace-Schott, E.F., & Hobson, J. A. (2002). The neurobiology of sleep: Genetic, cellular physiology and subcortical networks. *Nature Review Neuroscience*, 3, 591-605.
- Payne, J. D., Kensinger, E. A., Wamsley, Erin J., Spreng, R. N., Alger, S.E., Gibler, K. Schacter, D. L. & Stickgold, R. (2015). Napping and the selective consolidation of negative aspects of scenes. *Emotion*, 15 (2), 176-186.
- Revonsuo, A. (2000) The reinterpretation of dreams: An evolutionary hypothesis of the function of dreaming. *Behavioral and Brain Sciences*, 23, 793-1121.
- Smith, G. J. W., & Carlsson, I. (1990). The creative process. *Psychological Issues, Monograph 57*. New York: International Universities Press.
- Smith, G.J.W., & Carlsson, M. I. (Eds.) (2008). *Process and Personality. Actualization of the personal world with process-oriented methods*. Frankfurt: Ontos Verlag.
- Smith, G. J. W., & Danielsson, A. (1982). Anxiety and defensive strategies in childhood and adolescence. *Psychological Issues, Monograph 52*. New York: International Universities Press.
- Smith, G. J. & Johnson, G. (1961). The stability of pathological signs into the perceptual process as revealed by a serial tachistoscopic experiment. *Scandinavian Journal of Psychology* 2. p. 142-148.
- Smith, G. J. W., Johnson, G., Almgren, P-E. & Johanson, A. (2002). *MCT-manual*. Lund: Department of psychology / Lund university. Sweden.
- Smith, G.J.W. & Johnsson, P. (1997). To understand psychosomatic illness: The concept of alexithymia and microprocess frame of reference. *Psychoanalysis and Contemporary Thought*, 20, 449-470.
- Spielberger, C. D., Gorssuch, R. L., Lushene, P. R., Vagg, P. R., & Jacobs, G. A. (1983). *Manual for the State-Trait Anxiety Inventory*. Palo Alto: Consulting Psychologists Press.
- Tan, X., Campbell, I. G., & Feinberg, I. (2001). Overnight reliability and benchmark values for computer analyses of non-rapid eye movement (NREM) and REM EEG in normal young adult and elderly subjects. *Clinical Neurophysiology*, 112, 1540-1552.
- Vaillant, G. E. (2001). *The wisdom of the ego*. London: Harvard University Press,
- Walker, M.P., Liston, C., Hobson, A., & Stickgold, R. (2002). Cognitive flexibility across the sleep-wake cycle: REM-sleep enhancement of anagram problem solving. *Cognitive Brain Research*, 14, 317-324.
- Weinberger, D. A., Schwartz, G. E., & Davidson, R. J. (1979). Low-anxious, high-anxious, and repressive coping styles: Psychometric patterns and behavioural and physiological responses to stress. *Journal of Abnormal Psychology*, 88 (4), 369 – 380.
- Yu, C. K-C. (2011). The mechanisms of defense and dreaming. *Dreaming*, 21 (1), Mar 2011, 51-69.

ADOLESCENTS' EMOTIONS AND RISK-TAKING IN SPORTS

Quentin Verneau¹, Valérie Pennequin¹ & Guillaume Martinet²

¹EA 2114, Université de Tours (France)

²Université Claude Bernard Lyon 1, Laboratoire des Vulnérabilités et de l'Innovation dans le Sport (France)

Abstract

The purpose of this study was to explore the role of emotions in risk taking in physical activities. We aimed at providing new data on the development of several dimensions of emotions in adolescents and young adults, in order to offer more adjusted prevention campaigns. Based on cognitive motivational relational theory (Lazarus, 2000, 2001) we looked into the following dimensions of emotions: discrete emotion experience (i.e., discriminating emotional profiles), directional interpretation process (i.e., identifying the debilitating or facilitating effects of emotions on decision making), regulation of emotions (i.e., identifying the strategies used by participants to initiate, maintain and modulate the emotional expression). Each of these dimensions was studied by considering the profiles from the Reactivation and Excitation Inventory (REI, 1997; French version; Lafollie & al., 2008) which detects the high-risk personalities. We compared two complementary approaches to analyze the development of emotional profiles. On one hand, in a qualitative approach, we conducted 30 self-confrontation interviews with novice climbers, during which they were shown videos of themselves climbing. These participants were selected according to their age (middle-schoolers, high-schoolers, and college students) and according to their profile at the REI (escape from self-awareness and compensatory self-regulation). The discourse analysis identified the dynamic role of emotions in risk taking on distinct profiles of personality. On the other hand, in a quantitative approach we identified all existing profiles in our 10 to 29-year-old population with a battery of tests (e.g., PANAS-D, ERQ, ALE, TAS-20). With this approach we aimed at estimating emotional development in order to better understand the cognitive functioning of adolescents. The first results from our discourse analysis showed that adolescents who took risk had a poor emotional directory, they used few regulation strategies and they tended to ignore their emotions. Moreover, despite these behaviors, they thought they were making the right decision in most cases. Alexithymia appears to be the preferred hypothesis to understand this appetite for risk among adolescents. Alexithymia prevalence is particularly high among adolescents (i.e., >30%; Zimmerman & al., 2007) and we supposed that, just like in adults, it is an important factor of risk taking and carelessness. We expect for the comparison of these two approaches, currently being processed, to provide new prevention tracks, relying specifically on emotional indicators.

Keywords: *risk taking; emotions; appraisal; physical activity; adolescents.*

1. Introduction

Risks taking in young are a set of known and studied phenomena in many fields of the human sciences. Nonetheless some forms of risks remain undetected more than others, especially because these are undertaken in institutionalized settings such as sport and physical activities (SPA). Recent studies have documented the frequency of accidents among French sports according to their age or type of practice, these data allow us to realize that the population of 15-29 is particularly affected by accidents during sports (Elfeki Mhiri & Lefèvre, 2012). In this study it is recorded that about 9% of the general population practicing physical activity had to go to a doctor or emergency in the 12 months preceding the survey, while this percentage increases significantly if we interested specifically at 15-29 with 18% of casualties! Thus the prevention of accidents in the risked SPA seems a real public health issue, especially among teenagers and young adults are particularly affected. Some activities such as BMX, climbing or kayaking are considered riskier but are passable in clubs in most cities of France. The risk and danger are sometimes inherent part of the activity and the risk is known and accepted by practicing and sometimes it participated in the attractive dimension of the activity. These findings are not new, as many security

measures had already been taken in the 90's (Delignières, 1993) to better supervise the APS and yet we note that two decades later the results are always the same. Besides, many scholars and athletes nuance the idea that APS could be "at risk" and emphasizing that it is the maladaptive behaviors that transform a secure activity in a risky activity. So it seems important to focus on the cognitive processes underlying these behaviors, the accidents seem to be explained by bad decisions and understanding will be subject to new and more appropriate preventive approaches.

Decision making in risky situations is a set of complex processes, to describe these mechanisms we used the model of Lazarus (2000, 2001). His Cognitive-Motivational-Relational Theory (CMRT) of emotions allows us to understand the decision-making dynamics as a whole in situations of risk taking. This model is part of the appraisal theories and supposes that spontaneous decisions in relatively new situations are taken following a cognitive evaluation. That is to say that in view of the challenges of the situation, a primary evaluation will allow comparing the potential costs and gains of the situation. The congruence or dissonance between the set goal and the evaluation will generate an emotional feeling that Lazarus described in the following components: physiological changes, impulses to act (action tendencies), and subjective experience; the relationship between emotional state and cognitive evaluation optimizes the decision and behavior. However, large interindividual differences are observed. In similar situations we observe variations in emotions profiles or intensity, but according to Jones (1995) who focuses on the role of stress in the sport performance, these element are not the most relevant. He showed in athletes preparing for the Olympic Games qualifications as equivalent level the selected athletes were those who said that stress had a positive effect, while for the same stress intensity athletes who felt disabled by stress were significantly underperforming. Then many studies have expanded the interest of emotions in sport by adding to the stress of other basic emotions (e.g., Cerin, 2003; Martinent & Ferrand, 2009; Martinent, Campo, & Ferrand, 2012) and more recently have shown the value of adding a direction scale to questionnaires about emotions (e.g., Nicolas, Martinent, & Campo, 2014). Finally the relationship between emotions and cognitive evaluation will also adjust with emotion regulation (Gross, 1998) that will be involved in the initiation, maintenance and modulation of emotions, and can act directly on the behavior as a feedback loop. Christophe and al. (2009) distinguishes two main types of regulation strategies: the cognitive reappraisal and the expressive suppression.

In adolescents, all of the emotional and cognitive processes involved in decision making do not develop simultaneously (Barbalat & al., 2010). Moreover Zimmermann and al. (2007) showed that during adolescence there is a high prevalence of alexithymia (> 30%), an emotional disorder that is characterized by difficulty in describing his emotional states and difficulty in distinguishing between subjective feelings and bodily sensations during the emotional activation. But as we have presented above, the role of emotions is central to take appropriate decisions and it seems essential to having to understand and regulate emotions to manage risky situations in the SPA. This observation seems to explain that despite the abundance of security features in place in recent decades in risky activities, accidents do not fall significantly. Indeed young people assess the danger as well as adults, but they would be in difficulty to assess themselves in new contexts. The involvement of personality and emotional dispositions in sport risk taking has been the subject of numerous studies (e.g., Castanier & Le Scanff, 2009) and for example Taylor and Hamilton (1997) have shown that there are two types of high-risk sportsmen: cautious with compensatory self-regulation logic of practice, and reckless with escape from self-awareness strategy. The sportsmen with compensatory personality aim to master the activity and have appropriate behavior, while the sportsmen with escape profile have low self-esteem and inadequate practice, uninhibited and dangerous. According Lafollie and Le Scanff (2007) to detect this type of risk profiles it is important to highlight the emotional data, including among reckless to be interested in alexithymic disorders.

The aim of the present study is to compare these adult models to younger people, to understand how the emotional profiles influence the decisions from adolescence to adulthood, and how alexithymia interacts with risk taking from adolescence to adulthood.

2. Objectives

The objective of this study is to compare two methodological approaches (discourse analysis vs. profile analysis) to detect cognitive and emotional determinants of risk taking. We focused this research on emotional patterns that seem to be relevant indicators for the prevention of accidents in the SPA at risk. The goal is to differentiate the emotional profiles between cautious and reckless subjects and study their distinct developments with advancing age. So we will look at the profile of a large repertoire of discrete emotions by evaluating their intensity, their direction and regulation to study their effects on decisions in risky situations.

3. Qualitative Approach

3.1. Methods

3.1.1 Participants. 30 participants were selected based on their age (middle school, high school, university) and their profile to the Risk and Excitement Inventory (Escape vs Compensation; REI French version, Lafollie, Le Scanff, & Fontayne, 2008) to have 5 participants per experimental condition. All participants are volunteers and have received an information letter about the research protocol. Parental permission was requested for minors. For reasons of difficulties of access data collection has not been done on middle-schoolers.

3.1.2. Materials. Subjects were filmed on three ascents climbing on 3 levels defined by their teacher (easy, medium, hard). For self-confrontations video interviews an interview guide was created, adapted from the works of Neil and al. (2011) to identify cognitive sequences leading to the risk taking.

3.1.3. Procedure. Selected participants are received by self-confrontation interview video in the following two days after ascents. They are instructed to cut the video if they detect a sequence where they consider taking a risk (the experimenter could also cut the video if he detects a potentially risky sequence). For each sequence detected the subject had to describe the perceived risk and the analysis of the situation. Then the experimenter asks a series of questions to understand the role of emotions in decision-noted decision. The emotional components are questioned in the following order: emotion felt, direction of emotions, emotional regulation, and decision.

3.2. Results

(no encrypted result will be presented so they can be used in a thesis) The first results of this study show that:

- Compensatory adolescents detect significantly more risky sequences than other groups and have greater durations interview,
- The escape adolescents have significantly lower interview duration than other groups,
- Adolescents from the compensatory profile have an emotional repertoire and regulation strategies significantly greater than their counterparts from the escape profile,

Discourse analysis shows that all groups recall anxiety in risk taking but the escape group has a specific tendency to experience emotions in the happiness register when it confronts the risk. We noticed in adolescents a particular tendency to act on the environment to regulate their emotions, and specifically in escape adolescents the expressive suppression strategy is used in about 50% of situations. Finally it was noted in escape adolescents a very high rate (~ 95%) feeling of having made the right decision unlike other groups (~ 70%).

4. Quantitative Approach

This approach is being collected and for ethical reasons the processing of data will be made at the end of all contract awards and we present the methodology and expected results of this approach.

4.1. Methods

4.1.1. Participants. To identify existing profiles in the general population, we aim to recruit 1500 volunteer participants "all comers" of 11-29 years, divided equally between middle-schoolers, high-schoolers, and students.

4.1.2. Materials. A test battery was used to assess all the cognitive and emotional dimensions that influence decision making in sports and daily risky situations. Here are the tests used respectively for each dimension:

- Risk taker Profiles (Risk and Excitement Inventory French version; Lafollie & al., 2008)
- Discrete emotions and directional scale (Positive And Negative Affects Schedule-Direction French Version; Nicolas & al., 2014)
- Appraisal (The Appraisal of Life Events French version; Quintard, 2001)
- Regulation of emotions (Emotion Regulation Questionnaire French version; Christophe & al., 2009)
- Alexithymia (Toronto Alexithymia Scale -20 French version; Zimmermann & al., 2007)

4.1.3. Procedure. To facilitate operations and data collection, the test battery is performed online by the participants.

4.2. Results

The main expected outcomes of this study:

- Identify whether the profiles of adolescent risk takers have an emotional profile comparable to adults,
- Identify whether alexithymia is a relevant indicator of dangerous sport behaviours in adolescence,
- Identify whether adolescents with alexithymia or / and risk profile are particularly attracted by the physical activities at risk,
- Identify cognitive and emotional indicators which are predictors of dangerous sport behaviour.

5. General discussion

The main objective of this study is to better understand the cognitive and emotional dynamics which would explain the abundance of accidents among young people, comparing with adult models and differentiating adolescents' profiles. Target prevention on cognitive predictors allow a diversified and appropriate approach, further understand the development and anchoring of some inadequate process will also propose preventive tracks more widespread in adolescence.

Indeed our first results show that adolescence compensatory and escape profiles are also observed in adolescents. Young compensators seem to have a balanced psychological and emotional profile. Interviews conducted showed that they had a significant emotional and strategic repertoire that allowed them to understand the risky situations in an appropriate manner, acting both on the environment and themselves to reduce endangerment. However their peers with an escape profile seem less sensitive to emotions when they threaten and even have the feeling of making the right choices. Their strategic repertoire is poor and adolescents involved have a great tendency to ignore or suppress their emotions. We find in their speeches the symptoms of alexithymia. They say they are happy and satisfied to have exceeded their limits at the expense of the risk. The quantitative study will provide important insights as to what imprudent risk taker profile, to determine whether alexithymia, as in adults, is an important risk taking predictor (Bréjard, 2005).

In terms of applications, though this study focuses on the risky SPA practitioners, the message is addressed primarily to the teachers and supervisor. For decades, passive safety is emphasized and it is undeniably necessary but it is not sufficient to control dangerous behavior. The supervisors must be aware of the risk profile of the young, by detecting risky practices. Alexithymia is difficult to identify by the young people concerned because they do not detect their emotions but may have symptoms, we must then detect the dissonances between the observed behavior and speech practitioner, which means to communicate and help these young to make connections between their mistakes and lack of self-assessment in their practice. It is common when one is interested in decision making or sports performance to think that emotions are going to be crippling, however when one looks at risky or extreme sports practices it seems that appropriate decisions are attentive to the emotional expressions and require different control strategies.

References

- Barbalat, G., Domenech, P., Vernet, M., & Fournier, P. (2010). Approche neuroéconomique de la prise de risque à l'adolescence. *L'Encéphale*, 36(2), 147-154.
- Bréjard, V., Bonnet, A., & Pedinielli, J. L. (2005). Développement cognitivo-émotionnel, régulation des émotions et comportements à risques: une étude exploratoire chez l'adolescent. *Neuropsychiatrie de l'enfance et de l'adolescence*, 53(8), 395-400.
- Castanier, C., & Le Scanff, C. (2009). Influence de la personnalité et des dispositions émotionnelles sur les conduites sportives à risques: une revue de littérature. *Science & Motricité*, (67), 39-78.
- Cerin, E. (2003). Anxiety versus fundamental emotions as predictors of perceived functionality of pre-competitive emotional states, threat, and challenge in individual sports. *Journal of Applied Sport Psychology*, 15(3), 223-238.
- Christophe, V., Antoine, P., Leroy, T., & Delelis, G. (2009). Évaluation de deux stratégies de régulation émotionnelle: la suppression expressive et la réévaluation cognitive. *Revue Européenne de Psychologie Appliquée/European Review of Applied Psychology*, 59(1), 59-67.

- Delignières, D. (1993). Risque préférentiel, risque perçu et prise de risque. *Cognition et performance*, 79-102.
- Elfeki Mhiri, S., & Lefèvre, B. (2012) Les accidents liés à la pratique sportive en 2010, *Stat-info / Ministère des sports*, n°12-05, décembre 2012.
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, New directions in research on emotion, 2(3), 271-299.
- Jones, G. (1995). More than just a game: Research developments and issues in competitive anxiety in sport. *British journal of psychology*, 86, 449.
- Lafollie, D., & Le Scanff, C. (2007). Détection des personnalités à risque dans les sports à sensations fortes. *L'Encéphale*, 33(2), 135-141.
- Lafollie, D., Le Scanff, C., & Fontayne, P. (2008). Adaptation française de "l'Inventaire de Risque et d'Activation"(IRA). *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, 40(2), 113.
- Lazarus, R. S. (2000b). Cognitive-motivational-relational theory of emotion. In Y. L. Hanin (Ed.), *Emotions in sport* (pp. 39-63). Champaign, IL: Human Kinetics.
- Lazarus, R. S. (2001). Relational meaning and discrete emotions. In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Appraisals processes in emotion: Theory, methods, research* (pp. 37-67). New York: Oxford University Press.
- Martinent, G., & Ferrand, C. (2009). A naturalistic study of the directional interpretation process of discrete emotions during high-stakes table tennis matches. *Journal of sport & exercise psychology*, 31(3), 318-336.
- Martinent, G., Campo, M., & Ferrand, C. (2012). A descriptive study of emotional process during competition: Nature, frequency, direction, duration and co-occurrence of discrete emotions. *Psychology of Sport and Exercise*, 13(2), 142-151.
- Neil, R., Hanton, S., Mellalieu, S. D., & Fletcher, D. (2011). Competition stress and emotions in sport performers: The role of further appraisals. *Psychology of sport and exercise*, 12(4), 460-470.
- Nicolas, M., Martinent, G., & Campo, M. (2014). Evaluation of the psychometric properties of a modified Positive and Negative Affect Schedule including a Direction scale (PANAS-D) among French athletes. *Psychology of Sport and Exercise*, 15(2), 227-237.
- Quintard, B. (2001). Concepts, stress, coping. *Recherche en soins infirmiers*, 67, 46-67.
- Taylor, R. L. & Hamilton, J. C. (1997). Preliminary evidence for the role of self-regulatory processes in sensation seeking. *Anxiety, Stress, and Coping*, 10(4), 351-375.
- Zimmermann, G., Quartier, V., Bernard, M., Salamin, V., & Maggiori, C. (2007). Qualités psychométriques de la version française de la TAS-20 et prévalence de l'alexithymie chez 264 adolescents tout-venant. *L'Encéphale*, 33(6), 941-946.

DEVELOPMENT OF COGNITIVE TRAINERS FOR SPORTS

Daniel Gopher

Technion –Israel Institute of Technology, Haifa, 32000 (Israel)

Abstract

Sport games such as basketball, football and ice hockey are highly demanding, dynamic, fast and strategic. Game competency is a joint product of motor, perceptual-motor and cognitive competencies. The talk describes the development of cognitive trainers to the 3 sports which are embedded in computer games training platforms. The trainers for and basketball and ice hockey have already become commercialized, practiced and led trainees to significant achievements; the football platform is currently under development and field testing. The guiding principles, task analysis and game development stages are discussed, as well as key transfer and validation outcomes

Keywords: *sport training, cognitive training, skills.*

1. The challenge

Sport games such as basketball, football and ice hockey are highly demanding, dynamic, fast and strategic. They call for top level individual competencies as well as an ability to observe, concur with, coordinate and synchronize team play. Professional players are continuously trained and practice from early childhood, accumulate experience and develop skills. Both coaches and players are well aware of the fact that game competency is a combined product of motor, perceptual-motor and cognitive competencies. However, while preparatory physical fitness exercises and training for each game have been well established, and training of perceptual motor skills has also been attended to, the cognitive aspect is conducted mainly by sketching on drawing boards, passive watching and analyzing videos and verbal coaching instructions on the field. While the contribution of these tools is not questioned, the challenge of creating preparatory, active and dynamic, cognitive training environments for each of these games has not been hitherto addressed. Briefly discussed and described are the principles and the results of development and application of cognitive trainers for Basketball, Ice Hockey and Football (soccer). They have been embedded in a computer game like trainers, specifically developed for the signifying cognitive demands of each game. For each game the emphasis is on the cognitive demands from an individual player, playing in the context of a team competing with another team. The work has been conducted within ACE – Applied Cognitive Engineering> A Israeli startup firm which involves human factors experts, game writers and programmers. The Basketball and Ice Hockey trainers have already been commercial products for several years and practiced widely. The football trainer is in the phase of development and field testing (<https://www.intelligym.com/>).

On the very top level, the cognitive processes and skills associated with the 3 games are quite similar. All three are team games and all call for efficient and fast visual scanning of the field, perceptual estimates, attention management, strategy examination and decision making. However, they differ considerably in the way in which each of these aspects is instantiated, as the physical environment, basic motor and perceptual-motor competencies, time frame and rules of the game are very different. The challenge is to pinpoint the formatting cognitive competencies of each game and develop a training platform and a training protocol for these competencies.

The development of the cognitive trainers stands on 3 major cornerstones:

1. A claim on the ability to isolate and develop the relevant cognitive competencies of a complex task in a separate training environment.

2. An approach to task analysis which is able to map the cognitive demands of each specific game to the associated dimensions of cognitive skills that should be developed and trained.

3. Development of a training platform and a training protocol embedded in a computer game that will be interesting compelling and demanding, without losing its training objectives and remain interesting for many sessions of playing.

The claim for the ability to provide a stand-alone platform for the development of cognitive competencies draws upon the conceptual framework to training and acquisition of skills proposed by Gopher (1993, 2006, 2007). This framework distinguishes between three layers of skill components of developed competence in task performance, elementary skills (e.g. shooting and tossing the ball, skating and hitting the puck), control processes (e.g., attention management, executing and coordinating plays) and metacognitive composites (conscious monitoring, decision making and control of intentions). The theoretical approach argues for different focus and protocols for training of each class and layer. In particular it argues for the existence and separate training options of executive and attention control skills. This claim has been formulated and embedded in a computer game like trainer of attention skills applied in flight training to improve piloting skills (Gopher et al. 1994).

2. Trainer development

Task analysis is a major challenge in the development of a cognitive training environment for a daily task. It requires a systematic and detailed assessment of each game, interviews with players, coaches scouters at all levels and expertise, observations of games, review of videos etc. The effort is to create, on the one hand, a representative list of the game cognitive demands in the game language, and on the other hand, map and associate them with dimensions and constructs of cognitive psychology and skill training requirements. Some examples of such maps from Ice Hockey are presented below:

Figure 1. mapping examples of Ice Hockey game elements into cognitive demands



This analysis and cognitive maps are the building blocks of the computer game trainer leading story and game demands. Development of the game itself is an interactive effort between the psychologists, computer games writers and programmers. For example in the Ice Hockey trainer two 5 members' teams are combating each other to shoot a bomb into the opponent home gate. The playing trainee is the only human element in the game, all other players are virtual players following artificial intelligent logics of Ice Hockey playing. The unique feature of this training platform is that it provides training to individuals in the context of game smart teams of collaborators and opponents. Below is an example of the screen for the Ice Hockey trainer and a summary of the main features of the training platform.

Figure 2. Example of game screen of the Ice Hockey trainer.

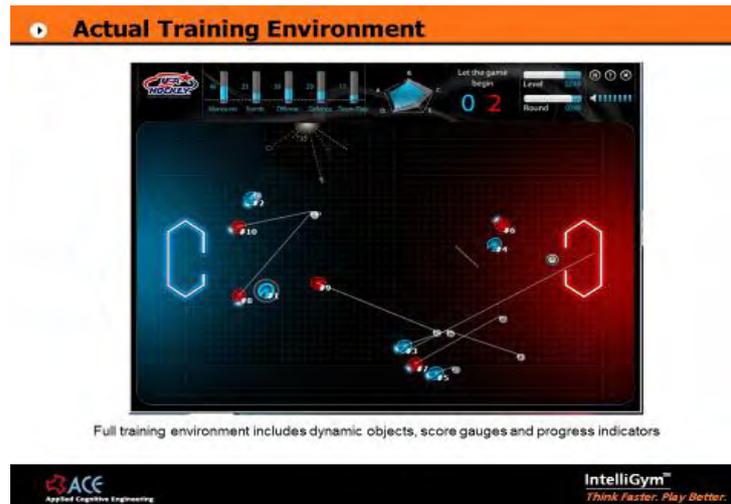


Figure 3. The main signifiers of the Ice Hockey trainer

The IntelliGym™ Training Platform

The IntelliGym™ Platform Characteristics:

- Personalized Training Plan (prepared automatically)
- Video-game like training environment
- Train anywhere – Internet based
- Rich feedback and progress indicators
- Training data collection and analysis
- Supports on-field stats collection
- Top performers demonstrations
- Performance reports – coaches access control

The IntelliGym™ logo and tagline 'Think Faster. Play Better.' are visible at the bottom right of the slide.

More examples and video clips can be found in the website (<https://www.intelligym.com/>).

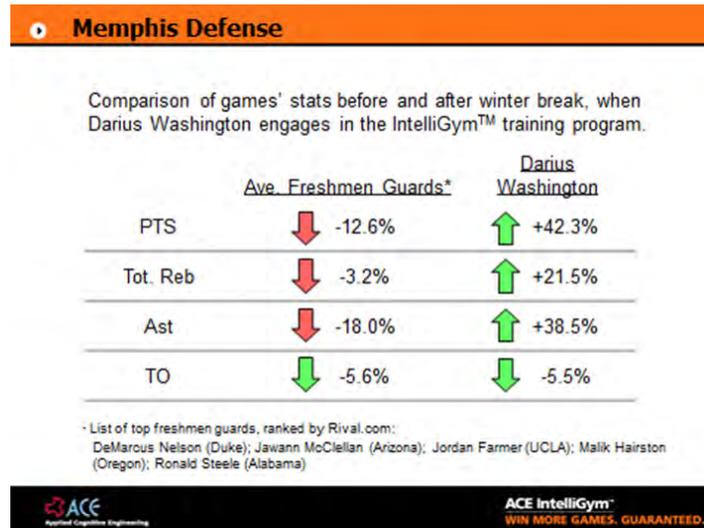
3. Validation and achievements

A major challenge for the trainer evaluation is obtaining the coping and commitment of teams to participate and the framework within which training can be administered and tested. It was hence decided to start by incorporating the trainer within a regular training program for the designated sport with younger players. Consequently, for Basketball the main participants were U.S NCAA College Basketball teams. In Ice Hockey, training was conducted on the U.S two young national teams, at the ice hockey academy in Michigan. Football training is currently being experimented in 3 football academies at the Netherlands, 2 in Germany and 1 in Israel. Evaluation and assessment of the trainer impact on players' performance on the field is another challenge to be addressed. The theoretical framework and guiding principles which are the anchor of trainers' development have been the outcome of extensive research following traditional methodological conventions, comparing experimental and control groups as well as contrasting manipulations. This approach is not feasible or practical when testing the impact of the present trainers. Some of the constraints are financial and temporal, running comparative groups is costly, longer and complicated. Another difficulty is that coaches and teams are less likely to agree to run a control or placebo groups. Running a controlled protocol is also much harder, as trainees practice on their time and personal computers, although we do have records of their practice sessions and schedule as well as the content and order of their training. Last but not least, if the trainer indeed improves game performance, it seems unfair to put a player in a control rather than experimental group. Our assessment has therefore been based on several complementary sources of information: 1) Players informal reports on the impact of the trainer of their game performance and achievements; 2) Coaches evaluated changes of individual players as well as overall team performance; 3) We tracked the scores and achievements of

each player before, during and following training; 4) We compared the history profile of each trained team with its performance following training; 5) we compared history and progress of trained individuals and teams with those of similar individuals and teams which were not trained. Users' and coaches testimonies and team achievement records for basketball and ice hockey can be found on the Website. A brief summary is presented in the following paragraph.

Basketball: Sixteen NCAA teams were trained and all improved. For example, Memphis Tigers which was our first team, showed a measurable improvement on both offense and defense after training with the IntelliGym™. The improvements manifested themselves in: Points per game, Points per possession (offense and defense), Field Goal pct, Assists, Turnovers, Opponent FG pct, Opponent rebounds and free throw attempts. Figure 4 shows the achievement of their guard who started the season anonymous and ended as the NCAA most valuable player of the year (MVP).

Figure 4. Memphis guard Darius Washington compared to guards without Cognitive Training



Ice Hockey: The two national teams have improved substantially their game performance relative to their history and national and international achievements in competitions. For example, the under 18 team increased their national win percentage from 29 to 70. In the world championship from 1999-2008 they won 4 gold medals. In 6 years of cognitive training (2009-2014), they won 5 gold and one silver (2013). During this period 6 different teams of players with changing coaches were trained. The basketball and ice hockey games have been commercialized, with documented success of teams and individuals. The US Ice Hockey Association is endorsing the inclusion of the cognitive trainer in all their training programs.

In conclusion the successful application of the trainers provides strong support for the importance of cognitive skills in these sports and the ability to develop and transfer them from a standalone desktop trainer.

References

- Gopher, D. (1993). The skill of attention control: Acquisition and execution of attention strategies. In D. Meyer & S. Kornblum (Eds.). Attention and Performance XIV: Synergies in Experimental Psychology, Artificial intelligence, and Cognitive Neuroscience - A Silver Jubilee. Cambridge, MA: MIT Press.
- Gopher, Weil, Bareket, (1994). Transfer of skill from a computer game trainer to flight. Human Factors, 36; 1-19.
- Gopher D. (2006). Control processes in the formation of task units. In: Qicheng Jing (Ed.): Psychological Science around the World, Volume 2, Social and Applied Issues. Oxford Psychology Press.
- Gopher, D. (2007). Emphasis change as a training protocol for high demands tasks. In: A. Kramer, D. Wiegman, A. Kirlik (Eds): Attention: From Theory to Practice. Oxford Psychology Press.
- Website: <https://www.intelligym.com/>

USE OF HEURISTIC AND ANALYTIC SYSTEMS OF REASONING DURING ADOLESCENCE: EFFECT OF DIFFERENTIAL EMOTION STATE

Elodie Tricard, Valérie Pennequin & Célia Maintenant

Université François Rabelais (France)

Abstract

Dual-process theories posit two systems of reasoning. Type I, often called “heuristic system”, is automatic, fast and heuristic-based. This kind of reasoning often leads to correct responses but could lead to bias and errors too. Type II, often called “analytic system” corresponds to a controlled, rule-based and slow process which requires a lot of computational capacity and permit to produce a correct response. According to this theory, Type II mostly overrides Type I when responses produced by the two systems do not match, even if a heuristic response could be produced sometimes. Work on development of both reasoning system has posited two kind of change with age: an improvement of analytical reasoning skills and an increase of intuitive strategies’ numbers. Moreover, the choice of one of the systems can be influenced by the emotion state. While reasoning based on the heuristic system is found in positive emotional states, negative emotional states cannot be associated to only one system of reasoning (Leith & Baumeister, 1996). Depending on the negative emotion (anxiety, anger, sadness) the type of reasoning used could be different. The present study proposes to highlight which system is used by adolescents according to four emotions through three reasoning tasks.

Participants were adolescents aged to 11-18 years old and will be segregated in one control group and one group corresponding to each emotion studied. A sequence of a movie is proposed to the five groups of participants which would induce emotional state. Then, they have to complete a French version of the Differential Emotion Scale (Izard & al., 1974), modified by McHugo & al. (1982). Finally, they have to listen a specific music to maintain their emotional state and complete three tasks of reasoning: inductive, deductive and probabilistic. Results should highlight a differential effect of emotional state on the performance on three task of reasoning, in interaction with age of participants.

Keywords: *reasoning systems, differential emotion, development, adolescence.*

AUDITORY-VISUAL SPEECH PERCEPTION IN BIPOLAR DISORDER

Doğu Erdener & Arzu Yordamlı

Psychology Program, Middle East Technical University Northern Cyprus Campus (Northern Cyprus)

Abstract

Speech perception is an auditory-visual process rather than solely an auditory one. While we have just started to understand the basics of auditory-visual speech process, investigations with clinical populations is almost completely an uncharted territory except for a handful of studies. In this study, we tested two groups of individuals with bipolar disorder (manic and depressive episodes) and a control group on a series of McGurk effect stimuli along with auditory-only and visual-only (lip-reading) experimental conditions plus a test of phonological awareness. In the light of previous findings with clinical populations, we advanced two main hypotheses: (1) control group should give more visually-based responses to the McGurk stimuli than their bipolar counterparts; (2) if the auditory and visual speech information are fused at behavioral level as a function of attentional focus rather than at a more central level, then bipolar participants in the depressive episode should yield relatively more McGurk-type (i.e., visually based) responses than the bipolar manic group. Analyses revealed no differences in the visually-based responses between the groups yet they differed on visual-only responses and phonological awareness performances. There was no significant difference between the two bipolar groups with respect to McGurk test. While regression analyses, on the other hand, revealed that no independent variable significantly predicted auditory-visual speech integration, yet in a second set of analyses where visual-only scores were the dependent variable, phonological awareness predicted lip-reading ability. The results suggest that bipolar disorder participants treat auditory and visual speech information differently than the controls yet somehow still integrate the two sources of information. Given the differences in the visual-only and phonological awareness data, we are left with the question as to how the auditory-visual integration occurs in bipolar disorder. The results are discussed towards a new hypothesis which requires obtaining new data at both behavioral and neural levels.

Keywords: *auditory-visual speech perception, McGurk effect, bipolar disorder, speech perception.*

1. Introduction

Speech perception is not solely an auditory phenomenon but an auditory-visual one as originally evidenced by the *McGurk Effect* (McGurk & MacDonald, 1976). In a typical demonstration of the McGurk effect, an auditory syllable /ba/ dubbed onto the lip movements for /ga/ is often perceived as /da/ or /tha/. Thus, this unequivocally shows that speech perception involves visual information even in cases where there is un-degraded, clear auditory information. McGurk effect is described in the literature as a demonstration of how humans integrate auditory and visual speech information. As such, the study of speech perception process in terms of the relationship between auditory and visual information gives us a thorough understanding of the phenomenon. The McGurk Effect did not only show the role of visual speech information in clear listening conditions, but more importantly, has come to be used as an important research tool that measures the degree to which visual speech information influences the resultant percept and the degree of auditory-visual speech integration. The effect is very robust and most participants perceive the effect and it has come to be used as –almost – a generic metric to measure the influence of visual speech information in auditory-visual speech perception research.

There are cross-language differences in perceiving McGurk effect thus the degree of auditory and visual speech integration (e.g., Sekiyama & Burnham, 2008; Erdener & Burnham, 2013). The degree to which visual speech information is integrated into the auditory information appears to be a function of age. While the McGurk effect is evident in infants (Burnham & Dodd, 2004), visual speech influence increases with age (Sekiyama & Burnham, 2008; McGurk & MacDonald, 1976) as a result of a number of factors such as language-specific speech perception – relative influence of native over non-native speech perception (Erdener & Burnham, 2013)

Unfortunately, there is little research in auditory-visual speech perception in the context of speech and language pathology. In the context of hearing, we know that children and adults with hearing problems tend to utilize visual speech information more than their hearing counterparts (Arnold & Köpsel, 1996). Using McGurk stimuli, Dodd, Macintosh, Erdener and Burnham (2008) compared children with delayed phonological acquisition, with phonological disorder and with normal speech development. The results showed that children with phonological disorder had greater difficulty in integrating visual speech information. This shows that the extent to which visual information is used can potentially be used as an additional diagnostic measure in speech disorders.

Auditory-visual speech perception in mental disorders is almost an unstudied area. Few, and rather scattered studies have emerged recently and these studies in the context of different mental disorders or developmental disabilities demonstrate some degree of deficit in auditory-visual speech integration. For instance, in a study with schizophrenic patients it was shown that they have difficulty integrating visual and auditory information (White, et al., 2014) and yet tend to focus less on the speech related areas of faces (Loughland, Williams & Gordon, 2002). Delbeuck, Collette and Linden (2007) reported deficits auditory-visual speech integration in Alzheimer's Disease patients and with a sample of Asperger's Syndrome individuals Schelinski, Riedel and von Kriegstein (2014) found a similar pattern.

Here, we looked at the status of auditory-visual speech perception in bipolar disorder (BD) – a disorder characterized by alternating periods of mania and depression. Apparently, individuals with BP experience impairments in processing visual cues (van Rheenen & Rossell, 2013). The limited evidence from the clinical populations suggests that there is an impediment in auditory and visual speech integration. Despite the paucity of research with clinical populations thus a preclusion from providing a literature-based, clear-cut hypotheses, we adopted the following aims: (a) preliminarily investigate the status of auditory-visual speech perception in BD; (b) determine whether, if any, differences exist between BD individuals who go through mania and depression episodes. In par with these aims, we predicted that (1) control group should give more visually-based/integrated responses to the McGurk stimuli than their bipolar counterparts; (2) if the auditory and visual speech information are fused at behavioral level as a function of attentional focus, then bipolar participants in the depression episode (who we thought anecdotally can attend to stimuli better) should give more integrated responses than the manic group. While no definitive prediction was advanced about the relationship between phonological awareness (PA) and auditory-visual speech perception, it is envisaged that no predictive relationship would be observed. As well, it is predicted that the control group should have greater PA than their BD counterparts.

2. Method

2.1. Participants

A total of 55 participants (22 females, 33 males, $M_{age}=31.6$ years, $SD=12.8$) were recruited. The BD sample consisted of 28 in-patients at Manisa Mental Health Hospital in Turkey. Of these, 15 were in the manic ($M_{age}=35.9$ years, $SD=11.9$) and 13 were in the depressive ($M_{age}=44.7$ years, $SD=13.1$) episodes at the time of testing. A further 27 healthy participants ($M_{age}=22.7$ years, $SD=3.4$) were also recruited from amongst volunteers at Middle East Technical University, Northern Cyprus Campus. All participants were native speakers of Turkish with normal hearing and normal/corrected-to-normal vision. A written informed consent was obtained from each participant.

2.2. Materials and procedure

The McGurk stimuli consisted of words and non-words spoken by two native speakers of Turkish and English each – a male and female talker in from each language. The raw stimuli were edited to auditory-visual (AV), auditory-only (AO), and visual-only (VO) stimuli. The AV stimuli were created by dubbing incongruent auditory components onto video components; (e.g. Aud /soba/ + Vis /soga/ → “soda”). The AO and VO stimuli were created by deleting visual or auditory portions. There were a total of 24 AV, 12 AO and 12 VO stimuli. Participants were instructed to “watch and listen” in each trial. Responses were manually recorded. The test phase was preceded by a familiarization trial in each experimental condition.

A *Phonological Awareness Skills Test* (PAST, 2015) was used to measure phonological awareness. The test features 11 tasks (rhyme recognition, rhyme production, phoneme blending, syllable segmentation, syllable deletion, initial-position phoneme isolation, final-position phoneme isolation, phoneme segmentation, and phoneme deletion) each of which consists of 6 items. Thhigher the scores the higher the PA.

3. Results

The AV, AO, VO and PA scores were separately subjected to a one-way ANOVA across the participant groups with $\alpha=.05$ (Figure 1). The ANOVA for AV, $F(2,52)=.828, p>.442$, AO scores, $F(2,52)=.683, p=.510$, did not reach significance; however, the VO, $F(2,52)=5.70, p<.005$, and PA scores did, $F(2,52)=26.937, p<.001$. Post-hoc tests (Sidak) revealed a significant difference between the BD-depressive and control groups on the VO scores. The PA scores revealed that the control group performed better than both BD groups, and the manic group better than the depressive group. A further set of *t*-test analyses comparing the overall BD groups and the controls showed no significant difference over AO, ($p>.05$), and AV scores, ($p>.05$), yet a significant difference was observed for both VO, $t(53)=-3.261, p<.005$, and PA scores, $t(53)=-6.498, p<.001$ (Figure 2).

Figure 1. The AV (upper left), AO (upper right), VO (lower left) and PA (lower right) scores across the two bipolar groups and the control group. The error bars represent the standard error of the mean

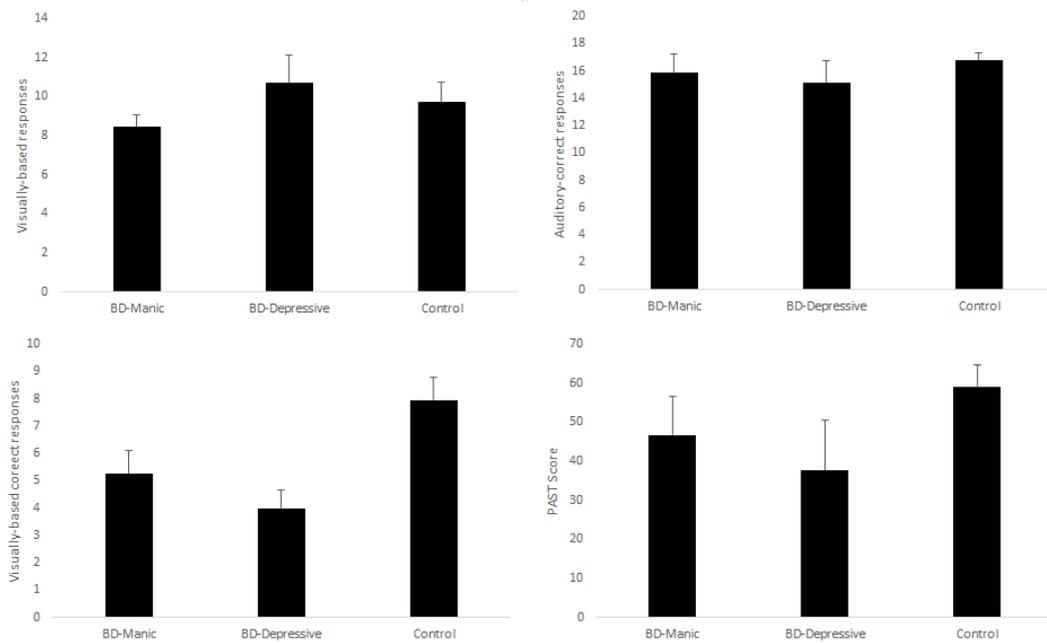
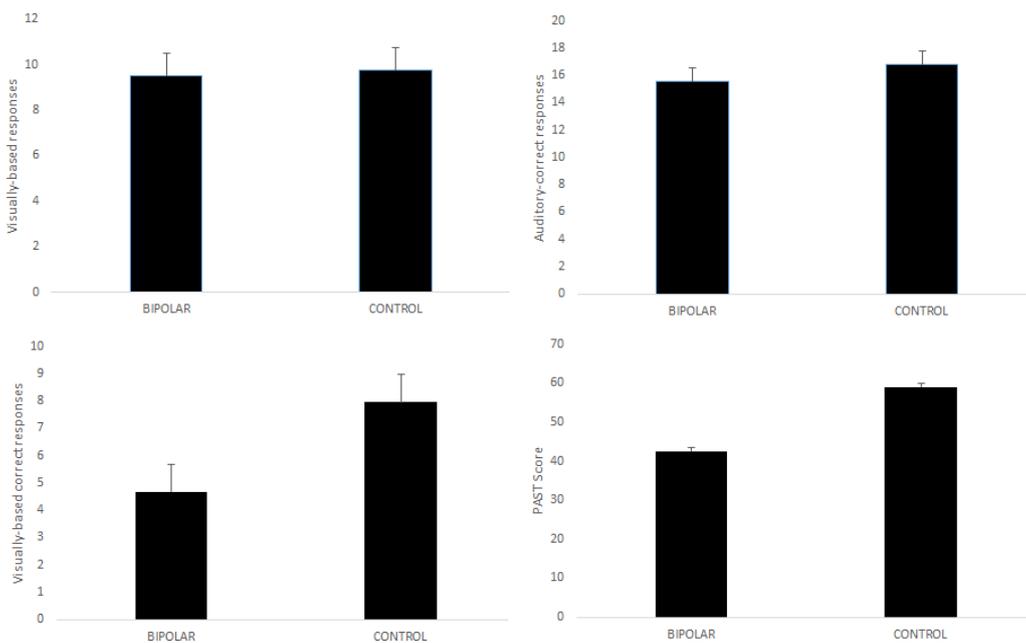


Figure 2. The AV (upper left), AO (upper right), VO (lower left) and PA (lower right) scores with bipolar groups combined and the control group. The error bars represent the standard error of the mean



Two regression analyses were conducted. AO, VO and PA scores were entered as predictor variables and AV scores as the dependent variable. Results revealed no significant result, $p=.558$. A second regression analysis where the dependent variable was VO revealed a significance, $R=.416$, $R^2=.173$, adjusted $R^2=.124$, $F(3,51)= 3.551$, $p=.021$; yet only PA scores reached significance, $\beta= .119$, $p=.008$. The correlation coefficients also showed that only significant coefficients were between AO and PA, $r= .23$, $p<.05$, and VO and PA, $r= .39$, $p<.01$ (Table 1).

Table 1. The correlation coefficients amongst variables. * $p<.05$, ** $p<.01$

	AV	AO	VO	PA
AV	-			
AO	.16	-		
VO	.15	.18	-	
PA	.09	.23*	.39**	-

4. Discussion and conclusion

It was hypothesized that the BD group would be less susceptible to McGurk effect thus less integration of auditory and visual speech information. Besides, BD-manic group was predicted to integrate auditory and visual speech less than the BD-depressive group as they were thought to be more attentive to the stimuli – if the auditory-visual speech integration occurred at the behavioral level.

The findings of this study did not support the first hypothesis; there was no significant difference between controls and BD groups whether they were collapsed or not. No group-based differences were observed with the AO stimuli, either – with BD groups separated or collapsed. On the other hand, lending partial support to the overall prediction, the control group performed overwhelmingly better than the BD groups on VO stimuli as well as the PA test. Specifically, when BD groups were separated, the control group performed better than the BD-depressive group and the BD-manic group did not differ from both controls and their depressive episode counterparts. On PA scores, the controls performed better than both groups and, interestingly, the BD-manic group did better than the BD-depressive group. As for correlation results, the overall data suggests that with the inclusion of BD groups, the VO and AO data part their ways by separately correlating with PA data. We also ran the same correlation analyses separately for both control and BD groups: while there was no any significant r from the BD group, in the control group the only significant r was between AO and VO, $r= .468$, $p=.012$, suggesting that the visual speech information appears to be treated more as a source of speech information by the control group than by the BD groups.

What is intriguing in these results is that rather than integrative aspects, the isolated speech information forms, namely, auditory and visual speech information tend to make a difference amongst the groups. Although seemingly this rather presents a bit blurry picture, and surely warranting further scrutiny, these results present us with a number of possibilities. First of all, attentional processes are presumably active during the intake of auditory and visual speech information prior to them being processed for integration – be it at behavioral/phonetic/phonological (Bernstein, Burnham, & Schwartz, 2002) or cortical level (Campbell, 2007). These attentional processes essentially grab the auditory and visual speech information for further processing. Given that the control group did not differ from the BD groups with respect to the integration of auditory and visual speech information and AO information, but did on VO information (as well as PA, to which we will shift our attention in a moment) leaves us with a necessity to understand why VO (lip-read) information acts differently. Given the no difference between the groups with respect to auditory-visual speech integration, it may be that there is an alternative mechanism at play for the BD group that allows for the visual speech information to eventually be integrated with the auditory information. The post-hoc correlational analyses reported above may just point out to the possibility that the issue, if any, in the BD groups, regarding auditory-visual speech integration is evident, it may be happening at the phonetic or phonological level. This inference and the exploratory data presented here, unfortunately, does not allow us to make a solid conclusion, but rather paves the way for further research for both behavioral and neural data. This leads us to the following hypothesis: given the impoverished status of VO processing (yet still with an eventual integration) in the BD groups, and that we know auditory-visual speech integration occurs at phonetic level (e.g., Dodd & Burnham 2004), the VO information is integrated either at language-specific phonological level or at neural level via a compensatory mechanism. In order to understand this mechanism responses at both behavioral and neural levels must be obtained to McGurk stimuli as well as new type auditory-visual speech stimuli (e.g., Jerger, Damian, Tye-Murray & Abdi, 2014).

References

- Arnold, P., & Köpsel, A. (1996). Lip-reading, reading and memory of hearing and hearing-impaired children. *Scandinavian Audiology*, 25, 13–20.
- Bernstein, L. E., Burnham, D., & Schwartz, J.-L. (2002). Special session: Issues in audiovisual spoken language processing (when, where, and how?). In J.H.L. Hansen & B. Pellom (Eds.), *Proceedings of International Conference on Spoken Language Processing 2002*, 3, 1445-1448.
- Campbell, R. (2007). The processing of audio-visual speech: empirical and neural bases. *Philosophical Transactions B*, 363(1493), 1001-1010.
- Delbeuck, X., Collette, F., & Van, L. M. (2007). Is Alzheimer's disease a disconnection syndrome? Evidence from a cross-modal audio-visual illusory experiment. *Neuropsychologia*, 45, 14, 3315-3323.
- Dodd, B., McIntosh, B., Erdener, D. & Burnham, D. (2008). Perception of the auditory-visual illusion in speech perception by children with phonological disorders. *Clinical Linguistics & Phonetics*, 22, 69-82.
- Erdener, D. & Burnham, D. (2013). The relationship between auditory-visual speech perception and language-specific speech perception at the onset of reading instruction in English-speaking children. *Journal of Experimental Child Psychology*, 116, 120-138.
- Jerger, S., Damian, M.F., Tye-Murray, N. & Abdi, H. (2014). Children use visual speech to compensate for non-intact auditory speech. *Journal of Experimental Child Psychology*, 126, 295-312.
- Loughland, C. M., Williams, L. M., & Gordon E. (2002a). Schizophrenia and affective disorder show different visual scanning behavior for faces: a trait versus state based distinction? *Biological Psychiatry*, 52, 338–348.
- McGurk H., MacDonald J. (1976). Hearing lips and seeing voices. *Nature* 264, 746–748.
- Nath, A. R. & Beauchamp, M. S. (2012). A neural basis for interindividual differences in the McGurk effect, a multisensory speech illusion. *Neuroimage*, 59, 781-787.
- Pearl, D., Yodashkin-Porat, D., Katz, N., Valevski, A., Aizenberg, D., Sigler, M., & Kikinon, L. (2009). Differences in audio-visual integration, as measured by McGurk phenomenon, among adult and adolescent patients with schizophrenia and age-matched healthy control groups. *Comprehensive Psychiatry*, 50, 2, 186-192.
- Pearlson, G.D., Petty, R.G., Ross, C.A., & Tien, A.Y. (1996). Schizophrenia: A disease of heteromodal association cortex? *Neuropsychopharmacology*, 14, 1-17.
- van Rheenen, T. E., & Rossell, S. L. (2013). Is the non-verbal behavioural emotion-processing profile of bipolar disorder impaired? A critical review. *Acta Psychiatrica Scandinavica*, 128, 163-178.
- Sekiyama, K., & Burnham, D. (2008). Impact of language on development of auditory-visual speech perception. *Developmental Science*, 11, 306–320.
- Schelinski, S., Riedel, P., & von Kriegstein, K. (2014). Visual abilities are important for auditory-only speech recognition: Evidence from autism spectrum disorder. *Neuropsychologia*, 65, 1-11.
- White, Wigton, Joyce, Bobin, Ferragamo, Wasim, Lisk & Shergill, (2014) Phonological Awareness Skills Test (2015). In Phonological Awareness Skills Test. Retrieved from http://www.specialconnections.ku.edu/~speconn/page/instruction/ra/case/caseb/pdf/caseb_scene1_2.pdf

THE VALIDITY STATUS OF DIGIT RATIO (2D:4D) AS A RETROSPECTIVE MARKER OF PRENATAL ANDROGEN ACTION

Martin Voracek & Ulrich S. Tran
University of Vienna (Austria)

Abstract

According to the broad research program in behavioral endocrinology based on the organizational hypothesis, prenatal androgen action not only leads to sexual differentiation, but in addition has long-lasting, permanent (i.e., organizational) effects on the brain, behavioral traits, and disease susceptibility postnatally. Central insights in this field are due to experiments with non-human species. However, the endocrine systems, routes, and effects of these may not be directly translatable to humans. In humans, prenatal hormone measurement is intractable for research, experimentation infeasible for ethical reasons, whilst experiments of nature (early manifesting endocrine disorders) have their own limitations of insight. Owing to these research barriers, having a valid retrospective marker for prenatal androgen action would be of great value. Appearing in about 1000 published papers, 100+ published journal abstracts, and 250+ academic theses produced since 1998, the second-to-fourth digit ratio (2D:4D) presently is by far the most frequently investigated among such proposed candidate retrospective markers. Despite this popularity, the usefulness of 2D:4D continues to be seen as controversial, and surprisingly little effort has been made to evaluate its validity comprehensively, systematically, and objectively. Available overviews in this research area are traditional ones (i.e., narrative opinion pieces) and partial reviews (i.e., increasingly outdated). Here, we undertake a comprehensive, integrative evaluation of the current validity status of 2D:4D, based on the totality of retrievable evidence (systematic review approach). Wherever feasible, we synthesize the lines of evidence quantitatively (via meta-analysis), and additionally apply recently developed grading systems for empirical research evidence (concerning the amount and robustness of empirical evidence and its protection from bias) to this literature. Inter alia, this validity evaluation encompasses evidence from animal experimentation, from molecular genetic studies (association studies of candidate genes and genome-wide associations studies [GWAS]), from endocrine assay studies (amniocentesis and cordal blood), from endocrine disorder studies (of congenital adrenal hyperplasia [CAH], complete androgen insufficiency syndrome [CAIS], and polycystic ovary syndrome [PCOS]), from sex-chromosome aberrations, and from convergent correlations of 2D:4D with other proposed candidate markers of prenatal androgen action (namely, age at menarche [AAM], anogenital distance [AGD], finger-ridge count [FRC], and otoacoustic emissions [OAEs]). Particularly discussed are gaps in the literature, i.e., which validity tests remain to be conducted. On the whole, from this integrative inquiry we conclude that the actual validity status of 2D:4D as a retrospective marker for prenatal androgen action is notably weaker and more uncertain than stated in the 2D:4D research literature.

Keywords: *digit ratio (2D:4D), prenatal testosterone, validity, meta-analysis, systematic review.*

BODY DISSATISFACTION: EFFECTS OF GENDER, EXERCISE, PERSONALITY, AND DISORDERED EATING

Leanne Davis, Cecile Proctor, Scott Lilly & Lisa A. Best
Department of Psychology, University of New Brunswick (Canada)

Abstract

Body dissatisfaction (BD), the negative body self-evaluation (19), is common in western society and relevant to both males and females (14). Although there are numerous techniques to assess BD, most measures were developed for use with females and have been erroneously adapted for use with males (14) without considering the differing body concerns of males and females. Males (n = 115) and females (n = 329) completed five measures to assess BD as well as a range of self-report questionnaires to assess personality, disordered eating, and exercise behaviours. The goal was to determine which measure of BD predicts the most variability for both males and females. It appears that the best measure of female BD is the BIQ (explained 40.8% of the total variability in BD), and the best measure of male BD is the BDS (explained 39.9% of the total variability in BD). If a general, non-gender specific measure of BD is required, the BIQ is the most appropriate as it produced the more consistent results across the genders. Using this measure, BD was predicted by higher levels of emotional instability and disordered eating as well as lower scores on time dedicated to exercise. A single scale that accurately measures both the amount of dissatisfaction and its relative importance is critical because BD, specifically its links to the development of eating disorders, have been well-documented. These results will aid in the creation of an improved unisex measure of BD.

Keywords: *body dissatisfaction, gender, exercise, personality, disordered eating.*

1. Introduction

Body dissatisfaction (BD) is typically defined as the negative self-evaluation of one's body (19). Negative evaluations can be related to various physical bodily aspects such as body size, shape, muscularity/muscle tone, and weight (14). Until the 1990's, the majority of work on BD was performed using populations of young females (25), largely because body image has its underlying roots in clinical psychology and psychiatric work focused on eating disorders (14). Although these studies are of great significance, BD and its consequences are relevant to males and females of all ages (7), including those with subclinical levels of disordered eating and those without eating disorders (19).

Researchers have shown that individual differences in personality, as well as eating and exercise behaviours are associated with evaluative components of body image. Using the commonly accepted Five-Factor model of personality that includes Neuroticism, Agreeableness, Extraversion, Openness to Experience, and Conscientiousness, studies have found higher Neuroticism and lower Extraversion are associated with negative body image in both males and females (21; 22). In examining the literature it is apparent that the relationship between BD and exercise is complex. Several researchers have identified exercise as a behavioural indicator of BD in both genders and suggest that frequent exercise can increase BD rather than reduce it (14). Campbell and Hausenblas (2009) reported a small effect size indicating that exercise interventions resulted in improvements in body image compared to a control group.

Although similar in degree and psychological impact (18), males and females express their dissatisfaction in different ways (13). The male ideal tends to be muscular; specifically a V-shaped figure with an emphasis placed on the upper torso (i.e. large biceps, chest, and shoulders). Conversely, the female ideal is thin and fit, with the emphasis placed on the lower half of the body (i.e., slim hips, bottom, and thighs; 14). Therefore, BD in women is typically shown by their desire to lose weight, whereas men equally want to gain weight or lose weight (8). The literature has consistently reported a linear relationship between BD and BMI for women (BD increases as BMI increases; 3). In contrast, a curvilinear relationship is typically expected for men (both low BMI and high BMI are associated with

BD; 3). Finally, a common finding reported in the literature is the large gender gap in levels of BD (i.e., males experience significantly less dissatisfaction than females; 23).

Subjective measures of BD can be grouped into two categories: figural rating scales and self-report scales. Figural rating scales consist of a series of frontal profiles of men and women varying in size from very thin (underweight) to very large (overweight; 22). Typically, participants select the image that represents their current and ideal body sizes. The discrepancy between these ratings is a widely accepted measure of BD (9). Females show a reliable tendency to select a thinner body ideal than their current figure on these scales (14). Past research involving males has revealed that although some report a desire to be thinner or heavier, the majority of males desire to gain muscle mass (7). Self-report scales contain questions requiring participants to indicate the level of agreement or disagreement with statements relating to satisfaction with particular body parts, or with the body as a whole (i.e., 14).

Most measures of BD were developed for use with females, and therefore may not tap into the specific nature of male BD (2). Consider that many questionnaires do not assess the concept of muscularity but instead contain items that focus on areas of BD of concern to women. For example questions such as, “Have you been so worried about your shape that you have been feeling you ought to diet?” (6), and “I think my buttocks are too large” focus on dissatisfaction associated with being too heavy (11), which may not be applicable to male populations. A shortcoming of figural rating scales lies in the fact that they contain a predetermined set of body shapes that vary along the dimension of body fat or body mass index ($BMI=kg/m^2$), not muscularity (2). This is specifically problematic with regard to the appearance of males because a weight value does not discern distribution of body fat from muscle mass, thereby confounding body fat levels and muscularity (7). These pre-set body shapes could therefore exclude individuals who think that they currently have a large, but muscular, body (and are satisfied), or those who wish to obtain a large, muscular body (and are dissatisfied because they are too thin).

In addition to gender specific issues, most measures do not contain importance ratings, namely, a rating that would allow participants to indicate how important each item is to them. For example, consider a participant who selects an ideal figure that is very discrepant from their perceived current figure on a figural rating scale (indicating a high level of BD). For some people, this discrepancy does not bother them and they are, contrary to what the figural rating scale score would indicate, body satisfied. Most questionnaires also assume that all items are of equal relevance across individuals, and do not weigh the importance of each item as it relates to the individual. Following the development of the Body-Image Ideals Questionnaire (BIQ; 5), one of the first body image questionnaires to incorporate importance ratings, the Body Dissatisfaction Scale (MBDS; 18) was the first measure designed for men to incorporate importance ratings. Participants are able to rate the personal importance of each item on a scale from 1 to 10 (1 = no importance to you; 10 = great importance). This allows questions to be weighted by importance before total BD is calculated. Importance ratings may allow for a more accurate assessment of the amount of BD by identifying the degree of dissatisfaction. Before future research continues to examine gender differences in BD, it is proposed that an assessment tool that is valid and reliable for both genders should be developed.

1.1. Purpose of the Current Study

Given the paucity of research on gender comparisons, the purpose of the current study was to: (1) investigate gender differences on several BD measures, and (2) examine whether personality, disordered eating, and exercise behaviours affect dissatisfaction of males and females differently. The goal of this research was to inform the creation of a valid and reliable measure of BD that can be meaningfully used in both male and female populations.

2. Method

2.1. Participants

Data was collected using two data collection methods: online and in person. To ensure the comparability of the two sets of data, independent samples t-tests were conducted and there were no statistically significant differences between the samples on any of the scales. Thus, all analyses were conducted using data from the whole sample. In total, data was collected for 115 males ($M_{age} = 24.06$ years, $SD = 7.76$ years), and 329 females ($M_{age} = 22.28$ $SD = 7.25$ years). In this sample, the average BMI was 24.71 ($SD = 5.57$) indicating a sample that was at the high end of the normal weight range. As would be expected from a sample of young adults, 19.8% of females ($n = 65$) and 7% of males ($n = 8$) scored about 20 on the EAT-26, indicating potential problems with disordered eating and associated behaviours. In total, 1 male and 35 females reported that they have been previously diagnosed with an eating disorder.

2.2. Materials

All participants completed the Eating Attitudes Test-26 (EAT-26; 10); the Exercise Dependence Scale-21 (EDS-21; 15); the Godin Leisure-Time Exercise Questionnaire (LTEQ; 12); either the NEO Five-Factor Inventory-3 (NEO-FFI-3; 17), or the Big Five Inventory (online participants only; BFI; 16); the Body Dissatisfaction Scale (MBDS; 18); the Attention to Body Shape Scale (ABS; 1); the Body-Image Ideals Questionnaire (BIQ; 5); the Contour Drawing Rating Scale (respective male and female versions; CDRS; 24), and the Body Morph Assessment Paper Version (respective male and female versions; BMA; 20). All measures had acceptable to excellent levels of reliability ($\alpha = .72$ to $\alpha = 1.00$).

2.3. Procedure

Data were first collected via supervised group sessions, and then via an online survey, designed using the Qualtrics system. The online format allowed us to attain a wider demographic, and maximize the response rate. After providing informed consent, participants indicated their gender. This determined which questionnaires would be presented. With the exception of the demographics questionnaire (always presented first), the order of the questionnaires was counterbalanced to prevent order effects.

3. Results

Separate t-tests were used to examine gender differences across each of the measures of BD. Type I error rate was controlled for by using $p = .01$. In spite of this correction, results were interpreted cautiously because of the unequal number of males and females. Levene’s test for homogeneity of variances indicated no statistically significant differences in variability for males and females ($ps = .15$ to $.67$). Table 1 presents the descriptive statistics for males and females and shows females scored significantly higher on both figural rating and two self-report measures of dissatisfaction.

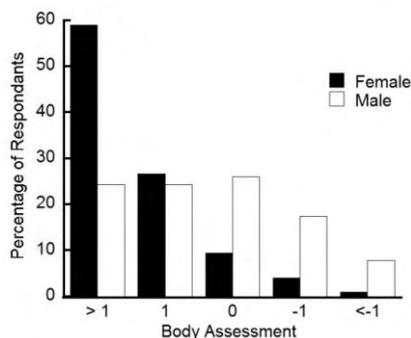
Table 1. Descriptive Statistics for Males and Females for each Measure of BD

	Males (N = 115)	Females (N = 329)	t-test (p value)
Figural Rating Scales			
CDRS	.49 (SD = 1.46)	1.87 (SD =1.53)	-8.48 (p = .0001)
BMA	.43 (SD = 1.62)	1.63 (SD =1.35)	-7.46 (p = .0001)
Self-Report Scales			
BDS	48.48 (SD = 20.85)	50.71 (SD = 18.85)	-1.06 (p = .29)
BIQ	1.47 (SD = 1.70)	2.17 (SD = 1.63)	-3.90 (p = .0001)
ABS	21.65 (SD = 6.06)	24.89 (SD = 5.60)	-5.22 (p = .0001)

Further, correlational analyses indicated moderate to strong correlations between the measures of BD. The correlation between the two figural rating scales was very high ($r = .857$). When examining the correlations with each of the figural rating scales and the self-report scales, the correlations between the CDRS and the other measures were larger and therefore, the CDRS was used in subsequent analyses.

To assess differences in the ways that males and females are dissatisfied, a Chi-square analysis was conducted on the CDRS and indicated that the number of males and females who wanted to gain or lose weight was different, $\chi^2(4) = 73.62$, $p = .0001$. Figure 1 illustrates that more females perceive themselves as significantly larger than their ideal. The pattern for males is more complex and the figure illustrates that although many males perceive themselves as too large, a significant number of males perceive themselves as too small. As would be expected, more males are satisfied with their bodies.

Figure 1. Summary of the Chi Square Analysis Reflecting Gender Differences in Body Ideals



3.1. Factors associated with BD

One of the goals of this study was to determine which measure of BD best described the BD of males and females. To examine this issue, four separate hierarchical regressions were conducted with the CDRS, ABS, BIQ, and BDS as criterion variables. The correlations between the three self-report scales ranged from $r = .27$ to $r = .54$; these values were below $r = .70$, preventing multicollinearity issues. In all regressions, age was entered in the first block, personality variables were entered in the second block, and disordered eating and leisure exercise and exercise dependence scores were entered in the third block. Table 2 presents the results of the regression and the predictors that accounted for a statistically significant proportion of the variability. As can be seen in the table, although the R^2 values were quite different, the patterns of predictors were similar for males and females. It is important to note both the R^2 values and the predictors were the same on the BIQ, suggesting that this measure of BD has similar predictive value for males and females.

Table 2. Summary of the Hierarchical Regression Analyses for Variables Predicting BD in Males and Females

CDRS		ABS		BIQ		BDS	
Male	Female	Male	Female	Male	Female	Male	Female
$R^2=.155$	$R^2=.209$	$R^2=.281$	$R^2=.386$	$R^2=.313$	$R^2=.408$	$R^2=.399$	$R^2=.267$
Age	Age						
$\beta=.253$	$\beta=.167$						
	Neuroticism	Neuroticism	Neuroticism	Neuroticism	Neuroticism	Neuroticism	Neuroticism
	$\beta = .239$	$\beta = .389$	$\beta = .359$	$\beta = .435$	$\beta = .306$	$\beta = .339$	
		Extraversion					
		$\beta = .200$					
	EAT-26	EAT-26	EAT-26	EAT-26	EAT-26	EAT-26	EAT-26
	$\beta = .316$	$\beta = .243$	$\beta = .493$	$\beta = .244$	$\beta = .399$	$\beta = .361$	$\beta = .339$
	Time Exercising	Exercise Tolerance	Exercise Lack	Time Exercising	Time Exercising		Exercise Reduction
	$\beta = -.219$	$\beta = .302$	$\beta = -.173$	$\beta = -.416$	$\beta = -.192$		$\beta = .223$

4. Discussion

Overall, females reported significantly higher levels of BD on four of the five measures, the CDRS, BIQ, ABS and the BMA, and this gender gap is commonly observed in the literature (7; 23). The current results also suggest that when measuring the amount of dissatisfaction, direction should be taken into account; most people who were dissatisfied felt that they were too large but some felt that they were too small. Of all the measures of BD, the BIQ produced the more consistent results across the genders. As can be seen in Table 2, the statistically significant predictors of BIQ dissatisfaction were identical for males and females. Using this measure, BD was predicted by higher levels of emotional instability and disordered eating as well as lower scores on time dedicated to exercise.

5. Limitations of the current study

A limitation of the current study was that the sample contained a low number of male participants in comparison to female participants, thereby possibly limiting the overall assessment of gender comparisons. Future research should aim to include a higher proportion of male participants in order to strengthen the power of the results. In addition, our predictor variables were selected because they are commonly associated with BD. In spite of the fact that each of our regression models led to statistically significant R^2 values, there was a large proportion of unaccounted variability in BD.

6. Conclusions

The goal of this study was to determine which measure of BD predicts the most variability for both males and females. The results provide interesting information that can be used by future researchers. Based on these results, it appears that the best measure of female BD is the BIQ and the best measure of male BD is the MBDS. If a general, non-gender specific measure of BD is required, the BIQ is the most appropriate choice.

References

- (1) Beebe, D. W. (1995). The attention to body shape scale: A new measure of body focus. *Journal of Personality Assessment*, 65, 486-501.
- (2) Cafri, G., & Thompson, J. K. (2004). Measuring male body image: A review of the current methodology. *Psychology of Men & Masculinity*, 5, 18-29.
- (3) Calzo, J. P., Sonnevile, K. R., Haines, J., Blood, E. A., & Austin, S. (2012). The development of associations among body mass index, body dissatisfaction, and weight and shape concern in adolescent boys and girls. *Journal of Adolescent Health*, 51, 517-523.
- (4) Campbell, A., & Hausenblas, H. A. (2009). Effects of exercise interventions on body image: A meta-analysis. *J Health Psychol*, 14, 780-793.
- (5) Cash, T. F. (2004). *Body image assessment manuals and questionnaires*. Available from the author at <http://www.bodyimages.com>.
- (6) Cooper, P. J., Taylor, M. J., Cooper, Z., & Fairbum, C. G. (1987). The development and validation of the Body Shape Questionnaire. *International Journal of Eating Disorders*, 6, 485-494.
- (7) Frederick, D. A., Buchanan, G. M., Sadehgi-Azar, L., Peplau, L. A., Haselton, M. G., Berezovskaya, A., & Lipinski, R. E. (2007). Desiring the muscular ideal: Men's body satisfaction in the United States, Ukraine, and Ghana. *Psychology of Men & Masculinity*, 8, 103-117.
- (8) Furnham, A., Badmin, N., & Sneade, I. (2002). Body image dissatisfaction: Gender differences in eating attitudes, self-esteem, and reasons for exercise. *Journal of Psychology*, 136, 581-596.
- (9) Gardner, R. M., & Brown, D. L. (2010). Body image assessment: A review of figural drawing scales. *Personality and Individual Differences*, 48, 107-111.
- (10) Garner, D. M., Olmsted, M. P., Bohr, Y., & Garfinkel, P.E. (1982). The Eating Attitudes Test: Psychometric features and clinical correlates. *Psychological Medicine*, 12, 871-878.
- (11) Garner, D. M., Olmstead, M. P., & Polivy, J. (1983). Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. *International Journal of Eating Disorders*, 2, 15-34.
- (12) Godin, G., & Shepard, R. J. (1997). Godin Leisure-Time Exercise Questionnaire. *Medicine and Science in Sports and Exercise*. 29 June Supplement: S36-S38.
- (13) Gray, J. J., & Ginsberg, R. L. (2007). Muscle dissatisfaction: An overview of psychological and cultural research and theory. In J. K. Thompson and Cafri (Eds), *The Muscular Ideal: Psychological, Social and Medical Perspectives*. Washington, DC: American Psychological Association.
- (14) Grogan, S. (1999). *Body image: Understanding body dissatisfaction in men, women, and children*. New York, NY: Routledge.
- (15) Hausenblas, H. A. & Symons Downs, D. (2002). How much is too much? The development and validation of the exercise dependence scale. *Psychology and Health*, 17, 387-404.
- (16) John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (pp. 102-138). New York: Guilford Press.
- (17) McCrae, R. R., & Costa, P. T., Jr. (2010). *NEO Inventories: Professional manual*. Lutz, FL: Psychological Assessment resources, Inc.
- (18) Ochner, N., Gray, J. A., & Brickner, K. (2009). The development and initial validation of a new measure of male body dissatisfaction. *Eating Behaviours*, 10, 197-201.
- (19) Pearson, A. N., Heffner, M., & Follette, V. M. (2010). *Acceptance & commitment therapy for body image dissatisfaction: A practitioner's guide to using mindfulness, acceptance & values-based behavior change strategies*. Oakland, CA: New Harbinger Publications, Inc.
- (20) Stewart, T. M., Allen, H. R., Han, H., & Williamson, D. A. (2009). The development of the Body Morph Assessment version 2.0 (BMA 2.0): Tests of reliability and validity. *Body Image*, 6, 67-74.
- (21) Swami, V., Hadji-Michael, M., & Furnham, A. (2008). Personality and individual difference correlates of positive body image. *Body Image*, 5, 322-325.
- (22) Swami, V., Salem, N., Furnham, A., & Tovee, M. (2008). Initial examination of the validity and reliability of the female Photographic Figure Rating Scale for body image assessment. *Personality and Individual Differences*, 44, 1752-1761.
- (23) Thompson, J. K. (1990). *Body image disturbance: Assessment and treatment*. Elmsford, NY: Pergamon Press.
- (24) Thompson, M. A., & Gray, J. J. (1995). Development and validation of a new body image assessment tool. *Journal of Personality Assessment*, 64, 258-269.
- (25) Tiggemann, M. (2004). Body image across the adult life span: Stability and change. *Body Image*, 1, 29-41.

COGNITIVE FUNCTIONS OF PATIENTS UNDERGOING CARDIAC SURGERY

Daria Eremina

Saint-Petersburg State University / Federal Almazov North-West Medical Research Centre (Russia)

Abstract

Coronary artery bypass grafting (CABG) remains one of the most commonly performed surgical procedures for more than 30 years. Numerous studies have demonstrated the effectiveness of CABG in treating coronary heart disease (CHD). At the same time, cardiac patients frequently experience neurocognitive complications as a result of the operation. Recent researches have shown severe cognitive disorders accompanying cardiac surgery. However, mild cognitive dysfunction, more amenable to prevention and correction, is less studied because of difficulties in diagnosing. Moreover, the underlying mechanism leading to cognitive decline is still unclear.

For this reason, we aim at analysing the dynamics of cognitive functions, dependent on biomedical and psychosocial factors, of patients with CHD undergoing CABG. The work focuses on studying the main indicators of cognitive functioning (including active attention and concentration, verbal and nonverbal memory, psychomotor speed, and thinking abilities) and on comparing cognitive functioning with the normative data.

The present study enrolled 118 patients (of average age 59.71 ± 7.32 years) who underwent coronary artery bypass grafting. The examination using a neuropsychological test battery (including WAIS, TMT-test, Stroop test, TAS, Benton test, etc.) was performed in three stages: two days before CABG, 12-14 days and three months after the surgery.

The results obtained suggest that the majority of subjective cognitive complaints is connected with memory decline after CABG. Patients with CHD experience significant postoperative cognitive decline mostly in verbal memory and attention. Possible reasons for postoperative cognitive decline include conditions and consequences of the surgery, normal aging, and brain injury at the time of coronary surgery. At the same time, positive dynamics in the visual and logical memory, as well as in spatial and verbal-logical thinking, was observed. Upon rehabilitation, the observed deficits in attention as compared to the normative data improved to the normal level three months after the surgery. According to the results of the study, the most important psychosocial factors of deterioration of cognitive functioning after surgery are: conflicts in family relationships, low social activity after surgery, a lower level of education, unemployment, and the pessimistic assessment of the prospects of returning to work. The data obtained confirm and extend the hypothesis of cognitive reserve, according to which environmental factors can reduce the vulnerability of individuals to the age-related cognitive decline and pathological brain processes.

Keywords: *cognitive functions, coronary heart disease, rehabilitation, cardiac surgery.*

1. Introduction

According to WHO, about 16.7 million people in the world die every year from cardiovascular diseases, including coronary heart disease (CHD). CHD is a leading disease in incidence and mortality in the general population [1,2]. One of the most important treatments of coronary heart disease is coronary artery bypass grafting (CABG), which's been one of the most commonly performed surgeries for more than 30 years. The main purpose of the operation includes: extending the patient's life, reducing the somatic symptoms associated with CHD, and improving the quality of life. However, CABG patients frequently experience neurocognitive complications as a result of the surgery. The current level of development of cardiac technology has resulted in a significant reduction of severe neurological complications. At the same time, mild postoperative neurological disorders (primarily, cognitive decline) remain a widespread problem [3].

In general, a cognitive decline means a subjectively and/or objectively detectable reduction of cognitive functions (attention, memory, gnosis, praxis, speech, thought, etc.). This reduction affects the efficiency of learning, professional, consumer, and social activities. The problem of a cognitive decline after CABG has been under the great attention recently.

Previous studies, which evaluate the effect of CABG on cognitive abilities, mostly consider long-term effects of the operation [4]. However, the studies of cognitive functioning in the early postoperative period are very controversial. For instance, some studies [5] describe a reduction of cognitive functioning in the early postoperative period, some authors report on the absence of changes and even on an improvement [6] of cognitive functioning after CABG. After that, recent studies have shown severe neurocognitive complications in cardiac patients after surgery. At the same time, mild cognitive dysfunction remains outside the scope of research because of difficulties in diagnosing in the early postoperative period. The situation is also complicated by the fact that mild cognitive dysfunction is less realized by the patients than by clinicians. In addition clinicians frequently reject subjective complaints about cognitive decline from patients and their relatives [7]. More over, the vast majority of current studies mostly considers negative changes in cognitive functioning, while positive changes are neglected. Finally, most studies only state the presence of some cognitive disorders, accompanying cardiac pathology, whereas the underlying mechanism leading to cognitive decline is still unclear.

The present research aims at a comprehensive study of the characteristics and disorders of cognitive functions in patients with CHD undergoing CABG. The work focuses on studying the dynamics of the main indicators of cognitive functioning, including active attention, psychomotor speed, memory, and thinking abilities.

2. Materials and methods

118 patients undergoing coronary artery bypass grafting with standard cardiopulmonary bypass technique in Federal Almazov Medical Research Centre (Saint-Petersburg, Russia) were studied. Cardiopulmonary bypass (CPB) is a technique that temporary takes over the function of the heart. CPB is commonly used in heart surgery because of the difficulty of operating on the beating heart and it is well known to contribute to cognitive decline. The informed consent was obtained from all patients. Among them there were 58 (82.9%) men and 12 (17.1%) women; the average age of the patients was 59.71 ± 7.32 years. 48.6% of the patients were employed before the operation, 54.3% of patients were planning to return to their work after the operation. According to clinicians, the majority of the patients had no contradictions to come back to work three months after the surgery. But in fact, only 20.5% returned.

The examination was performed in three stages: two days before CABG, immediately before discharge from a hospital (12-14 days after CABG), and three months after CABG.

The methods used in the current study were selected with regard to the bio-psycho-social approach in modern clinical psychology and in accordance with the «Statement of Consensus on Assessment of Neurobehavioral Outcomes after Cardiac Surgery» [8].

The study of cognitive functions of patients with CHD undergoing CABG was performed with the use of the following methods.

- (1) Verbal learning test «10 words» was used in studying short- and long-term verbal memory.
- (2) The method «Remembering stories» was used in studying logical memory.
- (3) «The Benton Visual Retention Test» was used in studying visual perception and visual memory.
- (4) The subtest «Similarities» of the Wechsler Adult Intelligent Scale (WAIS) was used in studying abstract verbal reasoning.
- (5) The «Simple analogy» method was used in studying verbal-logical thinking.
- (6) The subtest «Block Design» of the Wechsler Adult Intelligent Scale (WAIS) was used in studying spatial thinking.
- (7) The Trail Making Test (TMT Parts A and B) was used in studying psychomotor speed, attention switching and mental flexibility.
- (8) The Stroop Color-Word Test (SCWT) was used in studying two indicators: processing speed, as well as selective attention and resistance to cognitive interference.

The results obtained were processed with the use of standard statistical techniques included in SPSS and Statistica. We used Wilcoxon signed rank tests for a comparative analysis of the preoperative and postoperative variables of cognitive functioning. The scores obtained vs normative scores were analysed by using the t-tests. Differences were considered significant at $p < 0.05$.

3. Results

The investigation was started by asking patients whether they had had any problems in cognitive functioning. 58.6% of the patients answered positively and declared memory complaints.

In accordance with the purposes of the research, the dynamics of the main indicators of the cognitive functioning of patients with CHD during the rehabilitation after CABG was studied (Table 1).

Table 1. Indicators of cognitive functioning of patients undergoing CABG

The main indicators of cognitive functioning	The first stage (before CABG)	The second stage (12-14 days after CABG)	The third stage (three months after CABG)
	M ± m	M ± m	M ± m
Short-term verbal memory («10 Words»), the number of reproduced words after 5 presentations	7.97 ± 1.58	8.05 ± 1.46	7.24 ± 1.87
Long-term verbal memory («10 Words»), the number of reproduced words after 1 hour of presentation	5.44 ± 2.09	5.78 ± 2.05	3.20 ± 1.84
Visual memory (Benton test), score	6.64 ± 1.76	7.03 ± 2.05	7.96 ± 1.56
Logical memory («Remembering Stories»), score	3.98 ± 1.17	4.35 ± 1.06	4.64 ± 0.99
Abstract verbal reasoning (subtest «Similarity»), score	15.72 ± 4.29	17.20 ± 3.88	17.32 ± 3.84
Verbal-logical thinking («Simple Analogy»), score	7.68 ± 2.13	8.27 ± 1.78	8.04 ± 2.28
Spatial thinking (subtest «Block Design»), score	29.82 ± 10.47	29.43 ± 11.17	32.0 ± 12.47
Psychomotor speed (TMT-A), score	5.18 ± 2.93	5.05 ± 3.33	6.50 ± 3.23
Attention switching and mental flexibility (TMT-B), score	5.17 ± 3.0	4.57 ± 3.41	6.0 ± 3.46
Processing speed (SCWT), score	7.21 ± 2.16		8.29 ± 2.31
Selective attention and resistance to cognitive interference (SCWT), score	2.97 ± 2.87		5.26 ± 3.67

The short- and long-term verbal memory was investigated by the verbal learning test «10 words». The indicator of the short-term verbal memory span is statistically significantly higher before CABG than three months after. Moreover, 12-14 days after the operation the short-term verbal memory span is also larger than three months after the operation. As to the long-term verbal memory span the same statistically significant trend was observed.

On the contrary, the visual memory indicator increases during the whole period of observation (from the first to the third stage). The logical memory improves during both the hospital treatment period (from the first to the second stage of the study) and the whole period of the observation (from the first to the third stage of the study). Thus, the reduction in the verbal memory span and improvement in the visual and logical memory as a result of CABG were demonstrated.

Verbal-logical thinking, spatial thinking and abstract verbal reasoning of the patients were also studied during the research. The indicator of verbal-logical thinking is higher 12-14 days after CABG than before it. However, we have observed no significant changes in verbal-logical thinking between the second and the third stages of the research. The indicator of abstract verbal reasoning shows exactly the same dynamics. It is also higher 12-14 days after CABG than before it. The dynamics of spatial thinking was positive as well. The indicator measured three months after the surgery is higher than the preoperative one. This data suggests that CABG, mostly due to the improved cerebral blood flow, can have a positive impact on the thinking abilities of patients with CHD.

The psychomotor speed, attention switching, and mental flexibility were studied by the Trail Making Test. The changes in the psychomotor speed are not statistically significant. However, the indicator of attention switching and mental flexibility is statistically significantly lower after the surgery than before.

The indicators of processing speed, selective attention and resistance to cognitive interference were measured by the Stroop-test. The changes in the processing speed are not statistically significant. At the same time, the indicator of selective attention and resistance to cognitive interference statistically

significantly improves during the treatment. These facts show a reduction in the attention switching and in the tendency to interfere during mental work, as well as an improvement in functioning under the influence of external stimuli.

4. Conclusion

The present research demonstrates significant and stable changes in the cognitive functions of patients with CHD undergoing CABG with cardiopulmonary bypass. In agreement with previous results [9,10], we observed negative changes in both short- and long-term memory. At the same time, a positive trend was discovered in the visual and logical memory, active attention, and thinking activity. This positive dynamics can be a result of the coronary revascularisation and improved cerebral blood flow. The reason for postoperative cognitive dysfunctions is yet unknown. Possible reasons include conditions and consequences of the surgery, normal ageing during the rehabilitation period, brain injury at the time of coronary surgery, changes in lifestyle of cardiac patients, or a combination of these and other factors. The results obtained can be used in diagnosing cognitive impairments and in developing and improving rehabilitation programs for patients undergoing CABG.

5. Funding

This work was supported by the Russian Foundation for Humanitarian Research. Grant 14-06-00163a.

References

- [1] Leal J, Luengo-Fernández R, Gray A, Petersen S, Rayner M. Economic burden of cardiovascular diseases in the enlarged European Union. *Eur Heart J* 2006;27:1610-1619.
- [2] World Health Organization. *World Health Statistics 2006*. Geneva, 2006.
- [3] Bergh C, Backstrom M, Jonsson H, et al. In the eye of both patient and spouse: memory is poor 1 to 2 years after coronary bypass and angioplasty. *Ann Thorac Surg* 2002;4:689-694.
- [4] Marasco SF, Sharwood LN, Abramson MJ. No improvement in neurocognitive outcomes after off-pump versus on-pump coronary revascularisation: a meta-analysis. *Eur J Cardiothorac Surg* 2008;33:961-970.
- [5] Hudetz JA, Patterson KM, Byrne AJ et al. Postoperative delirium is associated with postoperative cognitive dysfunction at one week after cardiac surgery with cardiopulmonary bypass. *Psychol Rep* 2009;105:921-932.
- [6] Van den Goor J, Saxby B, Tijssen J et al. Improvement of cognitive test performance in patients undergoing primary CABG and other CPB-assisted cardiac procedures. *Perfusion* 2008;23:267-273.
- [7] Schwarza N, Kastauna S, Schoenburgh M, Kapsa M, Gerrietsa T. Subjective impairment after cardiac surgeries: the relevance of postoperative cognitive decline in daily living. *Eur J Cardiothorac Surg* 2013;43:162-166. doi: 10.1093/ejcts/ezt078
- [8] Murkin JM, Newman SP, Stump DA, Blumenthal JA. Statement of consensus on assessment of neurobehavioral outcomes after cardiac surgery. *Ann Thorac Surg* 1995;59:1289-1295.
- [9] Vingerhoets G, Van Nooten G, Vermassen F, De Soete G, Jannes C. Short-term and long-term neuropsychological consequences of cardiac surgery with extracorporeal circulation. *Eur J Cardiothorac Surg* 1997;11:424-431. doi: 10.1016/S1010-7940(96)01031-7
- [10] Newman S. Neuropsychological and psychological changes. In: Smith P, Taylor K, editors. *Cardiac surgery and the brain*. London: Hodder and Stoughton 1993:34–54.

HOW DO I SAY “SAD?” BUILDING A DEPRESSION-LEXICON FOR PSYCHOLOGIST IN A POCKET

Roann Munoz Ramos¹, Paula Glenda Ferrer-Cheng²,
Jó Ágila Bitsch³ & Stephan Michael Jonas¹

¹Department of Medical Informatics, RWTH Aachen University Hospital (Germany)

²The Graduate School, University of Santo Tomas (Philippines)

³Communication and Distributed Systems, RWTH Aachen University (Germany)

Abstract

Language can be used as an indicator of psychological health. The study of language, particularly text analysis, assumes, among others, that mental states are reflected in the words we use and that certain language features can provide markers for mental illnesses. In studying depression and its characteristic symptoms, everyday language may reveal cognitive mechanisms, such as negative schemas and self-focus ruminations.

An emerging trend in health care, mobile health (mHealth) uses wireless (mobile) technology in medicine and public health. Extending its functions in the field of psychological health, mental mHealth augments clinical assessment via real-time measurements. It also reduces clients' recall bias and fear of being stigmatized. Although mental mHealth software application have been largely concentrated outside Asia, the popularity of mobile phones in the Philippines is perceived as a promising aspect in the development of mental mHealth applications, such as the *Psychologist in a Pocket* (PiaP) (Ramos, Winter, Smith & Bitsch, 2012).

Despite the growing recognition of depression in the Philippines, apprehension surrounding mental illness prevents individuals from taking necessary steps towards depression assessment and treatment. To partially address this, *PiaP*, as an adjunct to initial psychological assessment, aids in screening depressed mood non-intrusively using text analysis technology on the smartphone device itself. Text inputs are gathered and logged in real time and compared against a predefined set of keywords indicative of depression. The language behavior is captured over a longer period of time, thereby creating a more complete picture of the user's experience and reducing recall bias.

This study presents the first part of our on-going validation of *PiaP*. In building the *PiaP* lexicon in English and in Filipino, we utilized two general approaches in order to represent the entire domain of depression and its 13 symptom categories based on DSM and ICD: top-down (deductive) and bottom-up (inductive). Words for analysis were derived from focus group discussions with university students, interviews with mental-health professionals and the review of psychological tests. In addition, we considered cultural idiosyncrasies in text writing (e.g., use of spelling variations/shortened words) and current expressive styles found in social media (e.g., use of emoticons and emojis). As a result, the lexicon of the current *PiaP* prototype is composed of over 11,400 main keywords and its derivatives and more than 800,000 spelling variations.

Keywords: *depression, Psychologist in a Pocket, mHealth, lexicon development, text analysis.*

1. Introduction

Whether stating facts, asking questions or exchanging ideas, we use language as a means to communicate. Being social animals, language is instrumental in developing and maintaining relationships. In addition, language (and the words we employ) provides suggestions as to our educational background, social standing, various motivations and other (more or less) conspicuous personal circumstances.

From a psychological perspective, our use of everyday words reflects on-going thoughts and emotions, which we may or may not be fully aware of. Freud and psychoanalysis, for example, view that the contents of one's unconscious – the repository of repressed, distressing psychological contents and processes - are expressed in slips of the tongue (verbal slips or parapraxes). The aim of projective

techniques, which require participants to, among others, fill in incomplete sentences, draw common objects or weave a story, is to externalize (project) unpleasant feelings or experiences. The use of vague stimuli in this technique allows the unburdening of thoughts or emotions that are difficult to articulate.

This perspective that language can be a diagnostic approach to gauge mental and emotional health has been further scrutinized using more precise approaches. For instance, one methodology is quantitative text analysis or the statistical analysis of word use. A specific example is word count strategies, involving simple word counts of standard grammatical units (e.g., personal pronouns) and psychologically derived linguistic dimensions (e.g., emotion words) (Pennebaker, Mehl & Niederhoffer, 2003).

Advancements and rapid changes brought about by technology have heralded greater scientific sophistication and yielded newer paradigms in the psychological analysis of word usage. One illustration is computerized text analysis, the assignment of scheme categories to text on pre-defined variables with the aid of computers. Programs that emerged in the 1960's, such as General Inquirer (Stone et al., 1966) and WORDS (Iker and Klein, 1974), were significant in providing the impetus towards this direction. The Linguistic Inquiry and Word Count (LIWC), which appeared in 2001, is a transparent text analysis program that counts words in psychologically meaningful categories (Tausczik & Pennebaker, 2010). Pedesis (Neuman et al., 2012), a system that screens for depression proactively and automatically in texts, identifies metaphors associated with depression. Another system, Emotex, identifies and classifies emotions in Twitter messages (Hasan, Rundensteiner & Agu, 2014).

1.1. Characteristics of language among the depressed

For the past years, there has been heightened awareness of the strain that mental illness brings – in terms of individual costs, social impact and economic liability. In addition, it affects physical health and can be more impairing than common chronic medical disorders (Kazdin & Rabbit, 2015; Druss et al., 2009). Depression, which is chronically disabling, is ranked as the third most common among mental and health diseases (World Federation for Mental Health, 2011) and is predicted to be the number one disability in 2030 (WHO, 2008).

Everyday language use among individuals with depression may serve as a marker of the illness. Beck's Cognitive Theory explains the role of negative schemas in the consistently pessimistic way depressed individuals view themselves. Weintraub (1981) notes that the frequency of first-person singular pronouns is associated with one's level of depression. Furthermore, the Self-Focus Model of Depression (Greenberg & Pyszczynski, 1986) emphasizes the inclination to ruminate and to construe events in terms of themselves. Such attention placed on one's self triggers negative self-schema. Individuals who are experiencing or had experienced depression may be identified through their preoccupation with negative thoughts and a heightened sense of self-awareness (Rude, Gortner, and Pennebaker, 2004). The dimensions of symptom-specificity in depression (affective, cognitive, somatic) are likewise reflected with the use of affective-, cognitive- and somatic-related words in natural spoken or written language (Vanheule, Desmet and Meganck, 2009).

Text, emails and social media, which have become communication staples, can provide us with an understanding of emotional expressions among depressed individuals in their written texts. Social media postings can be valuable measures of depression symptoms, such as high self-focus attention, heightened relational concerns, decreased social activity and raised negative affect, that signal its onset (De Choudhury et al., 2013). Analysis of texts can be derived from social network sites like Facebook and Twitter. Studies have shown that college students may reference their feelings of depression in their status updates in Facebook. In addition, the online reinforcements and comments to their status updates allow them to publicly discuss their experiences via Facebook (Moreno et al, 2011).

1.2. Mental mobile health

The pervasiveness of mobile technology opens an innovative avenue for the enhancement of health care practice. Mobile health capitalizes on mobile technology for more efficient health monitoring and generation of health data. Advantages of this approach are especially felt, for instance, when health practitioners have to remotely monitor patients' health and housebound patients to be in-touch with their clinicians.

Knowing the seriousness of depression and other mental illnesses, mobile technology can be tapped to address mental health concerns. Applying mobile health to mental health assessment may augment the conventional procedures of direct interactions between doctors and patients (e.g., face-to-face interviews, clinical observations). Responses to paper-and-pencil tests may be affected by recall errors and misperceptions. With this technique, greater objectivity is attained, since such errors and biases are reduced or eliminated.

1.3. Psychologist in a pocket

Psychologist in a Pocket (PiaP) is an Android smartphone application (app) for screening depression symptoms via text analysis (Bitsch et al, 2015). It relies on Ecological Momentary Analysis (EMA) in capturing behavior – text inputs in electronic communications – at the moment of occurrence or in real-time. Advantages of adopting this approach include the ability to detect fleeting moods and to gather data in various settings passively. Most importantly, such an approach allows for privacy.

PiaP is not aimed at replacing human mental health professionals. Instead, it is designed as an adjunct in depression monitoring and assessment. To address privacy and security concerns, the app neither requires any Internet connectivity nor permission to access the Internet. PiaP data is gathered and evaluated only in one's local device. Unless given explicit consent, user input data will never be uploaded to a cloud service. Optional plug-ins may be installed only if the user wishes to inform a trusted third party of his/her mental health status.

2. Objectives

This paper focuses on the process of lexicon development used in PiaP. We describe the top-down and bottom-up approaches to build the corpus of words related to depression, in English and in Filipino, which serve as basis of our application's text analysis. We likewise considered the particular language culture of our target population (adolescents and young adults) in establishing our lexicon.

3. Methods

3.1. Use of established classification systems

We adopted the symptom description of Depressive Episode based on the DSM-5 and ICD-10 as basis for PiaP's lexicon categories. All words were classified into at least one of the 13 symptom categories: Mood, Interest, Anxiety, Guilt & Self-esteem, Fatigue, Appetite & Weight, Concentration, Sleep, Psychomotor Agitation, Psychomotor Retardation, Histrionic Behavior, Alcohol & Substance Abuse, and Suicide.

3.2. Review of Depression Tests

We analyzed 18 commonly used depression tests (e.g., Beck's Depression Index (BDI)-II, Patient Health Questionnaire (PHQ)-9, Inventory to Diagnose Depression (IDD)). Frequencies for words, phrases and sentences from these sources were computed and assigned to a PiaP keyword category.

3.3. Cultural considerations in expressing depression

To encompass a more accurate representation of the linguistic expressions among university students, we conducted seven FGD sessions (45-60 minutes each) with 76 students from Manila (mean age: 17.28 years; female: 61%). Based on BDI-II scores, their depression symptoms ranged from mild (42%) to severe (20%). Participants were randomly assigned to one session (10 – 11 participants per session). Discussion themes included: descriptions of personal experiences with depression, words to convey depression in mobile text inputs and in social media and recognition of depression in another's texts. They were also asked to select generally used emoticons or emojis to describe their experiences of depressive symptoms.

Filipino text writing culture is unique. Most especially among adolescents, it is typical to "shorten" or abbreviate texts. In addition, the practice of "textolog" and "tag-lish" – mixing Filipino/Tagalog and English words in informal verbal and written communications – is common. Recognizing this, we selected 328 students from various colleges in Metro Manila and in Central Luzon to provide at least three spelling variations of the keywords we compiled.

3.4. Consultations with mental health professionals

We interviewed psychiatrists (2), clinical psychologists (2) and a support group facilitator on what typical words and phrases their patients and clients use to describe depression and their insights on having a mobile application for depression. We also presented to them the words we gathered with our FGD participants for validation.

4. Findings & Discussion

PiaP's lexicon (English and Tagalog) consists of 11,417 keywords related to depression (including phrases and their derivatives). Each was classified into one of the 13 categories of the PiaP,

which are aligned with the symptoms of depressive episode as outlined in DSM-5 and ICD-10. Words are mostly classified under Mood (16%), followed by Appetite and Weight (14%) and Guilt & Self-Esteem (10%). As supported by the Self-Focus Model of Depression, we also observed that 1st person pronouns often accompanied the keywords, reflecting the self-referential tendency when participants describe experiences with depression.

Cultural specificity and generational attributes may have an impact on the differences in depression expression and experience. Since we also considered the texting background among Filipino adolescents, it was quite common among our participants to give more than three spelling variations to a particular keyword (e.g., “depressed” can be written in 6 different ways, including five spelling variations). In total, we collated and analyzed 823,869 spelling versions (keywords and personal pronouns). Aside from the lexicon, we included emoticons and emojis that our participants reported to use. Expressing feelings and body language using symbols and characters during text communication is widespread among young people and plays a dominant role in their social interchange as a way to compensate for the absence of face-to-face interactions during online communications. Adolescents tend to be adept at using emoticons. In a study of English language blogs, teen users were able to express intense and strong emotions using emoticons (Subrahmanyam & Smahel, 2010).

4.1. Review of depression tests

Words related to guilt and lowered self-esteem (33%) depressed mood (23%) and decreased interest (9%) were more frequently mentioned. Item statements were mostly written in the first-person point of view. We found almost no references to substance abuse in these tests. Substance abuse is generally regarded as a separate condition and, when combined with depression, comprises a dual diagnosis. Despite studies have shown a close link between the two conditions (e.g., Link et al, 1997), one does not directly cause the other.

4.2. FGD

Our participants (who were identified as experiencing depression to a certain degree) generally characterized their emotions as “sad,” “unhappy” and “lonely” (27%). They also described themselves as “a loner” (9%). Another common description (14%) is having concentration problems (e.g., no focus, not myself, having far-away thoughts). Aside from the affective dimension, having negative thoughts are typically present among depressed individuals (Beck, 2011). Cognitive deficits, such as distractibility, are further exacerbated by the condition (e.g., Hammar & Ardal, 2009).

The use of social network sites (SNS), such as Facebook and Twitter, is popular among our participants to express depression (56%). This allows them to escape stigma and to subtly seek help from friends (9%). Expressing feelings and thoughts on suicide can be more “indirect” and “resigned,” as represented in statements such as “God please take me.” Further, our participants, despite being non-mental health practitioners, recognize depression in other’s texts and social media through the presence of sad words (36%) and the abrupt change of topic or behavior (24%). As mentioned by De Choudhury et al. (2013), these can point out to the onset of depression.

4.3. Consultations with mental health professionals

There was an agreement among the mental health professionals we interviewed that the PiaP lexicon is representative of the experience of depression among their clients and patients. They also shared their observations that personal descriptions of depression may differ from how items in standardized tests are formulated. Further, contemporary modes of communication, such as SNS and texting, provide an avenue for expressing emotions especially among adolescents and young adults. Lastly, mobile technology may help in reaching out to more individuals suffering from mental health illnesses. An application for depression may be useful in screening and monitoring emotions.

5. Conclusions & future research directions

Mobile technology is changing the health care landscape. In the field of mental health, mobile technology provides an additional resource for earlier detection and screening for mental illness. In this work, we present the creation of a bilingual lexicon on depression based on the DSM-5 and the ICD-10 classification systems for the mobile application PiaP.

Initial results of PiaP are promising. The lexicon has undergone an initial validation phase and is currently being tested among university students. For future research directions, we will conduct additional studies regarding the lexicon’s validity and possible extension to mobile application-based depression screening in terms of the dimensionalities in measuring depression, such as physical activity, sleep and voice features and markers. We plan to incorporate adjuncts to monitor physical activity. We

are hopeful that research possibilities in the field of mobile health, such as the refinement in recognizing the more subtle signs of depression and other mental disorders, such as language use, will further advance.

While we did our best to address these issues in the study design, we likewise acknowledge that the novelty of this approach to mental health care leads to new legal and ethical questions. There is a need to establish more concrete and exhaustive guidelines to ensure patient safety for this technique to eventually become a part of the toolbox in the psychological community.

References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Virginia: American Psychiatric Publishing.
- Beck, J. S. (2011). *Cognitive behavior therapy: Basics and beyond* (2nd Ed.). New York: Guilford Press.
- Bitsch, JA, Ramos, R, Ix, T, Ferrer-Cheng, PG, & Wehrle, K. (2015). Psychologist in a Pocket: Towards depression screening on mobile phones. In B Blobel, M Linden & MU Ahmed, MU (Eds.). *pHealth 2015: Proceedings of the 12th International Conference for Wearable Micro and Nano Technologies for Personalized Health*. Amsterdam: IOS Press.
- De Choudhury, M, Gamon, M, Counts, S & Horvitz, E. (2013). Predicting depression via social media. *9th International AAAI Conference on Web and Social Media Proceedings*, 1-10.
- Druss, BG, Hwang, I, Petukhova, M, Sampson, NA, Wang, PS, & Kessler, RC. (2009). Impairment in role functioning in mental and chronic medical disorders in the US: Results from the National Comorbidity Survey Replication. *Molecular Psychiatry*, *14*, 728-737.
- Greenberg, J., & Pyszczynski, T. (1986). Persistent high self-focus after failure and low self-focus after success: The depressive self-focusing style. *Journal of Personality and Social Psychology*, *50* (5), 1039-1044.
- Hamar, A. & Ardal, G. (2009). Cognitive functioning in major depression – A summary. *Frontiers in Neuroscience*, *3*(26), 1-7.
- Hasan, M, Rundensteiner, E, & Agu, E. (2014). EMOTEX: Detecting emotion in Twitter messages. *Social Computing - Academy of Science and Engineering (ASE)*, 1-10.
- Iker, HP & Klein, R. (1974). WORDS: A computer system for the analysis of content. *Behavior Research Methods & Instrumentation*, *6*, 430-438.
- Kazdin, AE & Rabbit, SM. (2015). Novel models for delivering mental health services and reducing the burdens of mental illness. *Clinical Psychological Science* *1*(2), 170-190.
- Link, B, Struening, E, Rahav, M, Phelan, JC, & Nuttbrock, L. (1997). On stigma and its consequences: Evidence from a longitudinal study of men with dual diagnoses of mental illness and substance abuse. *Journal of Social Health & Behavior*, *38*(2), 177-190.
- Moreno, MA, Jelenchick, LA, Egan, KG, Cox, E, Young, H, Gannon, KE & Becker, T. (2011). Feeling bad on Facebook: Depression disclosures by college students on a social networking site. *Depression and Anxiety*, *28*, 447-455.
- Neumann, Y, Cohen, Y, Assaf, D, & Kedma, G. (2012). Proactive screening for depression through metaphorical and automatic text analysis. *Artificial Intelligence in Medicine*, *56*, 19-25.
- Pennebaker, JW, Mehl, MR, & Niederhoffer, KG. (2003). Psychological aspects of natural language use: Our words, our selves. *Annual Review of Psychology*, *54*, 547-577.
- Rude, SS, Gortner, EM & Pennebaker, JW. (2004). Language use of depressed and depression-vulnerable college students. *Cognition & Emotion*, *18*(8), 1121-1133.
- Stone, JP, Dunphy, DC, Smith, MS, & Ogilvie, DM (1966). *General Inquirer: A computer approach to content analysis*. Massachusetts: MIT Press.
- Subrahmanyam, K & Smahel, D. (2010). *Digital youth: The role of media in development*. New York: Springer.
- Tausczik, YR & Pennebaker, JW. (2010). The psychological meaning of words: LIWC and computerized text analysis. *Journal of Language and Social Psychology*, *29*(1), 24-54.
- Vanheule, S, Desmet, M, & Meganck, R. (2009). What the heart thinks the tongue speaks: A study on depression and lexical choice. *Psychological Reports*, *104*, 473-481.
- Weintraub, W. (1981). *Verbal behavior: Adaptation and psychopathology*. New York: Springer.
- World Federation for Mental Health. (2011). *The great push: Investing in mental health*.
- World Health Organization. (2008). *Task shifting: Global recommendations and guidelines*. Geneva: WHO.
- World Health Organization. (1992). *International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)*. Geneva: WHO.

PSYCHOMETRIC DIFFERENCES BETWEEN MEN AND WOMEN OF DIFFERENT ETHNIC AND MARITAL STATUS, IN HANDLING PAIN

Abraham A. Argun, Psy.D., FPPR., QME

Argun Affiliated psychological Services (www.argunaps.com), Newport Beach, California (USA)

Abstract

Introduction: Several studies descriptively and experimentally have looked into gender and ethnicity variables affecting patients' ability to cope with and adjust to chronic pain. This archival study is looking into the gender, ethnicity and marital status effects on pain perception, pain sensitivity and disability issues, psychometrically on industrially injured chronic pain patients with secondary psychosocial and psychophysiological problems. **Design and Objectives:** This is a part of series of archival studies. All subjects (Ss.) (N=275) were medical patients with physical and or psychological injuries, first screened with Pain-Patient-Profile (P-3), & Millon Behavioral Medicine Diagnostic (MBMD). Those with extreme elevations on multiple scales of MBMD and P-3 were administered Minnesota Multiphasic Personality Inventory (MMPI-2) and Millon Clinical Multiaxial Inventory (MCMI-III) for differential diagnosis and evidence based treatment planning and recommendations. Variables such as gender, ethnicity and marital status were analyzed as independent variables. **Method:** Original sample of 275 patients were cleaned up for this study by excluding the invalid protocols. Descriptive statistics and one-way analysis of variance were used to measure the effects of gender, ethnicity and marital status on these four tests. **Findings:** Contrary to common clinical expectations, very few scales on MMPI-2, MCMI-III and MBMD measured significant effects from marital status. Significant gender and ethnicity effects were shown on several scales. This study included 108 males (39.3%) and 167 females (60.7%). 57.1% of the Ss were Caucasian American, 9.1% African American, 22.9% Hispanic American, 3.3% Asian American and about 6% "other". The most significant gender differences on MMPI-2 and MCMI-III were on scales, measuring thinking problems, demoralization, dysthymia, negativism and feelings of helplessness, hopelessness, stress, anxiety and irritability mood in the male patients significantly higher than the females (**p<.01). Many other MMPI-2, MCMI-III and MBMD scales measured significant gender differences as well @ *p<.05. The MBMD, MMPI-2 and MCMI-III scales that differentiated significant ethnicity effects were on scales, measuring different levels of cognitive dysfunctions, traumatic and bizarre experiences, compulsive behaviors, anxiety and delusional thoughts. MCMI-III was also sensitive to ethnic differences in measurement of personality traits such as Antisocial (6A), Compulsive (7), and Schizotypal (s) personality disorders. Anxiety (A) and Drug (T) (@ **p<.01) also differed among different genders and ethnicities. Only Schizotypal (S) and Delusional Disorder scales measured significant marital status effects on MCMI-III. P-3 was only significant for gender differences on the Depression scale (@ *p<.05). MBMD was significant on several scales measuring greater gender effects for the male patients for introversion, non-compliance, guardedness and forcefulness. MBMD only detected ethnic differences on one scale and marital status effects on two scales. These measurements, of course, have great limitations because of small, non-randomized sample without comparison groups. Limited implications to assessment, treatment and med/legal evaluations will be discussed along with suggestions for future clinical research, especially on these tests' predictive validities for differentiating the recovery and functional restoration rates versus permanent disability.

Keywords: Chronic pain, gender, ethnicity, marriage.

1. Introduction

Response to and coping with chronic pain has been a serious subject of studies for decades, biopsychosocially. Several studies have looked into the effects of gender, age, ethnicity/race/genetics and culture on pain perception, coping with and adjustment to chronic pain and disability issues (Unruh, A., et al., 1996), based on interviews and or self rated pain perception measurements or biological, genetic models.

Most psychological research in this area have focused on the assessment (Gatchel,2004), self efficacy, depression and disability (Amstein, et al.,2001) and cognitive behavioral treatment and management of chronic pain(;Jensen, et al.,1999).. Common psychometric patterns of clinical psychopathology, borderline and schizotypal personality disorders' associations with "chronic pain syndrome(CPS)" and disability have been already studied and presented before (Argun, 2015; Argun & Singleton, 2008), using the MMPI-2(Hathaway, S. R., et al., 1989), MCMI-III(Millon, T.,etal.,1997), MBMD (Millon, T., et al.,1989), and P-3 (Tollison, T. C., et al.,1995).. Current study has further focused on the gender , ethnicity and marital status effects on the same archival sample of industrially injured patients, suffering chronic pain, with secondary symptoms of depression, anxiety and insomnia among many other problems. These effects of gender, ethnicity and marital status are measured with the use of the same objective psychometric measures, P-3, MBMD, MCMI-III and MMPI-2 for a more individualized and evidence based treatment planning, diagnostic specificity in differential diagnostic assessment of CPS patients.

2. Design and objectives

All SS. were screened and assessed as they were referred for "consultation, treatment and treatment recommendations". The main objectives of this study were to look into the effects of independent variables (IVs): a. Gender, b. Ethnicity, and c. marital status, as measured by MMPI-2, MCMI-III, MBMD and P-3.

3. Method

3.1. Subjects

All Ss (N=275), "chronic pain patients", included in this study, had medical evidence of orthopedic and or psychological industrial injuries who had gone through exhaustive medical examinations and treatments, including but not limited to pain, anti-inflammatory, neuromuscular relaxation, sleep and anxiety medications, physical therapy, epidural injections and acupuncture. Many of these patients had, also, undergone through one or more "failed" orthopedic surgeries and fusions There were 108 males and 167 females , 57% Caucasian American, 23% Hispanic American , 9% African American, 3% Asian American, and 7% others. The Ss. were, initially, administered the P-3 and MBMD as parts of the screening and admission to a Biopsychosocial pain management program, Team Power. MMPI-2 and MCMI-III were administered only to those Ss. who had extreme elevations on multiple MBMD and P-3 scales, measuring psychopathology.

3.2. Instruments

MMPI-2) is a well known psychometric test with 567 True-False items for personality assessment. It has the best reputation for differential diagnosis and assessment of malingering. MMPI-2 has been also used clinically and forensically for multiple purposes including pain assessment (Hathaway et al,1989; Gatchel, 2006).Millon Clinical Multiaxial Inventory (MCMI-III) consists of 175 multiple choices, true-false items. It was used for its complimentary incremental validity purpose with MMPI-2 in this study. MCMI-III is a clinical and personality test. It is a Base Rate based instrument, constructed in early 1980s by Theodore Millon, for differentiating clinical syndromes and personality disorders or traits (Millon et al, 1997). In this study it was included in the battery for the purpose of ruling out pre-morbid personality traits/ disorders, chronicity and co-morbidity of severe mental and or personality disorders. The Millon Behavioral Medical Diagnostic (MBMD)(Millon et al,2001) is a base rate based inventory of 165 "True -False" items designed to provide important clinical psychological information to the treating doctors to assist them to treat the whole person, not just an isolated medical condition or symptom. MBMD was standardized on patients with physical illnesses. The test is structured for adult patients, ages 18-85 with at least 8th grade level education, who are undergoing medical care or surgical evaluations.

Pain Patient Profile (P-3) (Tollison et al, 1995) is a 44 item multiple-choice self-report instrument constructed to assess patients who may be experiencing emotional distress secondary to pain. Instrument has three clinical scales of Somatization, Anxiety and Depression with a Validity Index to assess the probability of random responding, exaggeration or comprehension difficulties. P-3 is standardized on both pain patients and samples from the community. P-3 can be administered in 15-20 minutes to 17 – 76 old patients who have at least 8th-grade level comprehension and reading abilities.

3.3. Procedures

These patients were all involved in the initial screening including clinical interview, mental status examination, medical records review and administration of an screening package that also included P-3 and MBMD. When the two profiles of the MBMD and P-3 were positive significantly for wide spread symptoms of psychopathology, the patient then was further assessed with administration of the MCMI-III and MMPI-2 to rule out premorbid or comorbid mental and/or personality disorders.

For this study, the original archive of 275 protocols was cleaned up. The invalid protocols were excluded from the sample. A total of 169 P-3 protocols (67 male and 102 females), 221 MBMD (84 males and 137 females), 185 MMPI-2 (76 males and 109 females) and 190 MCMI-III protocols (75 males & 115 females) were qualified for this study. The Analyses included both descriptive statistics and One-Way ANOVA to measure the effects of gender, ethnicity and marital status. Significant findings were identified on the clinical scales of each test.

4. Findings

On P-3 only the Depression Scale showed significant gender effect @*P<.05, the males reporting more depressive symptoms than the females (53.06 v. 31.77). A One-Way Analysis of Variance for the effects of gender on MBMD indicated multiple scales being affected. The men scored significantly higher Means on MBMD scales, measuring guardedness (52.72 v. 39.67), introversion (70.92 v. 52.67), nonconformity (50.62 v. 36.80), and forcefulness (46.34 v. 31.90) (@ **P<.01). MBMD scale measuring inhibition (66.99 v. 52.64), dejected (63.75 v. 46.39), oppositional (64.15 v. 52.97), social isolation (62.41 v. 48.63), and utilization excess (68.62 v. 56.23) were also, significant at *P<.05, all with greater Means for the males v. the females.

On the gender issues MMPI 2 suggested significant differences between the male v. Female patients. The men experienced and reported more symptoms, secondary to chronic pain on scales, measuring disorderly and disorganized thinking (81.14 v. 66.39), demoralization (70.34v. 57.49), dysfunctional negative emotions (62.83 v. 49.20), aberrant experiences (64.07 v. 49.72), hypomanic activation (52.42v. 43.21) and psychoticism (62.88 v. 50.98) @ **P<.01. The men also reported greater psychopathy (69.33 v. 58.57), paranoia (67.90 v. 58.04), anxiety, and stress and obsessive thoughts (77.51 v. 66.39), mania (57.11 v. 49.96), somatic complaints (79.02 v. 69.28), antisocial attitude (57.77 v. 47.97), disconstraint (49.09 v. 43.07), and negative emotionality (64.34 v. 53.73)..

On MCMI-III, several personality and clinical scales showed greater gender effects for the men except one. MCMI-III scale measuring compulsive behaviors showed greater Mean for the women than men (63.51 v. 49.39 @**P<.01). MCMI-III scales, measuring dysthymia and thought disorder showed the men with greater Means (respectively 72.21 v. 55.83, & 58.20 v. 45.91 @ **P<.01). Significant differences were also measured at greater level for men versus woman on MCMI-III scales, measuring histrionic (74.21 v. 59.08), antisocial (46.76 v. 38.51), Sadistic (60.37 v. 43.75), schizotypal (54.37 v. 22.41), borderline (52.88 v. 43.35), anxiety (69.97 v. 59.26), alcohol (48.37 v. 40.65), drug (43.73 v. 36.08), and posttraumatic stress symptoms (54.99 v. 46.98).

The MBMD showed a statistical significance only on one scale, measuring “cognitive dysfunction” 4for African American v. Caucasian American patients (67.94 v. 47.95). For the effects of ethnicity/race, MMPI 2 suggested significant differences on only 2 scales, measuring Abberant Experiences and Bizarre Mentation for Asian greater than Caucasian greater than Hispanic American patients (with respective Means of 71.73< 52.90< 49.83 on the first scale and 74.33< 52.93< 52.26 on the second scale). On MCMI-III, several scales indicated significant ethnic differences. On a scale, measuring, compulsive behaviors, respectively, showed greater Means for African American patients v. Hispanics v. Caucasian v. Asian American patients (65.00 >62.78 > 57.56 > 43.14 @ **P=.01). On the scale measuring, schizotypal traits, Asian American patients had Means greater than African, Hispanic and Caucasian American patients.(66.86 > 59.38> 45.60> 42.68 @**P=.01). On the Anxiety scale of the MCMI-III, the Means were measured significantly greater for Asian American patients v. African v. Hispanic v. Caucasian American patients (80.14> 77.86> 65.05> 58.09). On MCMI III scale measuring problems with drug dependency or abuse, the analysis showed greater Means for the Asian v. Hispanic v. Caucasian v. African American patients (63.67> 58.43> 42.88> 28.00). On the Delusional Disorder scale, the Means differentiated the Asian> the African>Hispanic >Caucasian American patients.

Only two of MBMD scales, Drug and Sociable scales showed the singles with greater Mean than the married patients (@**P.01). The divorced patients showed greater Mean than the married or widowed ones on the Sociable scale of the MBMD. On MMPI 2 only one scale was affected by the marital status. MMPI subscale of Somatic Complaints measured greater Mean for married v. Single patients (80.54 > 69.79 @*P=.01). Only Schizotypal and Delusional Disorder scales measured significant Means for marital status effects on MCMI III. Single patients reported more disorderly and disorganized thinking problems than widowed patients (60.32 > 15.40 @**P=.01). Single patients also, reported more delusional symptoms than the widowed patients (55.18 > 15.80 @*P=.05).

5. Discussion

Two of the three hypotheses, gender and ethnic differences were overall evidenced at significant levels in this study, as measured by MMPI-2, MCMI-III and MBMD. Contrary to some of gender and pain perception studies, the men in the sample showed more vulnerability and more severe secondary psychosocial, emotional symptoms and dysfunctional personality traits than the women. Therefore, based upon these findings better prognosis is projected to women in general in dealing with physical injuries and chronic pain. Race and ethnicity also seemed to play significant role in the patients' pain perception and coping with physical functional limitation, disability and chronic pain but with mixed results that defied some of the earlier studies. Ethnicity variable varied on different scales and measurements. African American patients tended to show more cognitive and thinking problems and compulsive behaviors in response to chronic pain, but less sensitive to and dependent on pain, sleep, and anxiety medications. Asian American patients reported more traumatic, schizotypal, and overanxious symptoms in response to chronic pain. The Hispanic patients mostly scored somewhere in the middle between Asian and African American patients or Asian and Caucasian American patients. Asian American and Hispanic patients showed the highest sensitivity as measured with the Drug scale of the MCMI-III than the other two ethnic groups. This raises several serious clinical and research questions about ethno-pharmacological sensitivity of these two groups to opioid based medications. Some of their pseudo-psychotic and cognitive symptoms may be in reaction to some of these medications.

Among the three tests, the MCMI-III showed and measured more gender and ethnic differences in coping with chronic pain. MMPI-2 was the least affected by ethnic effects except on two subscales of Abberant Experiences and Bizarre Mentation with Asian American patients scoring significantly higher than Caucasian and Hispanic American patients.. MBMD was overall more sensitive to the gender factor in identifying the men with higher Mean scores than the women, on scales measuring, their coping styles, compliance with treatment and utilization excess.

Overall these limited findings are also consistent with some and contrary to other studies on gender, ethnicity, chronic pain, and disability in recent years. Contrary to common attributions by the cultural stereotypes, as an example, the women overall coped with and adjusted to chronic pain better than the men in the sample. This finding supports Anita Unruh's (1996) concerns for some health providers' psychogenic attributions about women being more vulnerable than men to coping with chronic pain.

6. Conclusions, limitations and future directions

The findings have a lot of limitations but important implications to ethnic and gender related treatment planning, prognosis and med/legal evaluations and recommendations, in dealing with industrially injured patients with chronic pain. Limited sample size clearly precluded more complex statistical modeling and analysis as well the generalizability of the results. Future studies should: Increase the overall sample size; Look into the correlations and correspondence between the MBMD, MMPI-2 and MCMI-III clinical scales as well; Include longitudinal data including types of interventions, treatment outcomes, work/disability status over time and medication dependency issues; include additional demographic variables, such as medical, psychiatric and substance abuse cells in order to further specify the profile patterns. Using larger samples with longitudinal data may also, help in exploring the predictive validity of the MMP-2 and MCMI-III in chronic pain patients.

References

- Amestein, P., et al (2001). (200) Self efficacy as a Mediator of Depression, and pain related disability. *Pain Medicine*. 2001. 2:238.
- Argun, A., A. (2015). MCMI-III identified “psychologically disabling” profiles on MMPI-2 with “severe personality disorders” in chronic pain patients. In *PACT 2015: International Psychological Applications Conference and Trends*. Ljubljana, Slovenia.
- Edwards, C.,L., et al. (2001). Race, ethnicity and pain. *International Association for the Study of Pain*. November 2001. Volume 94. Issue 2. Pages 133-137.
- Gatchel R J. (1997). The significance of personality disorders in the chronic pain population. *Pain Forum*,6,12-15.
- Hathaway, S.R., McKinley, C.J., Butcher, J.N., Dahlstrom, W.G., Graham, J.R., Tellegen, A., & Kaemmer, B. (1989). *Minnesota Multiphasic personalityInventory-2: Manual for administration*. Minneapolis: University of Minnesota Press.
- Millon, T., Davis, R., & Millon, C.(1997). *Millon Clinical Multiaxial Inventory (MCMI-III) Manual (2nd ed.)*. Minneapolis: NCS Pearson, Inc.
- Millon, T., Green, C., Meagher, R. (1983). *Millon Behavioral Health Inventory manual (3rded.)*. Minneapolis: NCS Pearson, Inc.
- Tollison, T. C., Langley, J. C. (1995). *Pain Patient Profile Manual*. Minneapolis: University of Minnesota Press.
- Unruh, A., M. (1996). Gender variations in clinical pain experience. *Pain*.1996. 65.123-167.

MENTAL HEALTH INVENTORY: STUDY OF CONSTRUCT VALIDITY WITH PORTUGUESE SAMPLES WITH AND WITHOUT PSYCHOPATHOLOGY

Ana Margarida Santos & Rosa Ferreira Novo
Psychology College of the University of Lisbon (Portugal)

Abstract

In order to contribute to the process of validation of the Mental Health Inventory (MHI) in Portugal, specifically on evaluating the usefulness of this tool in mental health screening, construct (convergent and discriminant) analyzes were conducted with two samples of adults (18-74 years) of both sexes, differentiated by the clinical situation: one without clinical complaints ($n = 31$) and another with a history of clinical complaints ($n = 33$). Apart from the MHI, the Scales of Psychological Well-Being (SPWB) and the Minnesota Multiphasic Personality Inventory 2 (MMPI-2) were used, instruments that provide convergent and divergent measures for the two target constructs on MHI, i.e., Psychological Well-being and Psychological Distress.

The results indicate that the final measures of the MHI measure, in fact, the constructs that are proposed to measure: these established significant positive correlations with almost every scale of the SPWB, which measure similar or related constructs, and significant negative correlations with almost every clinical scale of the MMPI-2 (e.g., Depression, Hysteria, Hypochondriasis, Psychopathic Deviate, Psychastenia, Schizophrenia, Social Introversion). On the other hand, scales that measure distinct constructs, i.e., scales that are not specific indicators of mental health and clinical pathology, showed low and almost non-significant correlations with MHI measures.

These findings, therefore, show evidences of convergent and divergent validity of the final measures of MHI. That way the MHI can be a useful tool in screening for mental health, in research and clinical settings. The need to replicate this study with other samples with larger dimension and with controlled clinical conditions and type of pathology is also discussed.

Keywords: *MHI, screening, mental health, distress, well-being.*

1. Introduction

For many years, mental health was defined as the absence of psychopathology, however this view has been challenged. From a psychological point of view, mental illness is only a minimal result in the development of life span (Westerhof & Keyes, 2010) and can therefore coexist with health. Thus, it is necessary not to limit the definition of mental health to the absence of psychopathology and include in its definition positive indicators. According to the World Health Organization (WHO) mental health is “a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community” (WHO, 2005). We can realize by this definition, that the understanding of what mental health is, is increasingly being focused on well-being and not in psychopathology. So mental health should be understood as “an organized syndrome from the absence or reduced expression of suffering or mental illness signs as well as the presence of emotional, psychological and social well-being symptoms” (Novo, 2005).

Changes in mental health definition entail, of course, changes in the way to operationalize it. Thus, the newer instruments focus almost exclusively in more direct measures of psychological constructs, as well as symptoms of anxiety and depression, which reflect most prevalent types of psychological distress in the general population. These changes increase the sensitivity of the instruments, however, to increase the content validity and represent characteristics of the mental health construct, instruments should include not only the mere frequency or intensity of symptoms of psychological distress, but also psychological well-being measures (Veit & Ware, 1983), since these two attributes are not opposite ends of the same continuous. The Mental Health Inventory (MHI) is composed in this way.

The MHI is a measuring tool of the general mental functioning, which was designed to measure psychological distress and psychological well-being in the population in general and not only in people with mental illness. It is a widely used, recognized and validated instrument with its original version being developed in 1975 by Veit and Ware (1983), under the Rand Corporation's Health Insurance Study (HIS). The factorial analysis studies performed with the original version confirmed a general factor of mental health (total mental health), two related, but distinct higher order factors (psychological distress and psychological well-being) and five correlated factors of lower order, which correspond to the subscales of the instrument: Anxiety, Depression, Loss of Emotional or Behavioral Control, Positive Affect and Emotional Ties (Ware & Gandek, 1994). This factorial structure was replicated with different samples in different regions of the USA, as well as with other adapted versions to different countries. The MHI has been subjected to translations and validity studies in several countries, including Portugal. Nationally there are two MHI translation studies both demonstrating high levels of internal consistency. In both of these studies (Ribeiro, 2001; Silva & Novo, 2002), samples were composed by healthy subjects (i.e., with the absence of psychopathology), but were different in terms of age, being one composed by youngsters and the other by elderly people.

In this investigation, we intend to study convergent and discriminant validity of the MHI measures in the Portuguese population by comparing groups, with a wider age range, with and without psychopathology and by analyzing the instrument correlations with other measures. We expect, therefore, to identify MHI's validity evidences.

2. Design

The present study follows a cross-model, with single point of data collection through quantitative methodologies, in a differential orientation type of comparison groups (with and without clinical complaints). It is a study of construct validity that seeks to clarify the meaning, interpretive limits and the usefulness of the measured constructs.

3. Objectives

Following the aforementioned design, the present study has the main aim to analyze the results of MHI as mental health indexes, in different samples, clinical and non-clinical of the Portuguese population. Specifically, we aimed to analyze the convergence of the MHI final measures (global and partial) relative to other independent measures that operationalize similar or related constructs (convergent validity), and to assess the independence of MHI final measures (total and partial) in respect of other measures that operationalize psychological constructs theoretically distinct (divergent validity).

4. Method

4.1. Participants

We analyze two differentiated final samples: a clinical sample composed by 31 participants with clinical history or psychopathology diagnose ($M_{age} = 45$ years, $SD_{age} = 16.5$) and a non-clinical sample with absence of present clinical history or psychopathology diagnose ($M_{age} = 33.79$ years, $SD_{age} = 14.9$). The total sample consisted of participants of both genders, aged between 18 and 74 years ($M_{age} = 39.22$, $SD_{age} = 16.6$). All participants were Portuguese, older than 18 years, had an educational level equivalent to the 9th grade level or above, had no suspected mental disability, cognitive impairment or critical clinical situation with implications of cognitive functions and had no physical illnesses that induce a high level of current psychological distress (e.g., cancer).

4.2. Procedure

Participants from the clinical sample were recruited from a public hospital (Hospital da Horta) in Azores and from a private clinic (Clínica Psiquiátrica de São José) in Lisbon. Ethical approval was sought and attained from the Ethics Committees of the aforementioned hospital and clinic and from the scientific council of Psychology College of the University of Lisbon. The application of the instruments in this sample were conducted in 1 to 2 individual sessions of about 1h30/2h, and were performed in spaces available in the respective institutions that respected the desirable conditions for the application. On the other hand, recruitment of participants from the non-clinical sample was conducted through personal contacts of the investigator. In this last case, the applications were performed in just one session, individual or in small groups (5 to 6 participants), each lasting about 2 hours. The application site was variable, since it was appropriate to the convenience of the participants; it was always chosen a room with adequate conditions for the application. All participants provided consent prior to participating and the order of applications of the instruments was as it follows for both samples: Mental Health Inventory

(MHI), Scales of Psychological Well-Being (SPWB) and Minnesota Multiphasic Personality Inventory 2 (MMPI-2).

The scoring of the SPWB and of the MMPI-2 followed the norms provided by the respective manuals. In the case of the MHI, the scoring was conducted manually and in order to make comparisons between the final measures of all scales, omission processing and recoding of results were performed.

Based on a quantitative analysis method, convergent and discriminant validity was studied by means of a bivariate analysis correlation (r Pearson) between the final measures of the MHI and the chosen external measures (MMPI-2 and SPWB). The statistical treatment of the data was performed using the statistical analysis software: Statistical Package for the Social Sciences (SPSS) 22 (SPSS Inc., Chicago, IL).

4.3. Measures

In the present study we used the Portuguese version (Silva & Novo, 2002) of the Mental Health Inventory (MHI; Ware, Johnston, Davies-Avery, & Brook, 1979). The MHI is a 38-item self-report measure of psychological well-being and distress, developed originally for use in general population. This instrument provides a global measure of mental health and two correlated partial measures: Psychological Well-Being and Psychological Distress. These in turn encompass five dimensions: Anxiety, Depression, Emotional Ties, General Positive Affect and Loss of Behavioral /Emotional Control.

The Psychological Well-Being was assessed by the Portuguese version (Novo, 2002) of the Scales of Psychological Well-Being (SPWB; Ryff, 1989). The SPWB is an 84-item self-report scale, in which each item is presented through statements that reflect six psychological well-being dimensions theoretically founded by Ryff: Autonomy, Environmental Mastery, Personal Growth, Positive Relations with Others, Purpose in Life and Self-Acceptance. The Portuguese version also provides a global measure of psychological well-being.

The Minnesota Multiphasic Personality Inventory 2 (MMPI-2; Butcher, Ben-Porath, Dahlstrom, Graham, Kaemmer, & Tellegen, 1989; Butcher et al., 2001) is a self-report 567-item inventory, that has the aim to contribute to the evaluation and characterization of personality and psychopathology, through response analysis items that concern the thoughts, the behaviors, the beliefs, the attitudes and the feelings of the subject who responds. In this study we used the experimental Portuguese version of the instrument (Silva, Novo, Prazeres, & Pires, 2006). The test provides several final measures: validity scales, clinical scales, content scales, supplementary scales and specific personality disorders scales.

5. Results

5.1. Intercorrelations: MHI – SPWB

All correlations demonstrated positive and significant, with the exception of the scale of Autonomy which has a non-significant correlation with MHI – Well-Being (see Table 1). The remaining correlations have moderate to strong values. The Total Psychological Well-Being and the Environmental Mastery scales are those with the strongest correlations. These results indicate a significant degree of association between the scales of the SPWB and MHI, suggesting that the test can measure the psychological well-being, especially the general psychological well-being and environmental mastery, but do not represent the autonomy dimension. Since the psychological distress is inversely scored (i.e., high scores indicate less psychological distress), the correlations are positive. Although, when the constructs are considered directly, a low psychological distress is associated with mental health. These results provide empirical evidence of validity of three measures of MHI.

Table 1. Pearson Correlation between MHI and SPWB measures

	SPWB						SPWB – Total
	Autonomy	Environmental Mastery	Personal Growth	Positive Relations	Purpose in Life	Self-Acceptance	
MHI - Total	.31*	.77**	.59**	.72**	.74**	.70**	.81**
MHI- PD	.38**	.76**	.58**	.61**	.69**	.68**	.77**
MHI – PWB	0.2	.70**	.53**	.75**	.70**	.64**	.75**

Note. $N = 64$; * $p \leq .05$; ** $p \leq .01$; SPWB: Scales of Psychological Well-Being; MHI: Mental Health Inventory; MHI-PD: MHI-Psychological Distress; MHI-PWB: MHI-Psychological Well-Being

5.2. Intercorrelations: MHI – MMPI-2

The majority of correlations between the MHI and the MMPI-2 measures demonstrated negative and significant, with moderate to strong values (see Table 2). These results could be established as indicators of convergent validity, since these are related constructs: theoretically psychological distress levels are inversely related to mental health. However, the Hypomania (Ma) scale showed positive correlations with the MHI measures, which could indicate that this dimension is not represented in this instrument.

Table 2. Pearson Correlation between MHI scales and clinical scales of MMPI-2

	MMPI-2										
	F	Fb	Hs	D	Hy	Pd	Pa	Pt	Sc	Ma	Si
MHI-Total	-.61**	-.70**	-.50**	-.78**	-.58**	-.60**	-.58**	-.72**	-.70**	0.01	-.65**
MHI-PD	-.63**	-.70**	-.49**	-.76**	-.58**	-.55**	-.61**	-.72**	-.67**	-0.05	-.61**
MHI-PWB	-.51**	-.61**	-.46**	-.72**	-.51**	-.59**	-.48**	-.62**	-.64**	0.08	-.61**

Note. $N = 64$; * $p \leq .05$; ** $p \leq .01$; MHI: Mental Health Inventory; MHI-PD: MHI-Psychological Distress; MHI-PWB: MHI-Psychological Well-Being; MMPI-2: Minnesota Multiphasic Personality Inventory 2; F: Infrequency; Fb: Back F; Hs: Hypochondriasis; D: Depression; Hy: Hysteria; Pd: Psychopathic Deviate; Pa: Paranoia; Pt: Psychasthenia; Sc: Schizophrenia; Ma: Hypomania; Si: Social Introversion.

Regarding the sincerity of attitudes (L), adherence to sexual role (Mf), social responsibility (Re), characteristics of aggressive personality type (AGGR), alcoholism (MAC-R), Addiction Potential (APS), Antisocial Practices (ASP) and characteristics of Type A personality (TPA), it appears to be no association between these distinct constructs (i.e., these are measures that indicate response attitudes or characteristics that are not specific to mental health) and the MHI measures. This goes towards evidences of divergent validity (see Table 3).

Table 3. Pearson Correlation between MHI scales and non-clinical scales of MMPI-2

	MMPI-2								
	L	Mf	Re	AGGR	MAC-R	O-H	APS	ASP	TPA
MHI-Total	-.25*	-.25*	.04	.18	-.05	.23	.10	-.09	-.25
MHI-PD	-.21	-.25*	.14	.08	-.10	.28*	.07	-.10	-.31*
MHI-PWB	-.27*	-.22	-.07	.25*	.01	.15	.12	-.06	-.14

Note. $N = 64$; * $p \leq .05$; ** $p \leq .01$; MHI: Mental Health Inventory; MHI-PD: MHI-Psychological Distress; MHI-PWB: MHI-Psychological Well-Being; MMPI-2: Minnesota Multiphasic Personality Inventory 2; L: Lie; Mf: Masculinity/ Femininity; Re: Social Responsibility; AGGR: Aggressiveness; MAC-R: MacAndrew-Revised; O-H: Overcontrolled Hostility; APS: Addiction Potential; ASP: Antisocial Practices; TPA: Type A

These results also suggest that the Psychological Distress scale can measure specific aspects of psychological suffering and that the Psychological Well-Being scale doesn't measure them. Specifically, it appears that the MHI is mostly associated with the dimensions of Depression (D) and Psychasthenia (Pt), scales that are a mostly oriented to depressive and anxious symptoms. It is also noteworthy that the MHI appears not to be relate so strongly with the personality scales compared to the clinical scales, which suggest that this instrument do not represent behavioral and functional aspects that constitute modes or styles of being, thinking and acting.

6. Discussion

This study aimed to identify MHI's validity evidences with external measures. In order to do so, exploratory analyzes of the correlations between the MHI and two independent instruments (SPWB and MMPI-2) were conducted.

The correlations between the MHI and the SPWB measures are convergent validity indicators for the MHI with regard to the measure of psychological well-being and of divergent validity with regard to the psychological distress measure. Specifically, the instrument seems to assess mainly the general psychological well-being and dimensions like environmental mastery and positive relations with others. Conversely, the data suggest that the MHI doesn't represent the dimension of autonomy. Also these positive correlations with the SPWB suggest that the MHI-Distress Psychology scale do not measure psychological well-being.

With respect to the correlations between the MHI and the MMPI-2 measures, these constitute indicators of validity convergent for the MHI with regard to the measure of psychological distress and of divergent validity with regard to the psychological well-being measure. The data suggest that the test measures the absence of psychopathology, which corroborates the base theory of the instrument that states that higher levels in the scales correspond to a lower level psychological suffering. Particularly, the results suggest that the measurement of Psychological Distress can measure specific aspects of psychological suffering (in this case inversely) and the measure of Psychological Well-Being do not measure them. Likewise, the data proposes that the MHI is strongly associated with dimensions of Depression and Psychasthenia. On the other hand, measures of specific constructs, such as aptitudes of malingering, or gender role, tendency to develop aggressive traits or social responsibility, proneness to type A personality, overcontrolled hostility and addiction potential present very low and moderate correlations, which indicates low correlation with specific measures of mental health. Is also highlighted the fact that the MHI seems not to relate so strongly with the personality scales, when compared with the clinical scales, suggesting that this inventory fundamentally evaluates clinical symptoms and non-functional and behavioral aspects that constitute modes or styles of being, thinking and acting.

7. Conclusion

The present study suggests that the Mental Health Inventory (MHI) could be established as a valuable tool in screening for mental health, with good psychometric properties in the Portuguese sample studied. Predominantly, this study not only demonstrates the convergent and divergent validity, but also amplifies the results of previous investigations through the associations of the final measures of the MHI with the psychological well-being dimensions and psychological distress, respectively.

The data suggest that the MHI can measure psychological well-being particularly with regard to the environmental mastery, and the positive relationship with others, and measuring the psychological distress especially in respect to depression and psychasthenia. On the other hand, with regard to the level of psychological distress and of global level of mental health, measures of specific constructs, like attitudes and personality traits (tendency to lie and alcohol and other substances consumption, aggressive and type A personality traits, social responsibility, gender role, overcontrolled hostility) show no association with the MHI measures. The results also suggest that the MHI measure essentially clinical symptoms and do not measure personality characteristics.

Data from this study is relevant since it shows the MHI potential as a mental health screening instrument in research and in clinical settings. The use of the MHI may impact both the early detection of psychopathology and the monitoring of the course of treatment. Due to its simple nature and fast application, the use of the MHI may also be recommended in primary health care units and in prevention and health promotion campaigns.

However, this study has some limitations, being the results, thereof, regarded as preliminary. It is advisable the continuation of the investigation. One of those limitations is the small sample size, which may lead to this sample not be representative of different levels, types and dimensions of psychological distress and well-being in the general population. The fact that most of the clinical sample has high levels of psychopathology and impairment, and the fact that these disorders are not well represented are other limitations of this study. Therefore, in order to better understand the role of each psychopathology type and level, future studies with populations with specific levels (i.e., severity) and types of psychopathology should be conducted to clarify the suitability of the MHI to different contexts and populations.

References

- Butcher, J. N., Graham, J. R., Ben-Porath, Y. S., Tellegen, A., Dahlstrom, W. G. & Kaemmer, B. (2001). *MMPI-2 (Minnesota Multiphasic Personality Inventory – 2) Manual for Administration, Scoring, and Interpretation*. Minneapolis: University of Minnesota Press.
- Butcher, J. N., Dahlstrom, W. G., Graham, J. R., Tellegen, A., & Kaemmer, B. (1989). *Minnesota Multiphasic Personality Inventory (MMPI-2): Manual for administration and scoring*, Minneapolis, MN: University of Minnesota Press.
- Novo, R. F. (2005). Bem-estar e psicologia: Conceitos e propostas de avaliação. *RIDEP*, 20(2), 183-203.
- Novo, R. F. (2002). *Para além da eudaimonia – O Bem-Estar Psicológico em mulheres na idade adulta avançada*. Lisboa: Fundação Calouste Gulbenkian e Fundação para a Ciência e a Tecnologia.
- Ribeiro, J. L. P. (2001). Mental Health Inventory: um estudo de adaptação à população portuguesa. *Psicologia, Saúde & Doenças*, 2 (1), 77-99
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of personality and social psychology*, 57(6), 1069.
- Silva, D., Novo, R., Prazeres, N., & Pires, R. (2006). *Inventário Multifásico de Personalidade de Minnesota (Adolescentes): Versão experimental portuguesa do MMPI-A*. Lisboa: Centro de Investigação em Psicologia e Faculdade de Psicologia e de Ciências da Educação da Universidade de Lisboa.
- Silva & Novo, R. (2002). *Inventário de Saúde Mental (Mental Health Inventory - MHI) adaptação portuguesa para adultos de idade avançada (Policopiado)*.
- Veit, C. T., & Ware, J. E. (1983). The structure of psychological distress and well-being in general populations. *Journal of Consulting and Clinical Psychology*, 51(5), 730.
- Ware, J. E., & Gandek, B. (1994). The SF-36 Health Survey: development and use in mental health research and the IQOLA Project. *International Journal of Mental Health*, 49-73.
- Westerhof, G. J., & Keyes, C. L. (2010). Mental illness and mental health: The two continua model across the lifespan. *Journal of Adult Development*, 17(2), 110-119.
- World Health Organization. (2005). *Promoting mental health: Concepts, emerging evidence, practice*. Geneva: WHO.

COOPERATION OF FORENSIC IN-PATIENTS AT THE ASSESSMENT PROCESS COMPARING TO OTHER PSYCHIATRIC IN-PATIENTS

Anica Prosnik Domjan

Department for Psychiatry, Unit for Forensic Psychiatry, University Medical Centre Maribor (Slovenia)

Abstract

The retrospective clinical study of 199 patients involved in the process of assessment during psychiatric evaluation and hospital treatment of severe mental disorder will be presented. Since the problem of poor cooperation is believed to be a very common issue clinical and forensic psychologists have to deal with working with forensic patients, a comparison with non-forensic psychiatric patients was done using standard statistical methods to prove this hypothesis. Cooperation was defined as patients' willingness to follow clinicians' instruction at psychological assessment methods. The level of patients' cooperation was estimated using 3-point scale ranging from absolutely no cooperation, partly cooperation to full cooperation. The control group consisted of the same number of in-patients from general psychiatric wards.

Keywords: *assessment, cooperation, mental disorder, forensic patients.*

1. Introduction

Forensic mental health assessment (FMHA) is challenging in many ways. Interviewing individuals charged with a crime means careful informed consent, scrupulous record-keeping, carefully chosen assessment methods, vigilance to civil and legal rights, and attention to boundaries-boundaries of competence and boundaries of information disclosure. The FMHA evaluator must be able to communicate with individuals with mental health problems, procriminal attitudes and/or behaviors, and also with defense lawyers, public prosecutors and judges (Jackson, 2008).

In Slovenia only recently a specialized forensic psychiatric ward has been established for hospital treatment of criminal offenders with severe mental health problems. Before 2012 when first two such wards have been opened as a part of Psychiatric Unit of University Medical Centre of Maribor forensic patients were treated in the same way as any other psychiatric patients meaning at local psychiatric hospitals throughout the country.

According to Slovenian law system there are three types of forensic psychiatric in-patients which are currently hospitalized at the three forensic wards of the Psychiatric Department of University Medical Centre of Maribor. At the high security ward mostly patients with acute and severe mental disorders are admitted since it is very similar to intensive care unit at general psychiatric wards. Crime offenders which are sent to the ward from prisons and are either already convicted of crime or are still in custody represent two groups and the majority of in-patients at the high security unit. Third group are patients who have committed a crime but were found by the court as irresponsible for it due to severe mental illness. They are sent under a court order to hospital psychiatric treatment instead of serving a prison sentence. From the diagnostic point of view psychotic disorders often combined with aggressive behavior, major depression with suicidal thoughts or conditions after suicidal attempts are most frequent diagnostic categories of patients from high security ward. Drug dependency, mostly due to use of illegal drugs and consequently abstinence symptoms are quite frequent as well. At the medium security ward there are treatment programs for psychiatric after care, mostly of chronic mental disorders like schizophrenia, bipolar disorder or dementia. At medium to low security forensic ward programs for psychiatric psychosocial rehabilitation are performed with goal of reaching independency of individuals as much as possible trying to help them integrate in the society successfully.

Clinical psychologist is a member of professional team at all three forensic psychiatric wards. As a clinician he represents an expert that has a very important role at the assessment process of all patients. Common procedures as psychological interview and psychometric instruments are used to perform very precise assessment at the beginning of treatment of mental disorders. However, during psychiatric treatment evaluation to follow patients' condition using psychological assessment methods is performed as well.

Clinical experience not only by clinical psychologists but also by other members of forensic psychiatric team (psychiatrists, psychiatric nurses, social workers, occupational therapists) shows reaching minimum compliance and cooperation of forensic patients is very often a difficult part and a challenge. However, for clinical psychologists achieving sufficient cooperation needed to fully perform psychological assessment which would provide enough information to make correct diagnostic decisions is sometimes not possible despite use of different suggested approaches. Forensic patients are prone to be reluctant to put enough effort in participation at psychological interviews and psychological instruments. Lack of general motivation for treatment, tendency to seek specific benefits at the treatment or acute psychotic illness combined with absence of insight are most common cause of the patients' unwillingness to take part at the FMHA. Even more difficult to deal with is a cause of rejection to collaborate at the assessment due to personality traits, mostly of dissocial type.

Only few research has been done so far to explore specific attitude towards psychological assessment observed in forensic patients. A. Carroll et. al. found forensic patients with schizophrenia showed similar levels of insight to mainstream psychiatric outpatients (Carroll, Pantelis & Harvey, 2004). Also M. Hildebrand et. al. have proved psychopathic and non-psychopathic patients showed similar levels of disturbance at baseline assessment. Same authors provided partial support for the association between psychopathy and treatment noncompliance, i.e., the extent to which the patient actually participates in the assigned treatment program. (Hildebrand & Ruiters, 2012).

2. Objectives

The objective of following research is to examine how a specific group of in-patients at the psychiatric department which are hospitalized at the forensic unit differ from other in-patients from general psychiatric wards in terms of cooperation at the assessment process performed by clinical psychologist.

The goal of the study is to analyze the difference at the level of cooperation at the assessment process. It's expected forensic in-patients are less willing to cooperate with clinical psychologist and more frequently reject application of psychological instruments comparing to other in-patients with similar mental illness. Also diagnostic categories from both forensic and non-forensic samples will be examined in order to find any significant difference.

3. Methods

3.1. Setting and assessment model

The study was designed as retrospective including data from assessment procedures performed at the treatment of forensic and non-forensic psychiatric in-patients.

3.2. Sample

Participants included were 99 forensic in-patients (90 males and 9 females) and 100 non-forensic in-patients (43 males and 57 females). They were admitted to Psychiatric Department of University Medical Centre in the period from April 2011 and released until December 2015. The inclusion criterion for the study was they all have been assessed by clinical psychologist at least once during their hospital treatment.

Diagnosis, demographic details and psychological assessment reports were obtained from hospital computer data base.

3.3. Measures

In order to define level of cooperation at the assessment a three point scale was used. All reports from data base included a precise description of patients' behavior during the whole process of assessment, both interview and application of psychological instruments (personality tests, projective methods, neuropsychological cognitive tests). Based on descriptions in the clinical psychologists' reports the patients' level of cooperation at the assessment process was defined using a three-point scale with following inclusion criteria:

Level 0 – patients completely unwilling to cooperate after a brief interview (a standard procedure at the assessment process in all subject was the use of assessment instruments following a brief interview)

Level 1 – patients only partly unwilling to cooperate after a brief interview (at least one assessment instrument could not be fully applied due to subject rejection)

Level 2 – patients completely agreed to cooperate at the assessment process at all points

Either rejection or agreement was defined as patients' clear attitude and decision towards clinical psychologists' instruction at application of assessment methods. In cases patients wouldn't be able to participate at the assessment methods due to other reasons (f. e. severe psychotic symptoms) they were not included in the assessment process (this patients would not be able to perform such level of reasoning to decide whether to cooperate or not).

An analysis of diagnostic categories of the patients was carried out using ICD-10 classification categories. Due to a large number of diagnostic subcategories patients were merged into 5 groups using the criteria of only first code in the ICD-10.

3.4. Data analysis

All analyses were carried out on SPSS for Windows V10.0 software. Beside descriptive statistical methods statistical test such as chi-square test, logistic regression and discriminant analyses were used.

3.5. Results

The rate of non-compliance among forensic patients was at 21.2%, which was significantly higher compared non-forensic patients, unwilling to cooperate in 5% of cases ($\chi^2 = 11.4$, $df = 1$, $p = .001$). When looking at the data more specifically 10.1% of forensic patients failed to cooperate completely and 11.1% cooperated partially. Among non-forensic patients these percentages were 2% and 3% respectively.

Using a logistic regression we also looked at the potential confounding role of other variables in predicting non-compliance. We found that none of the other variables (age, gender, diagnosis) significantly predicted compliance (see Table 1.).

Table 1. Results of logistic regression

	Wald χ^2	df	p	Exp (B)
Male gender	0.572	1	.449	.610
Age	1.097	1	.295	.985
Forensic group	2.904	1	.088	.335
Diagnosis				
Organic disorder	0.058	1	.809	.785
Schizophrenia	0.726	1	.394	.551
Mood disorder	0.557	1	.455	.512
Personality disorder	2.863	1	.091	.273
Other (reference)				

When using discriminant analysis we found that a single discriminant function best separated the participants who participated from those unwilling or partially willing to participate (Wilks' $\lambda = .937$, $\chi^2 = 12.6$, $df = 4$, $p = .013$). This discriminant function coefficients for the variables are given below in Table 2.

Table 2. Standardized Canonical Discriminant Function Coefficients

Predictor variables	Standardized coefficients
Age	-,306
Gender	,173
Forensic patient	,732
Diagnosis	-,056

4. Discussion

The results of the study proved on statistical significant level (Pearson Chi-Square $p=,003$ in the table 5) the group of patients from forensic in-patients' sample differ from the group of patients from non-forensic in-patients' sample in terms of being less willing to cooperate at the psychological assessment process. However, it remains rather unclear, whether the factor that contributed to poorer cooperation in forensic sample is specific common characteristic of those patients showing their behavioural pattern in the criminal history (consequently they were treated at forensic unit) or there is an unidentified secondary variable underlying and causing the difference at the level of cooperation in between the two groups.

For the purpose to clarify this assumption the generalized linear model was used with ordinal logistic regression. Parameter estimates from table 3 include Wald's Chi square confirming the significant difference between forensic and non-forensic sample in cooperation only with $p=,088$. So, we can only assume there is a trend towards patients from forensic sample being less cooperative than subjects from non-forensic sample. But the same tables also provide an interesting result, namely another recognizable trend. Patients from both groups diagnosed with personality disorders (from ICD-10 category coded F60-F69) were poorly cooperative than patients diagnosed with any other diagnostic category with the difference significant only $p=,091$. Due to solely a trend recognized there is only a possibility at the forensic units there are more patients with personality disorder than at general psychiatric units and partly that could represent a cause of poorer cooperation at the assessment at this unit. Such finding is not so surprising for the fact one of the personality disorder is dissocial disorder very often found in forensic population and poor cooperation is consistent with more diagnostic criteria of patients with dissocial patients. Individuals with this disorder do not tell the truth and cannot be trusted to carry out any task or adhere to any conventional standard or morality (Kaplan & Sadock, 1998). Unfortunately, this survey doesn't include such data, but further research is needed to test such hypothesis. Finally, not only patients with dissociative personality disorder, but patients with other personality disorder (f. e. borderline or paranoid) have disturbed psychosocial functioning that could lead in difficulties in cooperative relations such as following someone's instruction, as well.

Further statistical methods were applied to give more precise information about differences between two samples. Discriminant analysis (table 4) provide parameters (Wilks' lambda and Chi-square with $p=,013$) confirming the significant difference in cooperation at the assessment process between the two samples. In this case, the group with estimated level of cooperation 0 and the group with estimated level of cooperation 1 were merged into just one group for methodological purpose. Again, not only the forensic/non-forensic variable contributed to differences in cooperation in subject, but age as well. The results include standardized canonical discriminant function coefficients, and age is negatively correlated with cooperation significantly. So we can assume, older patients are prone to be less cooperative than younger patients as well.

Unfortunately the present study has many methodological shortcomings. Due to retrospective type of study patients were not included randomly, but based on the availability of clinical psychologists' assessment reports from hospital database. Not all patients at the psychiatric unit are involved in such assessment process. Assessment process was performed by more than one clinical psychologist and the study didn't provide the control of possible differences between them in the attitude towards patients, that could cause differences in cooperation as well. The diagnostic categories used for description of subjects' psychopathology were quite heterogeneous. Not only all personality disorders are in the same category, also psychotic, mood and anxiety disorder have many different subcategories. Another issue are patients with multiple diagnosis, where only the main diagnosis was given (f. e. an important group of patients with double diagnosis remains unrecognized). Also, they were no data on the type of offenders representing forensic sample, consequently a high level of heterogeneity due to differences in patients' criminal history could be assumed (ranging from homicide to much less violent criminal act). Finally, there are no data what were reasons underlying patients' poor cooperation. A standardized checklist could be formed to explore subjects' decision not to cooperate at the assessment providing additional data.

5. Conclusions

In the study presented we found a significant difference in cooperation at the assessment process between forensic and non-forensic patients confirming hypothesis formed by clinicians' experience. However, the difference is very complex and some other factors besides just forensic/non-forensic variable contribute to difficulties in cooperation at the assessment process. With the data given some other research questions remain open. We were able to recognize some interesting trends: patients with personality disorders are prone to be less cooperative. However, further research is needed to confirm also

in what type of personality disorder poorer cooperation at the assessment process is observed. Additionally, age as another variable is possible to be connected with poorer cooperation was identified.

Further studies are suggested to define more precisely the reasons for forensic patients having troubles getting involved in the assessment process during hospital treatment due to unwillingness to cooperate with clinical psychologist.

References

- Jackson R. (Ed.) (2008). *Learning forensic assessment*. New York: Routledge.
- Kaplan H. I. & Sadock B. J. (Eds.) (1998). *Synopsis of Psychiatry*. Baltimore: Williams and Wilkins.
- Hildebrand M. & de Ruiter C. (2012). Psychopathic traits and change on indicators of dynamic risk factors during inpatient forensic psychiatric treatment. *International Journal of Law and Psychiatry*, 35, 276-288.
- Carroll A., Pantelis C. & Harvey C. (2004). Insight and hopelessness in forensic patients with schizophrenia. *Australian and New Zealand Journal of Psychiatry*, 38, 169-173.

THE MOTIVATION FOR HEALTH: WHAT IS IT AND HOW TO ASSESS IT?

Shulamith Kreitler

School of Psychological Sciences, Tel-Aviv University (Israel)

Abstract

The purpose is to present an approach to physical wellness that is anchored in the cognitive motivational theory of cognitive orientation (CO). After describing the theory and methodology of predicting behaviors according to the CO approach, the model of physical wellness is presented, emphasizing the role of psychological factors in forming a motivational disposition for physical diseases that functions as a risk factor for the occurrence of the disease in the presence of a pathogen. The motivational disposition for a disease consists of beliefs of four kinds (about self, reality, rules and norms, and goals) referring to themes relevant for the specific disease, representing deeper-lying meanings of the disease. A general CO of health (COH) questionnaire was constructed by combining the themes common to different diseases. Various kinds of validation studies are described, referring to the role of the COH in regard to diseases, physical symptoms and disease manifestations, risk factors for diseases, health-related behaviors and attitudes and psychological correlates. The findings support the conclusion that the COH assesses a general tendency of health proneness that may be considered as a manifestation of immunity on the psychological level.

Keywords: *cognitive orientation, risk factors for diseases, cognitive orientation for health questionnaire.*

1. Introduction

1.1. The cognitive orientation theory: major assumptions and stages

The concept of the motivation for health is grounded in the theory of the cognitive orientation- (CO) (Kreitler, 2004). The CO is a cognitive theory of motivation designed to enable understanding, predicting and changing outputs in different domains. It consists of a central core model that will be presented prior to the description of the specific model of wellness about physical health.

The major tenet of the CO theory is that any output on the human level is a function of a directionality of behavior and of a performance scheme, both of which are under the control of cognition. Cognition refers to attitudes, beliefs, meanings, information, that are not necessarily conscious, rational or based on systematic reasoning, not dependent on volition or logical decisions.

The processes intervening between input and output can be grouped into four stages, characterized by metaphorical questions and answers. The first stage is initiated by an external or internal input and is focused on the question "What is it?" which leads to identification of the input, for example, as a stimulus for a reflex. The second stage is devoted to further elaboration of the meaning of the input, by the question "What does it mean in general and for me?" which results in an enriched generation of general and personal meanings in terms of beliefs, designed to determine whether action is required. A positive answer initiates the third stage focused on the question "What will I do?". The answer is based on specific beliefs, defined in terms of form and contents. Formally the beliefs are of four types: about oneself, about reality, i.e., others and the state of things, about rules and norms, about goals and wishes. In terms of contents the beliefs refer to themes specific for the particular input representing deep underlying meanings identified by a standard in-depth procedure of interviewing of pretest subjects. The fourth stage is focused on the question "How will I do it?" which is answered in the form of a behavioral program, inherited or learned.

1.2. Predicting outputs by means of procedures based on the CO model

A large body of data demonstrates the predictive power of the CO theory in regard to a great variety of behaviors, including achievement, responses to success and a failure, coming on time, etc. in different kinds of individuals, differing in age (4 to over 90), gender, ethnic background, education, IQ level (i.e., retarded individuals) and mental health (e.g., schizophrenics) (Kreitler, 2004). The success of

the predictions is based on applying the standardized procedure based on the CO theory (Kreitler & Kreitler, 1982). The major predicting construct is the motivational disposition, which is assessed by a CO questionnaire which contains beliefs of the four types referring to the meanings underlying the behavior in question (called "themes"). Participants are requested to check on a 4-point scale the degree to which each belief seems true to them. The themes of a particular CO questionnaire are identified by means of a standard interviewing procedure with pretest subjects who manifest the behavior in question and control subjects who do not manifest it (Kreitler & Kreitler, 1990). The major variables provided by the CO questionnaire are scores for the four belief types and for each of the themes. For a behavior to occur there needs to be a motivational disposition for the behavior supported by at least three of the types of behavior and a behavioral program. The CO theory also enabled successful modifications of behavior, such as rigidity, impulsivity and curiosity (Kreitler, 2004; Kreitler & Kreitler, 1982).

2. The cognitive orientation model of wellness

The CO model of wellness is designed to provide a theoretical and methodological framework for understanding, predicting and changing psychological factors involved in the occurrence and course of physical diseases and health. It conceives of any disease as the joint product of a motivational disposition and a performance program. The motivational disposition for a disease or health resembles the motivational disposition for any other output in not being conscious or under voluntary control, and in being composed of four types of beliefs referring to themes representing the underlying meanings of that health state. The motivational disposition represents the psychological factors that may contribute to physical disease or wellness by constituting part of the background conditions promoting disease or health, making the difference between the occurrence of a disease or its non-occurrence in the presence of a pathogen. In line with the "stimulus-background" model the occurrence of a disease is assumed to be the joint function of a stimulus, namely, a pathogen like a microbe or a virus, and background conditions, which include various risk factors, such as genetic, nutritional, immunological and psychological ones.

Notably, the cognitive contents and processes affecting disease are disease specific (Kreitler, Kreitler, & Barak, 2013). However, though the whole pattern of beliefs is unique to a disease, different diseases may share some of the beliefs and this sharing may even be a means for grouping some diseases together (e.g., autoimmune diseases). Moreover, some beliefs are common to several disorders which reflect, as it were, the core of disease-proneness (Kreitler, 1999) (see 3).

Although the motivational disposition for a disease or health represents psychological variables, contrary to the popular belief it is not a function of the individual's conscious decision or volition to be sick or healthy. An individual may become sick despite one's decision to be healthy and may stay healthy despite one's conscious decision to be sick or die. In terms of the CO theory, cognitive factors play an important role in shaping the contents, form and strength of the motivational disposition supporting a certain disorder. The relevant cognitions reflect the deeper underlying meanings of the physical disorder rather than directly the meanings of the disorder or support for preventive measures against it. The anchoring of the cognitions in meaning ensures also their relevance to the disorder. Evidence shows that only clusters of beliefs are considered as liable to affect the tendency for a disorder, rather than single cognitions, regardless of how important they may seem to be.

The same model applies also for recovery. In regard to recovery, the stimulus would be the treatment, and the background conditions would include variables different in their nature and contributions to health from those involved in getting sick

Evidently, both in regard to disease occurrence and recovery the motivational disposition is not the only variable accounting for the observed phenomena. In addition to further risk factors, one needs to consider the performance program that is responsible for physiological processes producing the functional disorders that may culminate in anatomically manifested deviations (e.g., a cancerous tumor).

The CO model of wellness has been applied successfully for predicting health-related behaviors, such as smoking, cessation of smoking, undergoing tests for the early detection of breast cancer, and compliance in diabetes patients or asthmatics. Likewise, it has enabled identifying the motivational disposition of a great number of different disorders, such as asthma, genital infections, chronic pain, ulcerative colitis, CHD (Kreitler, 1999) and cancer (Figer, Kreitler, Kreitler, et al., 2002).

3. The cognitive orientation of health questionnaire

The COH questionnaire was constructed by pulling together the themes common to a series of CO questionnaires concerning different diseases (genital infections, coronary heart disease, diabetes, chronic pain) and, whenever needed, reversing the direction of the beliefs so that they all orient toward health. The COH includes 30 statements for beliefs about self, 31 for general beliefs, 31 for beliefs about

norms and 30 for beliefs about goals. The number of themes is 30. Each theme is represented by items in all four belief types. The subject is requested to check on a 4-point scale to what extent the item is true. The subject gets 4 scores, one for each belief type, which are treated as separate variables or are combined into one index (the COH score which ranges from 0 to 4, and is the sum of the belief types in which the subject scored above the group's mean). Further optional scores are the scores for each theme, across the belief types. The reliability of the COH questionnaire ranged in different samples (total number of subjects 790) from Cronbach's $\alpha = .89$ to $.92$ for each of the four belief types.

The themes of the COH questionnaire may be grouped into five clusters: (a) *The body and physiological processes*: Not letting external factors affect the body; minimizing reliance on external aids for minor discomforts; disregarding minor symptoms; but treating major ones. In sum, maintaining contact with one's body and relying for recovery to a certain extent on internal regulation; (b) *Tensions*: Not feeling overburdened and pressured (namely, organizing one's life so that one is able to perform one's duties and in addition do things one wants to do); minimizing tensions in intensity and duration (e.g., accepting events as occurrences and not necessarily as irritating events); (c) *Actions and activities*: Being involved in many activities; undertaking commitments; regarding oneself as the source and agent of occurrences though remaining aware of the role and impact of reality; avoiding perfectionism; persisting in the face of difficulties; feeling on the whole successful; not regretting previous actions; feeling sufficiently strong to cope with the daily chores; not considering the daily routine as irritating; (d) *Interpersonal relations*: Maintaining close ties with others; trusting others; sharing experiences; managing relations so as to minimize fights and ruptures of relations; (e) *Feelings and emotions*: Expressing emotions, both positive and negative (e.g., anger), overtly; gaining control over emotions; maintaining usually a good mood; promoting enjoyment.

4. Brief overview of validation studies

Studies of several types have been used for exploring the nature and predictive span of COH.

4.1. COH and diseases

The involvement of COH in contracting diseases was assessed by examining *episodes of sickness in healthy undergraduates* (Kreitler, 1999): 100 undergraduates in the social sciences were administered the COH questionnaire at the beginning of the winter season. Students with chronic diseases (e.g., diabetes, asthma) were excluded. Information about the students' ailments (e.g., fever, flu episodes, infections) during the academic year (November to June) was obtained with the students' permission from their medical records at the end of the academic year. Those who had low COH scores (0, 1 or 2) suffered during the predetermined period from 5.6 different ailments as compared with 2.1 in the high scorers (COH scores 3-4). Thus, the high scorers suffered from fewer ailments which necessitated medical attention.

4.2. COH and physical symptoms and disease manifestations

One study dealt with *complications in men undergoing hernia surgery* (Kreitler, Bentwich, & Kreitler, in Kreitler, 1999): 53 men (mean age 43.3 yrs) who were scheduled to undergo surgery for the correction of hernia, were administered the COH questionnaire upon admission to the hospital. All subjects were equally free of disease or infection before surgery. As compared with the low scorers (COH scores 0-2), the high scorers (COH score 3-4) had fewer complications (e.g., fever above 37.7, bladder infection, constipation) in the course of hospitalization (0.8 vs 2.9), and were in better state in the first and second check-ups (2 weeks and 6 weeks later) in accordance with criteria, such as the healing of the wound, degree of straightened posture and use of analgesics. In sum, high scorers on the COH questionnaire maintained a better state of health and recovered faster when undergoing a medically injurious procedure like surgery.

A second relevant study dealt with *severity of coronary event* (Greif, Kreitler, Kaplinsky, & Bachar, in Kreitler, 1999). Consecutive patients with myocardial infarction were administered the COH questionnaire. Comparing the high with the low scorers (COH score 3-4 vs 0-2) showed that the former had overall lower severity of infarction, prognostically more favorable MI location (posterior or diaphragmatic vs anterior), fewer blocked blood vessels, more rarely left ventricular impairment and fewer complications (such as, ventricular fibrillation, arrhythmias, and congestive heart failure). Stepwise discriminant analyses with the 4 belief types as predictors enabled correct identification of the subjects according to each of the different criteria about 20% better than chance.

Another study dealt with the reactions of side effects to chemotherapy treatment by women diagnosed with breast cancer invasive ductal carcinoma, grade 2-3 (Richkov, 2014). The sample included 60 women, in the age range 23-71 who were administered either Adriamycin, Cytoxan, Taxol or Herceptin; Cytoxan and Taxol. The number and severity of side effects were recorded by the patient son

an expanded version The Rotterdam Symptom Checklist which included 83 commonly mentioned symptoms following chemotherapy, in the most varied domains, such as respiratory, gastrointestinal, pain, movement, sleep disorders etc. Each symptom was rated on a four-point scale from highly severe to very weak. The COH questionnaire was administered only once, prior to the beginning of the treatments, whereas the symptom questionnaire was administered four times (once prior to the treatments and once after each set of the three treatments). The results showed that the women with higher COH scores reported significantly fewer symptoms and with lower severity after each set of treatments.

4.3. COH and risk for diseases

One study dealt with *risk factors for coronary heart disease (CHD)* (Kreitler, Weissler, & Brunner, in Kreitler, 1999): Men, 50 to 60 yrs old, were administered the COH questionnaire in the framework of the WHO MONICA project for examining risk factors for CHD. High scorers on the COH questionnaire (CO score 3-4) had fewer risk factors for CHD than low scorers (CO scores 0-2), i.e., they had a lower mean systolic blood pressure, higher HDL, lower LDL, lower triglycerides, etc. In sum, high scorers on the COH questionnaire are less susceptible to a disease such as CHD.

Another study relevant for the issue of risk for diseases dealt with *immunological correlates of COH* (Kreitler, Berliner, Aronson, Arber, & Kreitler, in Kreitler, 1999). The COH questionnaire was administered to 91 healthy men and women (age 18-69 years). Multiple regression analyses with the four belief types as predictors showed that the COH variables were related significantly to the state of leukocyte adhesiveness/aggregation in the peripheral blood, which is a known immunological factor that plays an important role in various leukocyte functions and is an especially reliable marker of inflammation. Higher scores on the COH questionnaire were related to lower levels of leukocyte adhesiveness. The major predictors were general beliefs, norms and self beliefs and they accounted for about 30% of the variance in leukocyte adhesiveness, more in women than in men.

4.4. COH and health-related behaviors and attitudes

A study on *COH scores and rehabilitation* (Greif, Kreitler, Kaplinsky, Behar, & Scheinowitz; in Kreitler, 1999) was designed to examine in post-myocardial patients the effects on the COH of participating in a short-term rehabilitation program based on exercise. The effects were expected to be positive in view of the claims about the benefits of exposing coronary patients to exercise immediately following the myocardial event. There were three groups of patients, all of whom had undergone myocardial infarction in the preceding week. Group A (n=22) was exposed to intensive exercise for one week in a special recovery camp; Group B (n=26) spent one week in the recovery camp without exercise; and Group C (n=14) spent the time at home. The groups did not differ in demographic and medical characteristics. All patients filled the COH questionnaire once before leaving the hospital, and a week later. The results showed that in Group A COH scores improved the most, especially the scores for beliefs about goals and norms. In sum, COH scores are affected favorably by rehabilitatory recovery.

Another relevant issue in this context concerns *COH and health behaviors*. The relations of COH and health behaviors are of special interest because of the common claim that health behaviors are a major determinant of good health (Glanz, Rimer, & Viswanath, 2014). The findings may be expected to be ambiguous because, on the one hand, some health behaviors such as smoking or driving under alcohol may indeed affect one's health adversely (e.g., Lanz et al., 1998), while on the other hand a great number of health behaviors are a manifest expression of the conscious desire to be healthy that may have little or nothing to do with actual health (Glanz et al., 2014). Thus, a study about *undergoing tests for the detection of cancer* showed that women who attended clinics for the early detection of breast cancer scored significantly higher on COH (each of the belief types and the CO index score) than women who did not attend the clinics (Kreitler, 1999). However, other studies suggest that COH scores do not assess the tendency to carry out behaviors ostensibly designed to promote health. Thus, COH scores were not related to taking vitamins or using alternative medicine (Kreitler, Bentwich, & Kreitler; in Kreitler, 1999). A survey of the extent to which students carried out health behaviors, e.g., safety measures at home, in driving cars or motorcycles, food, hygiene, smoking and physical activities showed few positive correlations with COH. Yet, COH was correlated positively with the sense of experienced health in healthy individuals (Kreitler, 1999).

4.5. COH and psychological correlates

Susceptibility to stress is a factor liable to affect one's health. One study (Kreitler & Hatzor, in Kreitler, 1999) compared the mean COH scores in samples of four Kibbutzim (collective settlements) in Israel, two relatively stable and two in the course of discussions designed to decide whether they would be disbanded. The COH scores of the samples in the Kibbutzim on the verge of disbanding were significantly lower than those in the stable Kibbutzim, especially general beliefs and beliefs about self.

Another study (Kreitler, Alгим, & Nussbaum; in Kreitler, 1999) was done with a sample of psychology students in the month before they got the information whether they had been admitted to the much desired clinical program in the graduate school and with a control sample of psychology students who have not applied for admission to this program. The COH scores of the former were significantly lower than those of the latter, especially beliefs about self and goals.

In order to learn about the psychological correlates of the COH, the COH questionnaire and a battery of different psychological tests were administered to 176 healthy adults (88 women, 88 men; 31-50 yrs old, $M = 39.4$ yrs) (Kreitler, 1999). The results showed that high and low scorers on the COH differed in many tendencies. For example, in the domain of emotions, the high scorers on COH differed from the low scorers in scoring higher on emotions, such as love, elation, contentment and joy, hostility, jealousy (only men), emotional reactions in general and fatigue (only women) and scoring lower on emotions, such as depression, anxiety, fatigue (only men), jealousy (only women) and alexithymia. Further, in the domain of daydreams, the high COH scorers scored higher on positive daydreams, and lower on negative daydreams and poor attentional control. In the domain of the self-concept, the high scorers on COH tended more to describe themselves in actional-functional terms and less in terms of references to body parts, weight and external appearance. Further, the high scorers were higher on internal locus of control and lower on somatization and somatic complaints, but they were also higher on neuroticism and repressiveness, which suggests suggest that denial may not be harmful for health. The results indicate that COH represents a well-structured and coherent psychological type.

5. The motivation for health

The major conclusions of the present review are that there is a set of cognitive contents constituting motivation for physical health, identified by means of a procedure anchored in the CO theory, referring to various domains - the body, tensions, action and activity, interpersonal relations, and emotions. These themes can be assessed by means of the COH questionnaire that has adequate reliability and was validated in different domains of health, including immunology. The motivation for health has specific medical and psychological correlates which justify considering it as a new psycho-physiological construct that we suggest to call "health-proneness". It reflects the general tendency to maintain health when threatened by pathogenic factors and recovering it fast when impaired. This motivational predisposition for health is non-conscious, non-voluntary and not controllable by the individual in a direct manner. Further, it is not the product of reasoned decision-making based on weighing rationally costs and benefits. Rather, it is the result of the clusterings of beliefs and their meanings. Apparently, it does not have too much to do with the conscious manifest desire to be healthy, which many people seem to share. Rather it seems to be a psycho-physiological tendency, rooted in meanings orienting toward health. Hence, it may be considered as the psychological counterpart or complement of physiological immunity.

References

- Figer, A., Kreitler, S., Kreitler, M. M. et al. (2002). Personality dispositions of colon cancer patients. *Gastrointestinal Oncology*, 4, 81-92.
- Glanz, K., Rimer, B. K., & Viswanath, K. (Eds.), (2014). Health behavior and health education: Theory, Research and Practice (4th ed). Wiley Imprint; San Francisco, CA: Jossey-Bass.
- Lanz, P.M., House, J. S., Lepkowski, J. M., Williams, D.R., Mero, R. P., & Chen, J. (1998). Socioeconomic factors, health behaviors and mortality. *JAMA*, 279, No. 21.
- Kreitler, H., & Kreitler, S. (1982). The theory of cognitive orientation: Widening the scope of behavior prediction. In B. Maher & W. B. Maher (Eds.), *Progress in Experimental Personality Research* (Vol. 11, pp. 101-169). New York: Academic Press.
- Kreitler, S. (1999). The cognitive orientation for health: A tool for assessing health-proneness. In R. Schwarzer (Ed.) *Advances in Health Psychology Research* [CD-ROM]. Berlin: Freie Universitaet Berlin. Institut fuer Arbeits-Organizations- und Gesundheitspsychologie.
- Kreitler, S. (2004). The cognitive guidance of behavior. In J. T. Jost, M.R. Banaji, & D.A. Prentice (Eds.), *Perspectivism in social psychology: The Yin and Yang of scientific progress* (pp. 113-126). Washington, DC: American Psychological Ass.
- Kreitler, S., Kreitler, M.M., & Barak, F. (2013). Psychological risk factors of cancer diseases: How specific are they? *Open Journal of Social Sciences*, 1, 81-86.
- Richkov, V. (2014). A cognitive orientation as a factor moderating side effects following chemotherapeutic treatments. Unpublished Master's thesis, Haifa University.

COGNITIVE BEHAVIORAL TREATMENT OF ANXIETY IN CHILDREN AND YOUNG ADULTS WITH DEVELOPMENTAL DISABILITIES

Omar Rahman & Adam Lewin

University of South Florida (USA)

Abstract

Introduction: Anxiety disorders have a lifetime prevalence of 20-30% among youth aged 13-18 years. Anxiety is particularly problematic among children with developmental disabilities for several reasons. These children typically have difficulty with many functional tasks, and often have real issues to worry about. In addition, they often have fewer emotional and cognitive resources to cope with negative life events, both major and minor ones. Moreover, these children often have significant problems in several areas (e.g., motor difficulties, educational problems, etc.), so anxiety issues often get overlooked. Finally, individuals with developmental disabilities often have difficulty with communication, which makes it difficult for them to communicate their anxiety. Cognitive behavioral therapy (CBT), an effective treatment for anxiety, can be challenging to implement for these individuals due to several reasons. Moreover, there are few standardized treatment protocols for treating anxiety in youth with developmental disabilities. Here, we present a case series of the application of a CBT protocol adapted for treating anxiety and obsessive-compulsive symptoms in youth with developmental disabilities.

Method: Participants were five youth and young adults with development disabilities with the following characteristics:

- Three had Prader-Willi Syndrome (PWS), a genetic disorder characterized by dysfunctional food behaviors (e.g., hyperplasia, food hoarding), motor and speech impairments, delayed puberty, and cognitive delays. Individuals with PWS typically exhibit psychiatric symptoms such as behavioral outbursts, emotional lability, aggression, stubbornness, anxiety, and obsessive-compulsive symptoms.
- One had Williams Syndrome, a genetic disorder characterized by medical and physical problems, including cardiovascular disease, developmental and intellectual delays, learning disabilities, and high anxiety.
- One had Autism Spectrum Disorder, including significant deficits in social interactions, repetitive and stereotyped behaviors, restricted interests, and intellectual disability.

All participants received 12 sessions of CBT by a trained therapist specializing in anxiety. The treatment was based on specific techniques for each session, but allowed for flexibility to address immediate issues and for individualized treatment.

Results: All participants displayed significant improvement in anxiety, behavioral issues, obsessive-compulsive symptoms, and family interactions.

Discussion: We demonstrate that CBT can be an effective treatment for anxiety in children and young adults with developmental disabilities. We discuss necessary adaptations to treatment, as well as limitations. Implications of these findings as they apply to other challenging populations is discussed.

Keywords: *developmental disability, anxiety, obsessive compulsive, intellectual disability, cognitive behavioral therapy.*

THE DYADIC ASSOCIATION AMONG AFFECT, NEGATIVE LIFE EVENTS, AND MARITAL ADJUSTMENT

Elçin Sakmar¹ & Hürol Fıfılođlu²

¹*Department of Psychology, İstanbul 29 Mayıs University (Turkey)*

²*Department of Psychology, Middle East Technical University (Turkey)*

Abstract

The aim of the study was to identify the relationship among affect, negative life events and marital adjustment by controlling length of marriage, number of children, and education levels of spouses. It was planned to conduct the actor-partner interdependence model (APIM) to investigate not only the association among person's own dimensions (actor effect) but also the association between person's own and partner's dimensions (partner effect). This study involved 165 married couples who were in their first marriages, had at least primary school education, lived in big cities, and got official marriage. A demographic information form, Dyadic Adjustment Scale, Positive and Negative Affect Schedule, and Life Experiences Survey were administered. The model was tested by utilizing a path analyses, using the APIM and by controlling length of marriage, number of children, and education levels of spouses. The results showed significant associations about both actor and partner effects. Specifically, it was revealed that both wives and husbands high in positive affect reported high marital adjustment. On the other hand, it was shown that husbands high in negative affect lead to low own and wives' marital adjustment. However, wives high in negative affect predicted only low their own marital adjustment. For negative life events, both wives and husbands experienced higher negative impact of life events tend to report lower marital adjustment. The results were discussed with reference to the related literature together with the implications and limitations of the research.

Keywords: *Affect, life events, marital adjustment, couple.*

1. Introduction

Many studies examined the association between trait affects and marital adjustment, and found significant connections. Both positive and negative affect are the predictors of marital adjustment (Fisher & McNulty, 2008; Watson, Hubbard, & Wiese, 2000). Besides, some studies such as Thomsen and Gilbert's (1998) claim that negative affect is a better predictor to understand marital satisfaction. Similarly, Karney and Bradbury (1995) suggest that negative affect shows greater effects on marital outcome than the other personality factors. Moreover, individual's affect is not only related to their own marital adjustment, but also to their partner's marital adjustment (Gordon & Baucom, 2009; Watson et al., 2000).

Negative and unpleasant experiences can lead to severe personal distress. Couples' perceptions of life events as stressful or negative may be connected more closely to marital quality than their objective experiences (Williams, 1995). Spouses who report more negative and stressful life events tend to evaluate their marriages less satisfactory (Neff & Karney, 2009; Wosidlo & Segrin, 2013a). The association between negative life events and marital quality were shown to be negatively related with a variety of stressful events, like loss of important individuals (Umberson, Williams, Powers, Liu, & Needham, 2006), the transition to parenthood (Lawrence, Rothman, Cobb, Rothman, & Bradbury, 2008), economic strains (Conger, Rueter, & Elder, Jr., 1999), disabilities of children (Florian & Findler, 2001), unemployment (Ström, 2003), discord with spouses' parents (Bryant, Conger, & Meehan, 2001), and general major life events (Tesser & Beach, 1998). In addition to their own, wives' and husbands' perception of negative life events are related to their spouses' lower marital adjustment (Neff & Karney, 2007).

The aim of the current study was to examine the relationship among affect, negative life events and marital adjustment in a dyadic manner. It was hypothesized that affect dimensions and negative life events of wives and husbands would predict marital adjustment of couples. Specifically, positive affect of

wives and husbands would predict marital adjustment of couples positively, and negative affect and negative life events of wives and husbands would predict marital adjustment of couples negatively.

2. Method

2.1. Participants

The sample of the current study included 165 Turkish married couples. The age of wives ranged between 22 and 64 ($M = 40.01$, $sd = 9.94$) and the age of husbands ranged between 24 and 66 ($M = 43.63$, $sd = 10.43$). Moreover, the length of marriages of couples ranged from 1 month to 44 years 11 months (539 months) with the average of 204.12 months ($SD = 131.25$). With the respect to their children, 14.5% of couples ($N = 24$) had no child, 22.4% of couples ($N = 37$) had one child, 46.7% of couples ($N = 77$) had two children, 13.3% of couples ($N = 22$) had three children, 3% of couples ($N = 5$) had four or more. When education level were considered, 26.7% of wives ($n = 44$) and 14% of husbands ($n = 23$) had primary-secondary school education, 25.5% of wives ($n = 42$) and 26.7% of husbands ($n = 44$) had high school education, 38.2% of wives ($n = 63$) and 45.5% of husbands ($n = 75$) had university degree, and 9.7% of wives ($n = 16$) and 13.9% of husbands ($n = 23$) had graduate/doctorate degree.

2.2. Instruments

The instruments included a demographic information form and following three scales:

Dyadic Adjustment Scale (DAS) was developed by Spanier (1976) to assess the quality of relationship of cohabiting and married couples. The scale is a 32-item self-report scale and measures four relational aspects which are dyadic satisfaction, dyadic cohesion, dyadic consensus and affectional expression. DAS was translated into Turkish by Fıfılođlu and Demir (2000). In that study, Cronbach's alphas were reported .83 for dyadic satisfaction, .80 for affectional expression, .75 for dyadic cohesion, and .75 for dyadic consensus, and .92 for overall scale. The split half reliability coefficient was .86. Additionally, criterion validity was obtained by the correlation between adapted DAS and adapted Locke-Wallace Marital Adjustment Test ($r = .82$) and construct validity was assessed showing the original four factors in the Turkish version.

The Positive and Negative Affect Schedule (PANAS) is a self-report scale to measure subjectively experienced moods was developed by Watson, Clark and Tellegen (1988). It contains two 10-item mood scales derived positive and negative ratings from 1 (very slightly or not at all) to 5 (extremely). PANAS was translated into Turkish by Gençöz (2000) and internal consistency coefficients were found to be .83 for the positive affect scale and .86 for the negative affect scale. Test-retest reliability coefficients for positive and negative affect were .40 and .54, respectively. Moreover, internal consistency coefficients were .81 for positive affect scale and .83 for negative affect scale. Furthermore, criterion-related validity was investigated by assessing the correlation between the scores of PANAS and the scores of both with Beck Depression Inventory and with Beck Anxiety Inventory. Findings indicated that positive affect presented correlations of -.48 and -.22, and negative affect correlations were .51 and .47, with these inventories, respectively.

Life Experiences Survey (LES) is a self-reported scale to measure the number of and to appraise both positive and negative life events experienced during the past 6 months and 1 year developed by Sarason, Johnson and Siegel (1978). It includes 2 sections and 57 items totally. Section one contains items related to specific life events for all individuals, and section two is specifically for students. Item scores range on a 7-point scale from extremely negative (-3) to extremely positive (+3). The respondents are questioned to evaluate the changes in their life during the past year stating the occurrence of those events within two 6-month-interval options (0-6 months and/or 7 months-1 year), and to evaluate how perceived impact of that particular event on their life as being positive and negative. The first section of LES was translated into Turkish by Aslanođlu (1978) and Cronbach's alpha was reported .68.

2.3. Data analysis

Descriptive statistics were conducted to get information about the characteristics of the data by using SPSS 20. The model among affect, negative life events and marital adjustment was formed by controlling length of marriage, number of children, and education levels of spouses. The model was conducted with using actor-partner interdependence model (APIM; Ledermann, Macho, & Kenny, 2011) by using a computer program for structural equation modeling, AMOS.

3. Results

3.1. Descriptive statistics and bivariate analyses

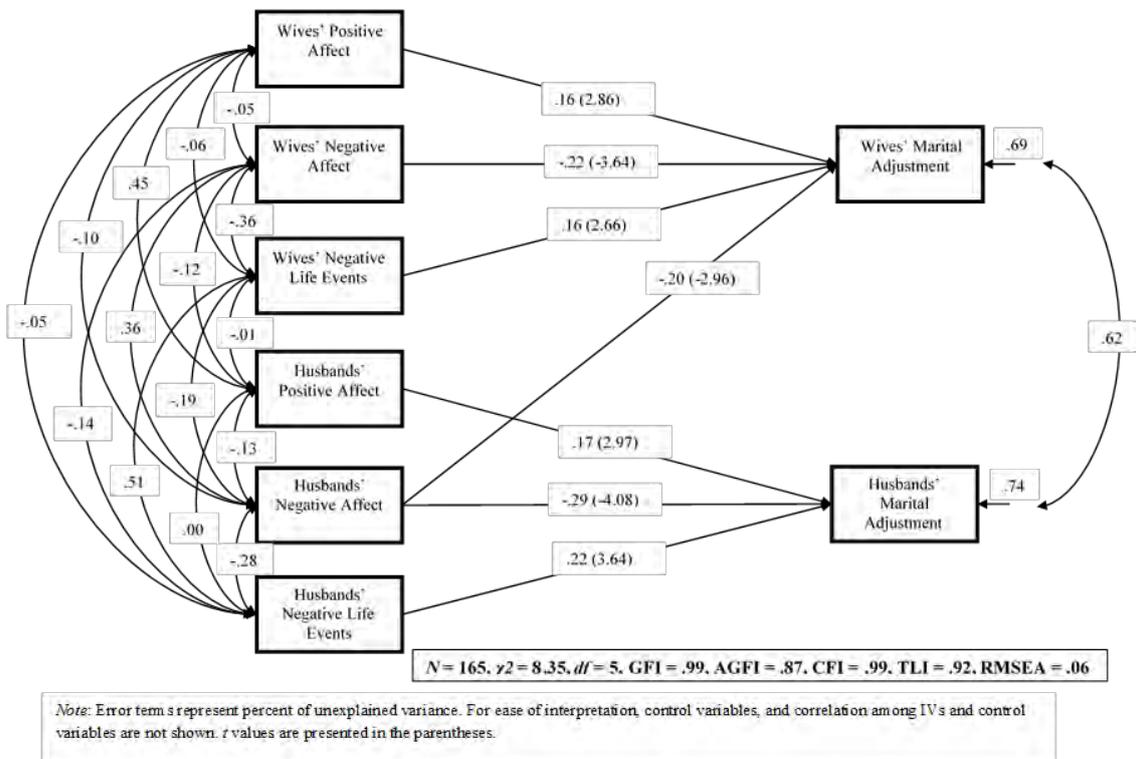
Descriptive statistics, which are means, standard deviations, and ranges, for the main variables of the study were calculated. The mean scores of positive affect were 3.52 for wives ($sd = .66$) and 3.59 for husbands ($sd = .68$). The mean scores of negative affect were 2.00 for wives ($sd = .61$) and 1.94 for husbands ($sd = .60$). The mean scores of negative life events were $-.09$ for wives ($sd = .10$) and $-.08$ for husbands ($sd = .09$) (lower scores mean higher negative life experiences). The mean scores of marital adjustment were 110.85 for wives ($sd = 17.37$) and 112.92 for husbands ($sd = 16.82$).

Prior to conducting tests of research questions, both intrapersonal and interpersonal correlations were calculated for all variables. For both wives and husbands, marital adjustment was significantly and positively correlated with positive affect ($r = .24, p < .01$; $r = .28, p < .01$, respectively), and negative life events (lower scores mean higher negative life experiences) ($r = .23, p < .01$; $r = .32, p < .01$, respectively); negatively correlated with negative affect ($r = -.43, p < .01$; $r = -.39, p < .01$, respectively). Moreover, negative affect was negatively correlated with negative life events ($r = -.36, p < .01$; $r = -.28, p < .01$, respectively) for both wives and husbands. Wives' marital adjustment was positively correlated with husbands' positive affect ($r = .25, p < .01$), negative life events ($r = .19, p < .05$), and marital adjustment ($r = .70, p < .01$); negatively correlated with husbands' negative affect ($r = -.35, p < .01$). Husbands' marital adjustment was negatively correlated with wives' negative affect ($r = -.28, p < .01$).

3.2. Actor-Partner effects of affect and negative life events in predicting marital adjustment

The conceptual model was determined as positive affect, negative affect, and negative life events would have direct effects on marital adjustment by controlling length of marriage, number of children, and education levels of spouses. In this manner, the model was saturated indicating observed and implied covariance matrices fitted exactly. The saturated model demonstrated five insignificant links, so they were dropped from the model. Eventually, the final model fit the data very well [$\chi^2(5, N = 165) = 8.35, p = .14, GFI = .99, AGFI = .87, CFI = .99, TLI = .92, RMSEA = .06$].

Figure 1. Actor and Partner Effects in Predicting Marital Adjustment



The APIM analysis showed significant associations about both actor and partner effects. Specifically, both wives and husbands high in positive affect reported high marital adjustment ($\beta = .16, p < .01$; $\beta = .17, p < .01$, respectively). On the other hand, husbands high in negative affect lead to low own and wives' marital adjustment ($\beta = -.29, p < .01$; $\beta = -.20, p < .01$, respectively). However, wives

high in negative affect predicted only low their own marital adjustment ($\beta = -.22, p < .01$). For negative life events, both wives and husbands experienced higher negative impact of life events (lower scores mean higher negative life experiences) tend to report lower marital adjustment ($\beta = .16, p < .01$; $\beta = .22, p < .01$, respectively). The only significant path from control variables to marital adjustment was the one from length of marriage to wives' marital adjustment. This indicates that the higher length of marriage, the higher wives' marital adjustment is ($\beta = -.22, p < .05$). Overall, affect and negative life events explained 31% and 26% of the total variances in wives' and husbands' marital adjustment.

4. Discussion

The aim of the study was to identify the relationship between affect, negative life events and marital adjustment. As expected, the current research found that both wives and husbands who showed higher positive affect tended to perceive higher marital adjustment, however, when they showed higher negative affect, they tended to perceive lower marital adjustment. This is consistent with the literature findings (Gordon & Baucom, 2009; Watson et al., 2000).

On the other hand, partner effects were shown only between husbands' own negative affect and wives' marital adjustment in the current research. In other words, when husbands showed higher negative affect, their wives' reported less marital adjustment (Fisher & McNulty, 2008; Watson et al., 2000). Thomsen and Gilbert (1998) suggested that negative affect is better predictor to understand marital adjustment. This effect was seen only for husbands' negative affect. Moreover, husbands' marital adjustment was explained with only their own affective features. These difference may be due to gender differences (Gilligan, 1982; Impett & Peplau, 2006; Lavee & Ben-Ari, 2004).

As expected, the results demonstrated that both husbands and wives who perceived higher negative impact of life events tend to evaluate their marriage less adjusted. This is consistent with the literature findings (Neff & Karney, 2009; Woszidlo & Segrin, 2013a) that spouses who perceive more negative and stressful impact of life events tend to evaluate their marriages less satisfactory. On the other hand, both wives and husbands perceived high negative life events did not lead to change their partners' marital adjustment. The present study included both newlyweds and older couples. Therefore, couples may be more sensitive to their spouses' negative life experiences at the beginning of the marriage. Nevertheless, with increment in responsibilities, such as having children, economics, getting age, they may have a tendency to focus on their own experiences.

References

- Aslanoğlu, S. (1978). Habis tümörlerin oluşmasında stresin rolü. *Unpublished Master's Thesis, Hacettepe University, Ankara.*
- Bryant, C. M., Conger, R. D., & Meehan, J. M. (2001). The influence of in-laws on change in marital success. *Journal of Marriage and Family, 63*, 614–626. doi:10.1111/j.1741-3737.2001.00614.x
- Conger, R. D., Rueter, M. A., & Elder, G. H. Jr. (1999). Couple resilience to economic pressure. *Journal of Personality and Social Psychology, 76*, 54–71. doi:10.1037/0022-3514.76.1.54
- Fışiloğlu, H., & Demir, A. (2000). Applicability of the dyadic adjustment scale for measurement of marital quality with Turkish couples. *European Journal of Psychological Assessment, 16*, 214–218. doi:10.1027//1015-5759.16.3.214
- Fisher, T. D., & McNulty, J. K. (2008). Neuroticism and marital satisfaction: The mediating role played by the sexual relationship. *Journal of Family Psychology, 22*, 112–122. doi:10.1037/0893-3200.22.1.112
- Florian, V. & Findler, L. (2001). Mental health and marital adaptation among mothers of children with cerebral palsy. *The American Journal of Orthopsychiatry, 71*, 358–367. doi:10.1037/0002-9432.71.3.358
- Gençöz, T. (2000). Positive and Negative Affect Schedule: A study of validity and reliability. *Turkish Journal of Psychology, 15*, 27–28.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development.* Cambridge, MA: Harvard University Press.
- Gordon, C. L., & Baucom, D. H. (2009). Examining the individual within marriage: Personal strengths and relationship satisfaction. *Personal Relationships, 16*, 421–435. doi:10.1111/j.1475-6811.2009.01231.x
- Impett, E. A., & Peplau, L. A. (2006). "His" and "her" relationships? A review of the empirical evidence. In A. L. Vangelisti & D. Perlman (Eds.), *The Cambridge handbook of personal relationships* (pp. 273-291). New York, NY: Cambridge University Press.

- Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, methods. *Psychological Bulletin*, *118*, 3–34. doi:10.1037/0033-2909.118.1.3
- Lavee, Y., & Ben-Ari, A. (2004). Emotional expressiveness and Neuroticism: Do they predict marital quality? *Journal of Family Psychology*, *18*, 620–627. doi:10.1037/0893-3200.18.4.620
- Lawrence, E., Rothman, A. D., Cobb, R. J., Rothman, M. T., & Bradbury, T. N. (2008). Marital satisfaction across the transition to parenthood. *Journal of Family Psychology*, *22*, 41–50. doi:10.1037/0893-3200.22.1.41
- Ledermann, T., Macho, S., & Kenny, D. A. (2011). Assessing mediation in dyadic data using the actor-partner interdependence model. *Structural Equation Modeling*, *18*, 595–612. doi:10.1080/10705511.2011.607099
- Neff, L. A., & Karney, B. R. (2007). Stress crossover in newlywed marriage: A longitudinal and dyadic perspective. *Journal of Marriage and Family*, *69*, 594–607.
- Neff, L. A., & Karney, B. R. (2009). Stress and reactivity to daily relationship experiences: How stress hinders adaptive processes in marriage. *Journal of Personality and Social Psychology*, *97*, 435–450. doi:10.1037/a0015663
- Sarason, I. G., Johnson, J. H., & Siegel, J. M., (1978). Assessing the impact of life changes: development of the Life Experiences Survey. *Journal of Consulting and Clinical Psychology*, *46*, 932–946.
- Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family*, *38*, 15–38.
- Ström, S. (2003). Unemployment and families: A review of research. *Social Service Review*, *77*, 399–430. doi:10.1086/375791
- Tesser, A., & Beach, S. R. H. (1998). Life events, relationship quality, and depression: An investigation of judgment discontinuity in vivo. *Journal of Personality and Social Psychology*, *74*, 36–52. doi:10.1037/0022-3514.74.1.36
- Thomsen, D. G., & Gilbert, D. G. (1998). Factors characterizing marital conflict states and traits: physiological, affective, behavioral and neurotic variable contributions to marital conflict and satisfaction. *Personality and Individual Differences*, *25*, 833–855. doi:10.1016/S0191-8869(98)00064-6
- Umberson, D., Williams, K., Powers, D. A., Liu, H. & Needham, B. (2006). You make me sick: Marital quality and health over the life course. *Journal of Health and Social Behavior*, *47*, 1–16.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063-1070. doi:10.1037/0022-3514.54.6.1063
- Watson, D., Hubbard, B., & Wiese, D. (2000). General traits of personality and affectivity as predictors of satisfaction in intimate relationships: Evidence from self- and partner-ratings. *Journal of Personality*, *68*, 413–449.
- Williams, L. M. (1995). Associations of stressful life events and marital quality. *Psychological Reports*, *76*, 1115–1122. doi:10.2466/pr0.1995.76.3c.1115
- Woszidlo, A., & Segrin, C. (2013a). Direct and indirect effects of newlywed couples' neuroticism and stressful events on marital satisfaction through mutual problem solving. *Marriage & Family Review*, *49*, 520–545. doi:10.1080/01494929.2013.772933

THE PREDICTORS OF DEPRESSIVE SYMPTOMS: THE ROLE OF ANGER AND DIFFICULTIES IN EMOTION REGULATION

Başak Bahtiyar¹ & Tülin Gençöz²

¹Department of Psychology, Maltepe University (Turkey)

²Department of Psychology, Middle East Technique University (Turkey)

Abstract

Current study aimed to investigate the roles of trait anger, anger expression styles and difficulties in emotion regulation as predictors of depressive symptoms. Based on this aim, the study was carried out with 544 nonclinical participants (408 females and 136 males) living in Turkey by using convenient sampling method. The participants whose ages were between 18 and 50 ($M = 26.52$, $SD = 7.30$) were asked to filled self-report questionnaires including trait form of State-Trait Anger Expression Inventory (STAXI), Difficulties in Emotion Regulation Scale (DERS) and Beck Depression Inventory (BDI). Hierarchical regression analysis was performed for examining the associated factors of depressive symptoms (as dependent variable). For this analysis, in the first step, trait and 3 styles of anger expression, i.e. Anger-In, Anger-Out and Anger-Control were entered into the equation via stepwise method. After controlling the possible effects of trait anger and anger expression, in the second step, 5 difficulties in emotion regulation, i.e. Lack of Emotional Awareness, Lack of Emotional Clarity, Non-Acceptance of Emotional Response, Limited Access to Effective Emotion Regulation Strategies, Inability to Engage in Goal Directed Behavior and Impulse Control Difficulties, were again entered into the equation via stepwise method. Results of the regression analysis revealed that trait anger and anger suppression were significant in increasing depressive symptoms. On the other hand, anger control had significant effect in decreasing depression. After controlling the effects of anger, three groups of difficulties in emotion regulation were found to be significant. Accordingly, Non-Acceptance of Emotional Response and Inability to Engage in Goal Directed Behavior had significant role in increasing depressive symptoms. However, there was negative association between Lack of Emotional Clarity and depression related symptoms. The findings of the current study are consistent with literature emphasizing the role of anger in depression, and have important implications by pointing the negative effect of anger suppression in the development and treatment of depressive symptoms. In addition, the significant difficulty in accepting emotional response and engaging in goal directed behavior may indicate specific problem in anger regulation that is associated with depression related symptoms.

Keywords: *anger, difficulties in emotion regulation, depression.*

1. Introduction

In terms of healthy behavioral, psychological and relational functioning, it is crucial to control both positive and negative emotions (Kring & Werner, 2004). Inability to deal with emotions in daily life leads to more intense and persistent psychological distress, so that this may be a risk factor for psychological disorders such as depression and anxiety (Mennin, Holoway, Fresco, Moore, & Heimberg, 2007). Recent empirical studies emphasized that specific difficulties in emotion regulation are more significant for some psychological problems than others. For instance, anxiety sensitivity tends to be more significant in heightened worry and anxiety arousal in the case of lack of emotional acceptance (Kashdan, Zvolensky, & McLeish, 2008). Similarly, the experience of uncured panic attack and generalized anxiety disorders are found to be positively related with both lack of emotional acceptance and clarity (Mennin, Heimberg, Turk, & Fresco, 2005; Tull & Roemer, 2007).

Anger is one of the emotions experienced in high intensity, that is mostly triggered in the conditions of frustration, perceived injustice, and possible threat (Spielberger, 1999). This strong emotion leads to activation of behavioral, cognitive and affective systems with an attempt to mobilize internal sources, to increase motivation and to energize behavioral action, (Anderson & Bushman, 2002; Potegal & Novaco, 2010). Despite adaptive functions of anger, its dysregulation, characterized as excessiveness

and inappropriateness in frequency, intensity, duration, and its expression; is associated with wide range of clinical problems, such as psychotic disorders, mood disorders, anxiety disorders, substance use disorders, impulse control problems, and also personality problems (Novaco, 2010). Spielberger (1999) defined trait anger as more stable pattern corresponding to predisposition to be angry characterized with experiencing more frequent and more intense state anger episodes. In addition, Spielberger (1996 and 1999) conceptualized different anger expressions emphasizing that not only the level, but also the ways of expressing anger are closely associated with psychological well-being.

The aim of the present study is to validate the role of trait anger and also to determine the role of anger expression styles on depressive symptoms. Another aim is to examine the predictive role of specific difficulties in emotion regulation on depression, after controlling the possible significant effects of anger experience and expressions.

2. Method

2.1. Participants

Data for the current study was collected from 544 nonclinical participants in the range of the age from 18 to 50 ($M = 26.52$, $SD = 7.30$). 408 of the participants were female (75%) and 136 of them were male (25%). Participants were selected by using convenience sampling method via snowball technique in Turkey, mostly from Ankara and Istanbul. The set of self- complete questionnaires was distributed to participants by either mail ($N = 444$, 81.6%) or paper-pencil style ($N = 100$, 18.4%). 49.5% of the participants were students ($N = 268$) and 50.5% were employed ($N = 273$). In terms of education level, 1.1% ($N = 6$) were graduates of elementary school, 7.2% ($N = 39$) were graduates of high school, 71.3% ($N = 388$) were university students or university graduates, and 20.4% ($N = 111$) were post-graduates.

2.2. Materials

In addition to demographic information form to gather information about participants' age, gender, education level, employment status, living style and psychological or psychiatric history; following questionnaires were administered:

The State-Trait Anger Inventory -Trait Form (STAXI) was developed to measure the experience and the expressions of anger (Spielberger, Jacobs, Russel, & Crane, 1983). The scale has 10 items assessing trait anger and 24 items assessing three styles of anger expression, namely anger in (i.e. internalizing anger) that refers to hold anger in without expressing it or to direct it toward self, anger out (i.e. externalizing anger) that refers to display anger toward its target; and anger control that refers to ability to manage anger and to control its expression. Items rated on a four-point Likert scale from 1 "almost never" to 4 "almost always". The scale indicated good construct and criterion validity in which high level of anger was found to be correlated with increased hostility, as well as cardiovascular problems (Spielberger, Johnson, Russel, Crane, Jacobs, & Worden (1985). Turkish version of the scale was adapted by Özer (1994) with high internal consistencies for trait anger (alpha coefficient was .79), anger in (alpha coefficient was .62), for anger out (alpha coefficient was .78), and anger control (alpha coefficient was .84).

Difficulties in Emotion Regulation Scale (DERS, Gratz & Roemer, 2004) was developed to assess difficulties in different emotion regulation, consisting of 36 items rated on a five- point Likert scale valued from 1 "almost never" to 5 "almost always" based on six domains, specifically, lack of emotional awareness, lack of emotional clarity, non-acceptance of emotional responses, limited access to effective ER strategies, inability in engaging goal directed behavior, and impulse control difficulties. The scale indicated good psychometric properties with Cronbach's alpha as .93 for total scale, alphas for internal consistencies of these subscales ranged from .80 to .89, as well as good test-retest reliability. The Turkish version of this scale was adapted by Rugancı and Gençöz (2010) with satisfactory reliability and validity properties indicating that scores of DERS were different between individual experiencing high psychological distress and those experiencing low distress. Turkish translations of some of the items were revised by Kavcıoğlu and Gençöz (2011) and this final version revealed strong reliability and validity coefficients as well.

Beck Depression Inventory (BDI, Beck, Rush, Shaw, & Emery, 1979) measures severity of depression related with the affective, cognitive, behavioral, and motivational symptoms as well as suicidal thoughts. The scale has 21 items rated on a four-point Likert scale. The reliability of the scale with alpha coefficient was stated as .86 in clinical populations and .81 in nonclinical population (Beck, Steer, & Garbin, 1988). The Turkish version of this scale was adapted by Hisli (1989) with similar and satisfactory psychometric properties.

2.3. Analyses

In order to examine the factors associated with depressive symptoms (as dependent variable), hierarchical regression analysis was performed. Independent variables entered into the equation via two steps. In the first step, Trait Anger and three styles of anger expression, i.e. Anger In, Anger Out and Anger Control were entered to the regression analysis via stepwise method, in order to control possible effects of anger experience and anger expressions. After controlling significant role of anger, in the second step, 6 difficulties of emotion regulation, namely, Lack of Emotional Awareness, Lack of Emotional Clarity, Non-acceptance of Emotion Response, Limited Access to Effective ER strategies, Inability to Engage in Goal Directed Behavior and Impulse Control Difficulty, were again entered via stepwise method.

3. Results

The result of the hierarchical regression analysis for depression as dependent variable revealed that, initially internalized anger entered into the regression equation ($\beta = .38$, $t(542) = 9.58$, $p < .001$, $pr = .38$) and explained 15% of the variance by itself, $F_{\text{change}}(1,542) = 91.74$, $p < .001$. As the second step, trait anger entered into the regression equation ($\beta = .25$, $t(541) = 6.06$, $p < .001$, $pr = .25$) and explained variance increased to 20%, $F_{\text{change}}(1,541) = 36.75$, $p < .001$. As the third step, anger control entered into the regression equation, ($\beta = -.13$, $t(540) = -2.81$, $p < .01$, $pr = -.12$) and explained variance increased slightly to 21%, $F_{\text{change}}(1,540) = 7.88$, $p < .01$. After controlling for anger, among difficulties of emotion regulation, non-acceptance of emotional response was significantly associated with depression ($\beta = .34$, $t(539) = 8.25$, $p < .001$, $pr = .34$) and explained variance increased to 30%, $F_{\text{change}}(1,539) = 68.12$, $p < .001$. Then, lack of emotional clarity entered into the regression equation ($\beta = -.20$, $t(538) = -4.76$, $p < .001$, $pr = -.250$) and explained variance increased to 33%, $F_{\text{change}}(1,538) = 22.64$, $p < .001$. Finally, inability to engage in goal directed behavior was significantly associated with depression, ($\beta = .19$, $t(537) = 4.46$, $p < .001$, $pr = .19$) and explained variance increased slightly to 35%, $F_{\text{change}}(1,537) = 19.87$, $p < .001$ (see Table 1).

Consequently, the results of the regression analysis revealed that higher level of internalized anger and trait anger were significantly associated with increased depressive symptoms, whereas anger control was negatively associated with depression. After controlling the effects of anger experience and expressions, higher level of non-acceptance of emotional response and inability to engage in goal directed behavior were significantly associated with higher depression level. On the other hand, lack of emotional clarity was negatively associated with depressive symptoms.

Table 1. Associates of Depressive Symptoms

	Fchange	df	β	t (within set)	pr	R ²
1) Anger In	91.74 ^{***}	1,542	.38	9.48 ^{***}	.36	.15
2) Trait Anger	36.75 ^{***}	1,541	.25	6.06 ^{***}	.25	.20
3) Anger Control	7.88 ^{**}	1,540	-.13	-2.81 ^{**}	-.12	.21
4) Non-Acceptance of Emotional Response	68.12 ^{***}	1,539	.34	8.25 ^{***}	.34	.30
5) Lack of Emotional Clarity	22.64 ^{***}	1,538	-.20	-4.76 ^{***}	-.20	.33
6) Inability in Engaging Goal Directed Behaviors	19.87 ^{***}	1,537	.19	4.46 ^{***}	.19	.35

Note ** $p < .001$, *** $p < .001$

4. Discussion

The aim of the present study was to examine the factors related to depressive symptoms including anger experience, styles of anger expression and difficulties in emotion regulation. Based on this objective, firstly, it was hypothesized significant association between anger and depressive symptoms. Secondly, it was expected that specific difficulties in emotion regulation would be significant associated with depression.

The results revealed that, as expectedly, participants who had more trait-like anger and who tended to hold anger inside without expressing, reported higher depressive symptoms; while those who were able to control angry feelings reported less depression. These findings are consistent with literature establishing the role inhibition of anger expression as a risk factor for internalizing problems, such as depression, somatic problems (Koh, Kim, Kim & Park, 2005) and also anxiety (Biaggio, 2005).

After controlling the effect of anger, two difficulties of emotion regulation, namely non-acceptance of emotional response and inability to engage in goal pursuit were found to be significant in the increase of depression level. Emotional acceptance is an effortless strategy referring to let the

emotion to be experienced without any attempt to modify or to suppress (Valdivia-Salas, Sheppard, & Forsyth, 2010). Contemporary studies indicated that high level of acceptance and tolerance for negative emotions contribute to mental health and better psychological outcome (Greenberg, 2002), whereas, inability to accept negative emotional experience lead to various psychological problems (Tull & Roemer, 2007). There was also unexpected result indicating that depressive symptoms tended to be increased with better emotional clarity. It may be proposed that lack of emotional differentiation may have a buffering effect in the experience of depression in Turkish culture.

Although the relationship between anger and depression has been widely examined in the literature, current study has contribution to the literature for providing support this association and also determining maladaptive ways of anger expression in depressive symptoms among Turkish culture. In addition, the investigation of specific difficulties in emotion regulation in depression is important for achieving more effective emotion-focused intervention procedures. However, findings based on nonclinical sample from relatively high education level have some limitations.

References

- Anderson, C. A., & Bushman, B. J. (2002). Human aggression. *Annual Review of Psychology*, 53, 27–51.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive Therapy for Depression*. New York: Guilford.
- Beck, A. T., Steer, R. A., & Garbin, M. A. (1988). Psychometric properties of the Beck Depression Inventory: twenty-five years of evaluation. *Clinical Psychology Review*, 8, 77-100.
- Biaggio, A. M. B. (2005). Anxiety, Anger, and Moral Judgement. In C. D. Spielberger & Sarason, I. G. (Eds.), *Stress and emotion: Anxiety, anger and curiosity* (vol. 17, pp. 14, 31 – 44). New York: Routledge.
- Kring, A. M. & Werner, K. H. (2004). Emotion regulation and Psychopathology. In P. Philippot & R. S. Feldman (Eds), *The regulation of emotion* (pp. 359-386). New Jersey: Lawrence Erlbaum Associates.
- Mennin, D. S., Holaway, R. M., Fresco, D. M., Moore, M. T., & Heimberg, R. G. (2007). Delineating components of emotion and its dysregulation in anxiety and mood psychopathology. *Behavior Therapy*, 28, 284-302.
- Kashdan, T. B., Zvolensky, M. J., & McLeish, A. (2008). Anxiety sensitivity and affect regulatory strategies: Individual and interactive risk factors for anxiety-related symptoms. *Journal of Anxiety Disorders*, 22, 429-440.
- Gratz, K. L. & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*, 26(1), 41-54.
- Greenberg, L. S. (2002). *Emotion-focused therapy: Coaching clients to work through their feelings*. Washington, DC: American Psychological Association.
- Hisli, N. (1989). Beck Depresyon Envanteri'nin üniversite öğrencileri için geçerliliği ve güvenilirliği üzerine bir çalışma [Reliability and validity of 106 Beck Depression Inventory for university students]. *Turkish Journal of Psychology*, 23, 3-13.
- Kavcıoğlu, F. C. (2011). *The role of meta-mood experience on the mood congruency effect in recognizing emotions from facial expressions* (Unpublished master's thesis). Middle East Technical University, Ankara, Turkey.
- Koh, K. B, Kim, D. K., Kim, S. Y., & Park, J. K. (2005). The relation between anger expression, depression, and somatic Symptoms in depressive disorders and somatoform disorders. *Journal of Clinical Psychiatry*, 66(4), 485-491.
- Mennin, D. S., Heimberg, R. G., Cynthia, L. T., & Fresco, D. M. (2005). Preliminary evidence for an emotion dysregulation model of generalized anxiety disorder. *Behaviour Research and Therapy*, 43, 1281-1310.
- Novaco, R. W. (2010). Anger and Psychopathology. In M. Potegal, G. Stemmler & C. Spielberger (Eds.), *International handbook of anger: Constituent and concomitant biological, psychological and social processes* (pp. 465-498). New York: Springer.
- Özer, K. (1994). Sürekli Öfke (SL – Öfke) ve Öfke İfade Tarzı (Öfke - Tarz) Ölçekleri Ön Çalışması. *Türk Psikoloji Dergisi*, 9 (31), 26-35.
- Potegal, M., & Novaco, R. (2010). A brief history of anger. In M. Potegal, G. Stemmler & C. Spielberger (Eds.), *International handbook of anger: Constituent and concomitant biological, psychological and social processes* (pp. 9-24). New York: Springer.

- Rugancı, R. N. & Gençöz, T. (2010). Psychometric properties of a Turkish version of the difficulties in emotion regulation scale. *Journal of Clinical Psychology, 66*, 442 – 455.
- Spielberger, C. D. (1996). *State-Trait Anger Expression Inventory: Professional manual*. Odessa, FL: Psychological Assessment Resources, Inc.
- Spielberger, C. D. (1999). *State-Trait Anger Expression Inventory-2: Professional manual*. Odessa, FL: Psychological Assessment Resources, Inc.
- Spielberger, C. D., Jacobs, G., Russell, S., & Crane, R. (1983). Assessment of anger: The state-trait anger scale. In J. N. Butcher & C. D. Spielberger (Eds.), *Advances in personality assessment* (Vol. 3, pp. 112–134). Hillsdale: Lawrence Erlbaum.
- Spielberger, C. D., Johnson, E. H., Russell, S. F., Crane, R. J., Jacobs, G. A., & Worden, T. J. (1985). The experience and expression of anger: Construction and validation of an anger expression scale. In M. A. Chesney & R. H. Rosenman (Eds.), *Anger and hostility in cardiovascular and behavioral disorders* (pp. 5–30). New York: Hemisphere.
- Tull, M. T., & Roemer, L. (2007). Emotion regulation difficulties associated with the experience of uncued panic attacks: Evidence of experiential avoidance, emotional nonacceptance, and decreased emotional clarity. *Behavior Therapy, 38*, 378–391.
- Vadiviah- Salas, S., Sheppard, S. C. & Forsyth, J. P. (2010). Acceptance and commitment therapy in an emotion regulation context. In A. M. Kring & D. M. Sloan (Eds), *Emotion regulation and psychopathology: A transdiagnostic approach to etiology and treatment* (pp. 310-338). New York: Guilford Press.

THE ROLE OF COPING IN THE PREDICTION OF FORGIVENESS: CONTRIBUTIONS BEYOND PERSONALITY

Samantha A. Fowler & Lilly E. Both

Department of Psychology, University of New Brunswick (Canada)

Abstract

The act of forgiveness has likely been around since the dawn of time. Indeed, most Holy Scriptures and religions of the world address forgiveness in some detail; however, forgiveness has only become a topic of interest to psychologists within the past few decades. As such, some researchers have come to conceptualize forgiveness in terms of three facets: forgiveness of self, forgiveness of others, and forgiveness of situations (such as illness or natural disaster). Researchers have found certain personality factors to predict forgiveness, most notably: emotional stability, extraversion, conscientiousness, and agreeableness. Other researchers have found a relation between personality and coping styles; however, there is scant research to date examining the relation between coping styles and forgiveness. To address this gap in the literature, the current study recruited 117 undergraduate students and had them complete questionnaires pertaining to personality, coping, and forgiveness. We found a relation between emotional stability, extraversion, agreeableness, conscientiousness, and each of the three forgiveness facets. Furthermore, there were significant correlations between coping styles and forgiveness, such that problem focused coping was correlated positively with the three forgiveness facets, and emotion focused coping was correlated negatively with them. Several hierarchical regression analyses were conducted to assess whether coping styles added unique variance beyond that of personality in predicting each of the three forgiveness facets. The overall models were statistically significant in all three analyses. In all models, age and gender were not statistically significant predictors of forgiveness. Forgiveness of self and situations were predicted by the personality factors of emotional stability and agreeableness. Additionally, coping styles did emerge as significant predictors, such that lower levels of emotion focused coping and higher levels of problem focused coping predicted forgiveness of self and situations. Finally, agreeableness was the only significant predictor of forgiveness of others; however, the lack of significant predictors in this model could be due to the low reliability of this subscale in the present study. Taken together, the findings of this study suggest there is a relation between coping and forgiveness. Additionally, coping adds unique variance in the prediction of forgiveness of self and forgiveness of situations beyond that of personality. Since forgiveness has profound implications for subjective well-being and mental wellness, clinicians should incorporate techniques that teach problem focused coping and the art of forgiveness in therapeutic settings.

Keywords: *forgiveness, personality, coping.*

1. Introduction

The present study examines three facets of forgiveness: forgiveness of self, forgiveness of others, and forgiveness of situations that are seen as beyond one's control (such as natural disaster or terminal illness; Thompson et al., 2005). Our goal was to examine personality and coping styles in relation to these three facets of forgiveness.

1.1. Personality

A number of studies have examined the "Big Five" personality factors (Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness) in relation to forgiveness. For example, neuroticism (the tendency to experience anxiety and other negative emotions) is negatively correlated with forgiveness (Brose, Rye, Lutz-Zois, & Ross, 2005; Walker & Gorsuch, 2002) and predicts revenge and avoidance motivations two-and-a-half years after the transgression (Maltby et al., 2008). Several studies have found agreeableness (the tendency to be trusting and open with others) to be related to

forgiveness (Ashton, Paunonen, Helmes, & Jackson, 1998; Brose et al., 2005); however, evidence relating agreeableness to forgiveness of self, others, and situations is inconsistent.

The relation between forgiveness and extraversion (being outgoing), conscientiousness (being organized and reliable), and openness (being inclined to seek new experiences) is considerably more ambiguous. Worthington (1998) suggested that introversion inhibits forgiveness; this notion was reinforced by Ross et al. (2004) who found the extraversion facets of warmth and positive emotions to be conducive of forgiveness towards others; however, other studies do not substantiate this claim (Maltby, Macaskill, & Day, 2001; Walker & Gorsuch, 2002). Berry, Worthington, Parrott, O'Connor, and Wade (2001) demonstrated a positive relation between conscientiousness and forgiveness; however, other studies have failed to establish this relation (Ashton et al., 1998; Walker & Gorsuch, 2002). The same studies were also unsuccessful in determining an association between openness and forgiveness. These discrepancies and mixed results in the literature highlight the importance of conducting further empirical research on personality and forgiveness.

1.2. Coping styles

In addition to being related to forgiveness, personality is also a known correlate of coping styles. Coping strategies can include: problem focused coping, which involves managing the source of stress (Vitaliano, Russo, Carr, Maiuro, & Becker, 1985); seeking social support, as in appealing to others for emotional, informational, or tangible assistance (Lazarus & Folkman, 1984); and, emotion focused coping, which involves attempts to lessen emotional distress (Lazarus & Folkman).

The relation between neuroticism and coping has been studied extensively, and it has been suggested that highly neurotic individuals use less adaptive coping behaviors than their less neurotic counterparts (Gunthert, Cohen, & Armeli, 1999). Specifically, evidence suggests that neuroticism is negatively correlated with problem focused coping strategies (O'Brien & DeLongis, 1996; Vickers, Kolar, & Hervig, 1989) and positively correlated with emotion focused coping strategies (Shewchuck, Elliot, MacNair-Semands, & Harkins, 1999). There is also a fair body of literature relating extraversion to coping. For example, studies by McCormick, Dowd, Quirk, and Zegarra (1998), and Bouchard, Guillemette, and Landry-Leger (2004) found extraversion to be related to problem solving based coping strategies.

A number of studies have also found that conscientiousness plays a role in the coping styles of individuals. Conscientiousness has been most strongly correlated with problem focused strategies (Bouchard et al., 2004; McCormick et al., 1998; Vickers et al., 1989). Other research focusing on the traits of agreeableness and openness have yielded mixed results, and the effects these traits have on coping is minimal, especially when controlling for the effects of neuroticism and conscientiousness (Vickers et al., 1989). Given the relation between personality and coping styles, and between personality and forgiveness, it stands to reason that there should also be an association between coping styles and forgiveness. Strelan and Covic (2006) have identified several parallels between the forgiving process and the coping process, leading them to suggest that the act of forgiving may be viewed as a means of reducing a stress reaction. Even so, the role that coping styles play in the forgiveness of the self, others, and situations has yet to be identified.

1.3. Purpose of the present study

The present study sought to extend the research on personality, coping, and forgiveness in three ways: (1) by adding to the existing literature on the relations between personality and coping and personality and forgiveness. As much of the previous research is mixed, more empirical investigation is needed to examine the relations among these variables; (2) by exploring the previously unexamined relation between coping and forgiveness; and (3) by determining if coping styles add unique variance beyond that of personality in separate models predicting forgiveness of self, forgiveness of others, and forgiveness of situations.

2. Method

One hundred and seventeen students at a small university in Eastern Canada were recruited from introductory psychology courses to participate in a questionnaire study in exchange for course credit. The mean age of the sample was 20.83 years ($SD = 4.4$). The majority of participants were female (82.1%). Participants completed questionnaire packages in supervised group sessions. All measures and procedures were approved by the university's Research Ethics Board prior to the commencement of the study.

2.1. Measures

Demographics. Participants completed a demographics measure that asked for age, gender, and marital status.

Heartland Forgiveness Scale (HFS; Thompson et al., 2005). This scale consists of 18 items and measures forgiveness on a scale of 1 = *almost always false of me* to 7 = *almost always true of me*. In addition to a total score, three subscale scores are computed: forgiveness of self (e.g., “*I hold grudges against myself for negative things I have done*”); forgiveness of others (e.g., “*I continue to be hard on others who have hurt me*”); and forgiveness of situations (e.g., “*With time I can be understanding of bad circumstances in my life*”). The reliability of the three scales in the current study was .79, .78, and .61, respectively.

Ways of Coping Checklist (WCL-42; Vitaliano et al., 1985). The WCL-42 is a 42-item scale designed to measure a number of coping styles. For the purpose of this study, we used the problem focused coping and emotion focused coping subscales. Participants recorded the degree to which they used each coping strategy on a 4-point Likert scale where 0 = *not used*, and 3 = *used a great deal*. Emotion focused coping and problem focused coping were found to have good internal reliability in this study ($\alpha = .91$ and $.74$, respectively).

The NEO-PI-R (Costa & McCrae, 1992). The NEO-PI-R is a 240-item measure that was used to assess personality. The NEO-PI-R measures five factors: Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. The NEO-PI-R is considered the “Gold Standard” for measuring personality and has good convergent and discriminant validity (see Costa & McCrae, 1992, for more details). Good internal reliability was demonstrated for all of the scales of interest in this study: Neuroticism ($\alpha = .87$), Extraversion ($\alpha = .80$), Agreeableness ($\alpha = .74$), and Conscientiousness ($\alpha = .82$). The reliability of Openness was found to be lower ($\alpha = .68$).

3. Results

3.1. Correlations

The correlations among forgiveness, personality, and coping are displayed in Table 1. Neuroticism was negatively correlated with forgiveness of self, others, and situations. On the other hand, Extraversion, Agreeableness, and Conscientiousness were positively related to the three forgiveness facets. No statistically significant correlations were found between Openness and the forgiveness facets.

In terms of personality and coping, problem focused coping was positively related to Extraversion, Openness, and Conscientiousness, and negatively related to Neuroticism. Emotion focused coping was positively related to Neuroticism and negatively related to Extraversion, Agreeableness, and Conscientiousness.

The correlational analyses also revealed that emotion focused coping was negatively correlated with forgiveness of self, others and situations. The inverse was found to be true for problem focused coping, which was positively correlated with forgiveness of self, others, and situations.

Table 1. Correlations among Forgiveness, Personality, and Coping

	Self	Other	Sit	PF	EF
N	-.62***	-.27**	-.58***	-.19*	.73***
E	.39***	.25**	.26**	.31***	-.40***
O	.02	.08	.17	.21*	.17
A	.35***	.50***	.37***	.18	-.27**
C	.23*	.21*	.26*	.23*	-.47***
PF	.36***	.22*	.29**	1	.07
EF	-.53***	-.31***	-.50***	.07	1

* $p < .05$

** $p < .01$ *** $p < .001$

Note: N = Neuroticism, E = Extraversion, O = Openness, A = Agreeableness, C = Conscientiousness, PF = Problem Focused Coping, EF = Emotion Focused Coping, Self = Forgiveness of Self, Other = Forgiveness of Other, and Sit = Forgiveness of Situation.

3.2. Hierarchical regression analysis

Three hierarchical regression analyses were conducted to determine if coping adds unique variance beyond that of personality scores in the prediction of forgiveness of self, forgiveness of others, and forgiveness of situations. In each model, age and gender were entered on the first step to control for their effects, and they were not statistically significant (all $ps > .05$). The personality factors of Neuroticism, Extraversion, Agreeableness, and Conscientiousness were entered on the second step, and the third step included problem and emotion focused coping.

When predicting forgiveness of self, the overall model was statistically significant with 54% of the variance accounted for ($F_{(8, 105)} = 15.09, p < .001, R = .73, \text{adjusted } R^2 = .50$). Significant predictors

were Neuroticism ($\beta = -.59$; $t = -6.68$, $p < .001$) and Agreeableness ($\beta = .16$; $t = 2.00$; $p = .048$). As well, both emotion focused coping ($\beta = -.32$; $t = -2.84$; $p = .005$) and problem focused coping ($\beta = .33$; $t = 4.09$; $p < .001$) were significant predictors.

In the second hierarchical regression analysis, the overall model predicting forgiveness of situations was statistically significant with 47% of the variance accounted for ($F_{(8, 103)} = 11.29$, $p < .001$, $R = .68$, adjusted $R^2 = .43$). The significant predictors were Neuroticism ($\beta = -.57$, $t = -6.29$, $p < .001$) and Agreeableness ($\beta = .23$, $t = 2.83$, $p = .006$). Finally, when coping styles were entered on the third step, emotion focused coping ($\beta = -.30$, $t = -2.48$, $p = .015$) and problem focused coping ($\beta = .29$, $t = 3.27$, $p = .001$) were significant predictors.

Finally, in the third hierarchical regression analysis, the overall model predicting forgiveness of others was statistically significant with 32% of the variance accounted for ($F_{(8, 104)} = 6.10$, $p < .001$, $R = .57$, adjusted $R^2 = .27$). Agreeableness ($\beta = .43$, $t = 4.70$, $p < .001$) was the only significant predictor. When problem focused coping and emotion focused coping were added to the model, the step was not statistically significant ($F_{inc(2, 104)} = 2.92$, $p > .05$).

4. Discussion

The correlational analyses found that individuals scoring higher on all three forgiveness facets had lower neuroticism scores. Lower neuroticism scores reflect emotional stability; these individuals are not anxious or depressed and are capable of dealing with their current situation. We also found positive correlations between extraversion, agreeableness, conscientiousness, and the three forgiveness facets. People who are more outgoing, easy to get along with, and rational are more likely to be able to forgive than those who are introverted, cynical, and undisciplined. Finally, in accordance with previous studies no correlation was found between openness and forgiveness.

Concerning personality and coping, the present research found individuals who scored higher on neuroticism were less likely to endorse problem focused coping and more likely to use emotion focused coping. The opposite pattern was true for extraverts and individuals high on conscientiousness – they were more likely to endorse problem focused coping strategies and less likely to use emotion focused strategies. Problem focused coping has implications for subjective well-being because these strategies deal directly with the stressor at hand, whereas emotion focused coping tries to minimize the emotions that are felt; in this case, the stressor can continue because it is not addressed.

This study also served to fill a gap in the literature as few empirical studies exist examining the relation between coping and forgiveness. The findings of this study indicate the emotion focused coping is negatively correlated with forgiveness of self, others, and situations. Alternatively, problem focused coping was found to be positively correlated with the three forgiveness facets.

The results of several hierarchical regression analyses found that together, personality and coping account for a significant amount of the variance in the prediction of forgiveness of self, others, and situations. Specifically, forgiveness of self and forgiveness of situations displayed a similar pattern of results: significant predictors were higher agreeableness, emotional stability, and problem focused coping, as well as lower emotion focused coping scores. In terms of forgiveness of others, agreeableness was the lone significant predictor. However, the forgiveness of others subscale had low internal reliability in this study, which could account, in part, to the lack of additional statistically significant personality and coping predictors in this model.

The results of this study have implications in applied settings because forgiveness has been correlated with life satisfaction (Thompson et al., 2005). Individuals who are capable of forgiving can deal with the stressor and try to recover enough to get on with their lives. Therefore, clinicians should address coping mechanisms that allow for dealing with stressors that are within one's control.

4.1. Limitations

Given that the sample was drawn from a population of undergraduate students, it limits the ability to generalize to a larger population of citizens. Moreover, the majority of participants were young females making it difficult to apply the findings to males or older adults. Additionally, the low reliability of the forgiveness of others subscale could have led to a failure to detect meaningful relationships in the data analysis.

4.2. Directions for future research

The generalizability of these results could be enhanced by exploring the relations between personality, coping, and forgiveness in a community-based sample or in a sample that contains equal numbers males and females.

5. Conclusion

The findings of this study indicate that there is a relation between coping and forgiveness. Additionally, coping adds unique variance in the prediction of forgiveness of self and forgiveness of situations beyond that of personality.

References

- Ashton, M., Paunonen, S., Helmes, E., & Jackson, D. (1998). Kin altruism, reciprocal altruism, and the big five personality factors. *Evolution and Human Behavior, 19*(4), 243-255.
- Berry, J., Worthington, E., Parrott, L., O'Connor, L., & Wade, N. (2001). Dispositional forgiveness: Development and construct validity of the transgression narrative test of forgivingness (TNTF). *Personality and Social Psychology Bulletin, 27*(10), 1277-1290.
- Bouchard, G., Guillemette, A., & Landry-Leger, N. (2004). Situational and dispositional coping: An examination of their relation to personality, cognitive appraisals, and psychological distress. *European Journal of Personality, 18*(3), 221-238.
- Brose, L., Rye, M., Lutz-Zois, C., & Ross, S. (2005). Forgiveness and personality traits. *Personality and Individual Differences, 39*(1), 35-46.
- Costa, P., & McCrae, R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Odessa, FL: Psychological Assessment Resources.
- Gunther, K., Cohen, L., & Armeli, S. (1999). The role of neuroticism in daily stress and coping. *Journal of Personality and Social Psychology, 77*(5), 1087-1100.
- Lazarus, R. & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.
- Maltby, J., Macaskill, A., & Day, L. (2001). Failure to forgive self and others: A replication and extension of the relationship between forgiveness, personality, social desirability, and general health. *Personality and Individual Differences, 30*(5), 881-885.
- Maltby, J., Wood, A., Day, L., Kon, T., Colley, A., & Linley, A. (2008). Personality predictors of levels of forgiveness two and a half years after the transgression. *Journal of Research in Personality, 42*(4), 1088-1094.
- McCormick, R., Dowd, E., Quirk, S., & Zegarra, J. (1998). The relationship of NEO-PI performance to coping styles, patterns of use, and triggers for use among substance abusers. *Addictive Behaviors, 23*(4), 497-507.
- O'Brien, T., & DeLongis, A. (1996). The international context of problem-, emotion-, and relationship-focused coping: The role of the big five personality factors. *Journal of Personality, 64*(4), 775-813.
- Ross, S., Kendall, A., Matters, K., Wrobel, T., & Rye, M. (2004). A personological examination of self and other-forgiveness in the five factor model. *Journal of Personality Assessment, 82*(2), 207-214. doi:10.1207/s15327752jpa8202_8
- Shewchuck, R., Elliot, T., MacNair-Semands, R., & Harkins, S. (1999). Trait influences on stress appraisal and coping: An evaluation of alternative frameworks. *Journal of Applied Social Psychology, 29*(4), 685-704.
- Strelan, P., & Covic, T. (2006). A review of forgiveness process models and a coping framework to guide future research. *Journal of Social and Clinical Psychology, 25*(10), 1059-1085.
- Thompson, L., Snyder, C., Hoffman, L., Michael, S., Rasmussen, H., Billings, L., ... Roberts, D. (2005). Dispositional forgiveness of self, others, and situations. *Journal of Personality, 73*(2), 313-359.
- Vickers Jr., R. R., Kolar, D. W., & Hervig, L. K. (1989). *Personality correlates of coping with military basic training* (No. NHRC-89-3). Naval Health Research Center San Diego Ca.
- Vitaliano, P., Russo, J., Carr, J., Maiuro, R., & Becker, J. (1985). The Ways of Coping Checklist: Revision and psychometric properties. *Multivariate Behavioral Research, 20*(1), 3-26.
- Walker, D. F., & Gorsuch, R. L. (2002). Forgiveness within the big five personality model. *Personality and Individual Differences, 32*(7), 1127-1138.
- Worthington, E. (1998). The pyramid model of forgiveness: Some interdisciplinary speculations and unforgiveness and the promotion of forgiveness. In E. Worthington (Ed.), *Dimensions of forgiveness: Psychological research and theological perspectives* (pp. 107-137). Philadelphia: Templeton Press.

GENERAL PRACTITIONER'S MANAGEMENT OF PARENT PATIENTS WITH DEPRESSION IN AUSTRALIA: WHAT ABOUT THEIR CHILDREN?

Cheryl Cornelius

Department of Psychology, James Cook University/ Cheryl Cornelius Psychology (Australia)

Abstract

This is a cross discipline study of how Primary health care practitioners (General Practitioners) in a regional Australian city manage parents with depression. The child of a parent with depression has been referred to as a "lost" or "forgotten" child. Australia included the unmet needs of these children in the national mental health policy in 2006. It remained unknown if the increased risk of mental health for children of parents with depression had filtered down into routine practice in the primary health care sector. This qualitative study aimed to understand if GPs in an Australian regional city asked their parent patients with depression about their children. The data was collected by use of semi- structured interview with each of the 12 GPs who participated. The GPs were recruited by use of a purposive sampling method to allow for maximum variation in mental health training. The GPs reported that they had knowledge of the increased risk to these children gained from their clinical experience, but that they had no formal training on this subject. Three themes emerged from the data related to the patient's child: assessment of the risk to the child; the child as a source of stress to the parent; and the child's wellbeing. It is proposed that training and information on this mental health prevention is given to all GPs, and that a family session be included as part of the patient's mental health care plan.

Keywords: depression, children, parents, primary care.

1. Introduction

Depression is a commonly occurring mental illness in the community and management of parent patients with depression was chosen as the scope of this study. It is well documented that children of parents with depression are at increased risk of developing mental health problems themselves (Goodman & Gotlib, 2002; Weissman et al, 2006). This increased risk has been show to exist if the parent had an episode of depression during their child's first 10 years of life (Hammen & Brennan, 2003). The unmet needs of children of parents with a mental illness, previously described as "invisible" (Cowling, 2003 p.1) was targeted by the Australian Government in 2006 in their National Mental Health Policy.

Depression was described by Beardslee (2002) as being a family matter. However, these children were still described as being "lost" in primary care by Baulderstone, Morgan and Fudge (2012), who stated that asking about the children of parents with depression was outside the main hub of issues the General Practitioner (GP) needed to assess when working with a patient with depression.

While it is known that not all children of parents with depression will develop problems, it is estimated that up to up to 40% will (Goodman & Gotlib, 2002). Hence, it is important to identify those children who are having problems, without giving the parent the message that their episode of depression will adversely affect their child. It is known that most people with depression in Australia seek treatment from their GP (Ellis & Smith, 2002) therefore the GP was determined as the ideal person to identify the children of parents with depression who are having problems, enabling early intervention.

1.1. Objective

This qualitative study was designed to seek to determine whether the GPs in the Australian State of Queensland have incorporated into their routine clinical practice, the research based evidence that children of parents with depression are at an increased risk of mental health problems themselves. The aim of the study is to ascertain: if GPs have knowledge of the risk to the child of a parent with depression; and, if they report that they routinely ask about the behaviour, functioning and/or coping of the child/ren when their parents with depression present for treatment.

2. Method

2.1. Design

The study was conducted by face-to-face interviews with a semi-structured format. A qualitative research design was chosen as this is an exploratory study and it enabled the researcher to incorporate a range of techniques best suited to answering the research question (Elliot & Timulak, 2005). As this subject had no prior research, a grounded theory framework was used (Charmaz, 2006).

2.2. Participants

The population for the study were General Practitioners, a group known to be difficult to recruit into research studies (Askew et al., 2002). The sample consisted of 12 GPs recruited from GPs practicing in an Australian regional city, using a purposive sampling method, with the strategy of selecting the sample for maximum variation (Elliot & Timulak, 2005). Data was collected until the point of saturation of key themes was reached, referred to as thematic saturation (Elliot & Timulak, 2005) which occurred between the 10th and 12th interviews. This number corresponded to the findings of Guest, Bunce and Johnson (2006).

2.3. Procedure

The research interview was conducted face-to-face in each GP's consulting room and was based on the generic scenario of a female patient with depression. Prior to the interview the GP gave written consent to participate in the study. The GP was then asked to read the female patient scenario and was allowed to refer to it during the interview. The interview consisted of 13 open questions predefined by the researcher with probes and prompts that allowed the participant to enlarge on relevant information as it arose (Forrester, 2010). Space restricts publication of the questions here but are available from the researcher on request. Each interview was recorded using a digital voice recorder and coded alpha-numerically. Following the interviews, the recordings were transcribed verbatim, checked against the interview recording for correctness and then sent to the appropriate GP participant for verification.

2.4. Analytic strategy

The data was analyzed using a thematic coding method. Initial explorations of the data used a descriptive coding method. The initial codes were then grouped into categories and arranged into a patterned order (Charmaz, 2006; Saldaña, 2009). Data collection occurred until a point of thematic saturation was reached. The data was managed using the NVivo software program versions 9 and 10 (QRS International, 2012) and by manual methods.

The rigour of the study was maximised by using a process of respondent validation. Additional to this the overarching themes were identified and coded in the data by the researcher and were reviewed by the researcher's principal supervisor (Elliot & Timulak, 2005).

3. Results

The four main themes that were identified as related to the parents child were: need to get the parent patient well; risk to the child in terms of safety and neglect; child as a source of stress for the parent; child's wellbeing and level of functioning; and are discussed as follows.

3.1. Need to get the parent patient well

The fact that the patient was a parent and had a child to care for was seen as an important consideration by most of the GPs. There was some suggestion that most GPs would follow up on a parent with depression more vigorously than the average adult with depression.

Not unexpectedly, issues around: patient symptom clarification; illness diagnosis and severity; personal and family history; were a major requirement for the all of the GPs interviewed. This is a direct reflection of the GPs' training and is consistent with published treatment guidelines for adult patients with depression (beyondblue, 2013). These results will not be reported here as this study is specifically interested in whether the GP asked the parent with depression about their child, an area described by Baulderstone, Morgan and Fudge (2012) as being outside of the main hub of issues needed to be assessed when working with patients with depression. When I directly asked the GPs if the fact that the adult patient with depression was a parent would influence their patient management and treatment decisions, the majority of GP participants commented that they would want to ask the parent for information of the age of the child mainly to ascertain if the patient had postnatal depression (PND) and discussed the medication considerations around this. Some GPs however, stated that apart from the above medication considerations, for them the fact that the patient was a parent was not a major consideration.

One question was included in each interview on whether the GP routinely asked about the child when treating a parent patient with depression. The question did generate a range of answers and the main themes were related to asking the parent patient about the age of the child, especially the need to ascertain if the child was very young as stated in an earlier section. At the extreme end of the participants' replies to this question, three of the GPs interviewed, reported that routinely they would not ask questions about the child unless the parent raised this as an issue.

Some of the GPs indicated their belief that when the parent got better the child's needs would be met. This was demonstrated by the answer given by GP07M who considered the child and reported that for him it was "important to get the parent back on track" in the hope that as reported by GP06M "if you've got a transient depression that is adequately treated and treated properly. I'd certainly be hoping that we wouldn't have much problems down the track" for the children. Hence there was the expressed belief that when the parent was treated properly the child would be cared for and all would be well.

This statement poses a level of concern, as the research shows parents with depression to have increased stress when compared to parents without depression over a period of a year. It is also shown that these stressors were episodic not static therefore treating the parent with a family focussed approach is required (Goodman & Gotlib, 2002; Hammen & Brennan, 2003). While it is known that in some cases the children "wouldn't have much problems down the track" as the majority of children of parents with depression do not have ongoing mental health problems, it is not true for all children in this situation (Goodman & Gotlib, 2002; Hammen & Brennan, 2003). The major problem then becomes identifying the children who are having or going to have problems.

3.2. Risk to the child in terms of safety and neglect

The need to determine the safety of the child was voiced by all of the GP participants. The GPs discussed the need to assess the risk to the child mainly if the child was young and especially if the mother was breastfeeding. This information is well documented in the guidelines of treatment for patients with depression and the risk of PND (beyondblue, 2013) and based on the findings in this study it was shown to be well translated into routine general practice.

3.3. Child as a source of stress to the parent

Some of the GPs' stated a need to determine if the child was a source of stress to the parent. This was in line with the GPs history taking to enable them to identify the patient symptoms, potential triggers for and maintaining factors of the depressive episode that the patient experienced. While this is not a direct way of asking how the child was coping, asking the parent questions about their child, to determine if the child was a source of stress to the parent, may lead to discussion of issues about the child that would help the GP to identify a child with problems. This is demonstrated in the extract of the interview with GP08F: "if the child's got problems then the mum's going to have problems. I might ask. How are the children? How are they going at school? Are there any problems there? Children are one of the big stresses in life...". In order to clarify her statements I asked GP08F if she was mainly asking about the child to find out if the child was a stress to the parent. GP08F's reply was "Yes".

While this type of question and resultant conversation may lead to discussion on the needs of the child and identify a child with problems, I believe that this approach to asking about the child would more likely only identify the child with externalising behaviours, as these are behaviours that impact on the child's external environment including other family members. This is thought more probable as externalising behaviours such as anger outbursts, defiance and acts of aggression are more likely to be a stress for the parent with depression. This situation is in contrast to the child demonstrating internalising behaviours, such as worry and being withdrawn, which may not be noticed by a parent with depression who is coping with their own problems and hence not mentioned in this type of discussion with their GP.

3.4. Child's wellbeing and level of functioning

The GPs in the study all worked in a practice with a stated family focus, therefore it can be assumed that the GPs frequently worked with parent patients. Despite this only four of the twelve GPs who participated in the study stated that they would ask the parent patient for information on the child's wellbeing. These four GPs reported in the interview they routinely asked about the child's wellbeing, had extensive information they would request when working with parents with depression about the functioning of their child. Their replies were unprompted and their reported practice was seen to be consistent with the approach advised by Baulderstone, Morgan and Fudge (2012) as the best way to be able to understand how the children of parents with depression were coping and to be able to identify those children that may need help. However, the interviews from these GPs did indicate that they were less likely to talk about the child when the parent was a male, unless the male patient was a single parent, or raised the subject of his children.

4. Discussion and conclusion

Based on the information reported in the interviews, the 12 GP participants could be divided into three main groupings. Figure 1 below allows for a visual representation of these findings.

Figure 1. The GP groupings based on the information of the child they requested from the parent patient



The findings of this study indicate that the well-established fact that, an increased risk to the child of a parent with depression for ongoing mental health problems themselves exists, was not reflected in the GPs reported practice when they consulted with a parent with depression. This study showed that the majority of GPs maintained a patient centred focus when working with parents with depression. Most of the GPs stated that their approach to management of a parent patient was the same as for any adult patient with depression, but with more emphasis on ‘getting her better’ as there was a child to consider.

One aim of the study was to determine if the GPs had knowledge of the increased risk to the child of having mental health problems themselves when their parent had depression. In this study no GP participant reported having any formal training on this subject. However, after being asked, most of the GPs, acknowledged that in their clinical experience they had observed that there was a risk of increased mental health problems for the child who had a parent with depression. Therefore, without standardised formal training it is supposed that the knowledge the GPs had gained of this subject would differ.

It is important to recognise that although most of the GPs interviewed reported that they had clinical knowledge of the increased risk to the child, most GPs reported that they did not put this clinical knowledge into their routine practice. In 2002 Beardslee wrote that “the medical community sometimes compounded the problems of depressed parents by understanding the illness in so far as it affected the individual. Health care providers would try to treat the parents’ illness, but for the most part they never enquired about the kids.....But depression is a family illness” (p. 8). The importance of treating the adult with depression from a family perspective was reiterated by Goodman and Gotlib (2002) who stated that although this may seem obvious it was their experience that it was not often put into practice. Sadly over 10 years later I found this to still be the case for over half of the GPs interviewed in this study.

In order to assist the children of parents with depression who need help, someone has to identify them. As was discussed earlier, the GP is in an ideal position to be able to do this (Ellis & Smith, 2002). It is understandable that the GP is primarily engaged in treating the patient, but the wellbeing of the child also needs to be factored into the consultation with the parent patient. This needs to be done in such a way that does not add to feelings of distress or worry to the parent who may already be thinking that they are a *bad parent* or a *burden* to their family.

It is concluded that in the absence of standardised knowledge and training on the increased risk of mental health problems for the child who had a parent with depression, there will be individual variation in the approach that GPs when working with the child’s parents with depression. This is due to the fact that the GPs knowledge would have had to be gained from either their clinical and/or personal domains. Additional to this it is an area viewed as outside the hub of GP training for treatment of patients with depression (Baulderstone, et al., 2012) and is not included in the treatment guidelines cited.

There are several limitations of this study. Firstly, the sample number of 12 GPs was small in comparison to the Australian GP population size, however it was consistent with the number identified by Guest, Bunce and Johnson (2006) as being the number of homogeneous participants required by health science qualitative research to reach thematic saturation. Additionally, the information the GPs reported was not gained during a patient-doctor consultation, it was what the GP reported they did in the routine consultation hence patient cues were absent.

4.1. Final remarks

Reported referral of the patient to appropriate community services available was a well expressed practice by the GPs in this study and reiterated the *gatekeeper* role the GP has. However, it is proposed that GPs be encouraged to broaden their view to better engage immediate family members of the parent patient with depression in line with the literature (Goodman & Gotlib, 2002; Reupert, Maybery & Kowalenko, 2012). It is acknowledged that this would require a longer consultation time, therefore an incentive payment for the GP to conduct a family consultation (Cohen et al., 2012), may be required if this was to become part of GP practice.

This study fills a gap in understanding as it was not previously known if the fact, that children of parents with depression are at increased risk of mental health problems themselves, had been translated into routine primary health care. The need for strategies and programs to aid in the prevention of mental health problems by community members have been acknowledged and now forms part of the Australian national mental health policy. This study shows that there is a need for further areas to be addressed to ensure that the resilience of children who have a parent with depression is increased in a way that is sensitive to the needs of the parent and the child within a community environment setting specifically when the parent presents for treatment with their GP. Further studies in this area are required.

References

- Askew, D. A., Clavarino, A.M., Glasziou, P.P. & Del Mar, C.B. (2002). General practice research: attitudes and involvement of Queensland GPs. *Medical Journal of Australia*, 177, 74-77.
- Baulderstone, M.J., Morgan, B.S. & Fudge, E.A. (2012). Supporting families of parents with mental illness in general practice. In Reupert, A.E., Maybery, D.J., & Kowalenko, N.M. (Eds.). *The Medical Journal of Australia*. Open 1 Supplement 1, (pp 11-13). doi:10.5694/mjao11.11146
- Beardslee, W.R. (2002). *When a parent is depressed: How to protect your children from the effects of depression in the family*. Boston: Little, Brown and Company
- beyondblue. (2013). *beyondblue guide to the management of depression in primary care. A guide for health professionals*. Retrieved from http://www.beyondblue.org.au/index.aspx?link_id=7.102
- Charmaz, K. (2006). *Constructing Grounded Theory: A practical guide through qualitative analysis*. London: Sage Publications.
- Cowling, V. (2003). *What are the special characteristics of families who provide long term care for children of parents with mental illness?* Dissertation for Master's Degree by Research in Psychology. University of Melbourne, Melbourne.
- Elliot, R. & Timulak, L. (2005). Descriptive & interpretive approaches to qualitative research. In J. Miles and P. Gilbert. (Eds.). *A handbook of research methods for clinical & health psychology*. (pp. 147-160). New York: Oxford University Press.
- Ellis, P. R., & Smith, D. A. (2002). Treating depression: the beyondblue guidelines for treating depression in primary care. *Medical Journal of Australia*, 176, S77-S83.
- Forrester, M.A. (Ed.). (2010). *Doing Qualitative Research in Psychology/ A practical guide*. London: Sage Publication Ltd.
- Goodman, S. H., & Gotlib, I. H. (Eds) (2002). *Children of depressed parents*. Washington, D.C: American Psychological Association.
- Guest, G., Bunce, A. & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18(1) 59-82. doi: 10.1177/1525822X05279903
- Hammen, C., & Brennan, P. A. (2003). Severity, chronicity, and timing of maternal depression and risk for adolescent offspring diagnoses in a community sample. *Archives of General Psychiatry*, 60(3), 253(256).
- QSR International (2012). NVivo 10. QSR International PTY LTD. Cambridge, Massachusetts, Retrieved from http://www.qsrinternational.com/products_nvivo.aspx
- Reupert, A.E., Maybery, D.J., & Kowalenko, N.M. (Eds.) (2012). *The Medical Journal of Australia. Supplement 1*. Retrieved from <https://www.mja.com.au/open/2012/1/1>
- Saldaña, J. (2009). *The Coding manual for qualitative researchers*. London: Sage Publications Ltd.
- Seidel, J.V., (1998). *Qualitative data analysis*. Retrieved from www.qualisresearch.com
- Weissman, M. M., Wickramaratne, P., Nomura, Y., Warner, V., Pilowsky, D., & Verdelli, H. (2006). Offspring of Depressed Parents: 20 Years Later. *The American Journal of Psychiatry*, 163(6), 1001-1008.

SOCIOTHERAPEUTIC INTERVENTIONS FOR POST-HAIYAN COMMUNITY INTEGRATION AND COHESION

Gail Tan Ilagan

*Center of Psychological Extension and Research Services, Ateneo de Davao
University, Davao City (Philippines)*

Abstract

On 8 November 2013, Typhoon Haiyan spawned storm surges that left at least 6,300 dead and swept away homes in Tacloban City. Haiyan injured 28,689 survivors and six months after, more than a thousand remain missing. Displaced survivors were moved to a government transitional facility built 40 kilometers to the north. Conditions at the transitional site challenged efforts at post-disaster recovery of the survivors who individually grappled with de-escalating stress from their disaster experience while figuring out the difficulties of adjusting to geographical dislocation, new neighbors, substandard housing, and lack of livelihood opportunities. As observed from past disasters, Mental Health and Psychosocial Support (MHPSS) provided to Haiyan survivors similarly waned after the emergency phase. Thus, the actual timeline of the stress impacting on survivors and the peculiarity of the emerging stressors on their road to recovery, especially for disaster populations in transit, are not very well known to disaster responders. This project on community resilience enhancement focused on hastening recovery and building the survivors' resistance to future such events. Interdisciplinary sociotherapeutic interventions following participatory action research methods employed over a 15-month period beginning nine months after the disaster event used the group as a therapeutic channel in encouraging a sense of social connection and self-efficacy and establishing peer-support structures to address subjective wellbeing of survivors, provide child-centered and gender-sensitive psychosocial support, and initiate collective income-earning opportunities. Individuals nominated by the community were organized and capacitated for delivery of psychological first aid and basic life support skills that utilized local resources. Relational adjustments were addressed through a series of community dialogues on gender sensitivity, male participation in anti-violence against women and children, and inputs – both material and technical - for operating a child-friendly space facility. A year after the disaster event, community dialogues turned up survivor concerns for more sustained income-earning activities, providing opening for renewed collaboration towards self-help strategies to be employed toward this end. Results yield increased psychosocial well-being and social cohesion, strengthened capacity and involvement of survivors in addressing psychosocial issues that emerge among them, and enhanced ability to support each other in preparation for relocation to more permanent housing. The sociotherapeutic model employed holds promise for generating a framework to direct MHPSS efforts beyond the post-disaster emergency phase until some measure of community stability is achieved by survivors. Collective efficiency may indeed be enhanced by restructuring the social capital of disaster populations in transit, when undertaken with sensitivity not only to the individual recovery processes but also to the disaster-affected social context.

Keywords: *Mental health and psychosocial support, sociotherapeutic interventions, post-disaster recovery, resilience enhancement.*

1. Introduction

On 27 May 2010, the Philippines passed Republic Act 10121, a law aimed to strengthen local capacities to manage disasters by institutionalizing the involvement of civil society organizations and the private sector to complement government resources. The implementing rules and regulations that came out indicate the intention for the development of a framework for disaster response that will allow the government and other stakeholders to “build communities that can survive disasters” (Rey, 2015). Such require changes in policies and organizational structure of implementing agencies, such as the Department of Health (DOH) that had been tasked to address post-disaster public health concerns, to include mental health issues emerging after the disaster experience (NDCC, 2010).

The Mental Health and Psychosocial Support (MHPSS) cluster system under the DOH is a relatively new public health mechanism that had been, through force of circumstance, made to respond even before its membership had been formally organized and properly capacitated. Before local government units were able to assemble their respective MHPSS clusters in compliance with RA 10121, a string of devastating typhoons of increasing intensities and breadth battered the country. After Washi hit Northern Mindanao in 2011, Bopha ravaged Davao Oriental and Compostela Valley in 2012. On 8 November 2013, Haiyan washed out major portions of Eastern Visayas and went on to make five landfalls as it traversed the islands, leaving at least 6,300 persons dead, over 28,000 injured, and more than a thousand missing. The development of the MHPSS clusters at the local level evolved out of necessity for various stakeholders to respond to these successive calamities, eventually refining their methods with each new crisis situation and opening up opportunities for interdisciplinary collaborations among psychosocial responders.

The Center of Psychological Extension and Research Services (COPERS) is the community engagement arm of the Department of Psychology at the Ateneo de Davao University (ADDU). It aims to generate empirically-based of community needs, network with duty bearers and service providers, and implement novel psychological applications as to appropriate to the peculiar concerns of the southern Philippines region. COPERS is designated as the Davao regional emergency MHPSS hub of the Psychological Association of the Philippines (PAP). It had provided leadership in post-Bopha MHPSS response, and had fielded eight deployments for post-Haiyan emergency response in the Eastern Visayas from December 2013 to February 2014.

It was COPERS' observation that due to the lack of practicing clinical psychologists in the affected areas, MHPSS was more often than not delivered by untrained albeit well-meaning faith-based and civil society volunteers who inappropriately parroted debriefing and psychotherapeutic procedures, keeping survivors unnecessarily trapped in reliving their distress over and over again. Implementing agencies, on the other hand, relied on the direction of international humanitarian agencies and delivered modules by rote, often disregarding the survivors' cultural context and prioritizing an adherence to what are accepted to be global standards,

However, the Asia-Europe Meeting (ASEM) held months after Typhoon Haiyan found that despite the huge amount of relief and rehabilitation money that the mega-disaster had raised and the participation of international humanitarian agencies in guiding these efforts, there was very little visible improvement in the lived reality of the displaced (Quismundo, 2014). The very same humanitarian agencies admitted that they needed the help of other stakeholders, especially those who can employ more indigenous methods that may be more culturally appropriate towards building community resilience (ASEM, 2014).

2. Design

This research project takes off from COPERS' work on grassroots concepts of the disaster experience (Ilagan, Batican, & Limbadan, 2011) and homegrown mechanisms for disaster recovery and resistance (Ilagan, Timonera, & Benitez, 2012), as well as its extensive field experience in MHPSS response in the aftermath of Washi, Bopha, and the 9 September 2013 Zamboanga siege, COPERS designed a 15-month psychosocial accompaniment project for 16 villages in Tacloban City. Following an action research design, the program of activities involved an initial assessment of psychosocial needs followed by the delivery of customized capacitating interventions meant to strengthen local capacities in anticipation of such similar future disasters. Periodic community meetings gathered the survivors' insights into the effectiveness of concluded interventions and encouraged social cohesion, inviting survivors as a community to articulate their emerging needs as well as recognize, plan, and implement self-help strategies to address these.

3. Methods

Sociotherapeutic interventions use the community as the unit of analysis, with community processes as the main method employed in delivering capacity building for self-help towards post-disaster recovery and normalization (Richters, 2013). Community meetings became the venue for surfacing stress vectors among Haiyan survivors. Customized interventions were delivered through organizing and capacitating local volunteers. Monthly feedback sessions evaluated the impact of the interventions and monitored the emergence of new stressors as the survivors moved through the timeline of post-disaster recovery and new conditions impinged upon their lived reality. The process was carried on as the

displaced populations moved from temporary shelters to transitional sites to permanent relocation from August 2014 to November 2015. Results of the community meetings were used to assess the effectiveness of the implemented activities as well as to plan for appropriate response to support community response to emerging stressors of life in transition.

4. Discussions

This project aimed to track the psychosocial recovery of Haiyan survivors and provide community interventions designed to capacitate community-based resources for enhanced community resilience. It found that across the timeline of post-disaster disaster recovery, there is a need to address the subjective well-being of survivors, the unique needs of women and children, and the persistent economic stressors of survivors through encouraging self-help initiatives borne out in dialogue with the community.

4.1. Addressing the subjective well-being of survivors

A workshop on psychosocial needs assessment yielded oral narratives of community disaster experience that summarized the types and quality of interventions already delivered in the communities. This allowed the research team to benchmark each community in terms of where the survivors were, who they were with, and whether they had access to various post-disaster services. Community narratives revealed the survivors' social imaginaries that inform who can work with whom (Taylor, 2004), whose needs are met, and whose needs fall through the gaps in post-disaster response. The resulting inventory of local capacities and mechanisms informed on further training needs and required structural organization that needed to be addressed in order to enhance the community's capacity to deal with future adversities.

Thus, a series of training sessions were held for psychological first aid, stress management, grief counseling, and basic life support skills was held in the villages, with the participants delivering on supervised hands-on application of these skills in their own communities. The trainees were encouraged to form the core volunteers of the village disaster risk reduction and management clusters that were being organized. At evaluation sessions, a system of referral was worked out for public health issues that required expert intervention beyond the capability of local resources to address.

4.2. Addressing the unique needs of children and women in transitional sites

As the close of school year approached, families living in the transitional sites worried about caring for the children who would be home during the day. Community dialogues turned up the parents' desire for a more structured supervision of day care services that could engage the children in wholesome and healthy pursuits as parents went about finding food for the table. Located 40 kilometers inland, the transitional site lacked regular public utility transportation to the residents' place of work along the coast. While a multi-purpose structure of light materials was erected by the government in the site, it lacked materials that the children could use.

The arrangement of the transitional housing facilities had families living within touching distance of each other. This proved stressful to many who had to adjust to new neighbors in a new environment while laboring under conditions of need. There was no running water, no electricity, and no livelihood opportunities in this new place. Everything that made for the life they were used to was just too far away. The stress took its toll in domestic disputes, short tempers, needless arguments, and even physical violence.

During a community dialogue, the residents expressed the need for a community forum on anti-violence against women and organized among themselves a group of Child Friendly Space (CFS) volunteers. The research team responded by arranging for a gender sensitivity training which allowed an inclusive discussion of domestic violence, identified risks particular to life in transition, and educated on applicable laws. To address the varying needs of children at different age ranges, the CFS volunteers were also trained on early childhood education methodologies, therapeutic play, and sports clinic. A solicitation drive yielded donations of books, art materials, educational toys, and sports equipment for the transitional sites. Before the summer months rolled in, the volunteers were able to work out rotating schedules of CFS duty and assign custodians for their inventory of library and sports materials.

4.3. Addressing gaps in livelihood support

Psychological functionality rests to a large extent on the individual's ability for self-care. Through the months of journeying with the survivors, the matter of lack of sustainable livelihood constantly registered as a major stress that stood in the way of their post-disaster recovery. Survivors opined that livelihood opportunities provided by government rehabilitation implementers often failed to take their wishes into account. What was available were opportunities for transitory cash-for-work tasks such as cleaning up typhoon debris and building shelters. Rehabilitation agencies offered livelihood

grants that required survivors to learn new skills, such as salon services and store minding, even as they negotiated the confusing bureaucracy of registering to avail of these. Community dialogues became the venue for them to express their own assessment of what they could and wanted to do. In some communities where the fisherfolk association remained intact, the desire for start-up at fish farming in cages was expressed. Others proposed livestock dispersal for backyard hog raising. Still others proposed skills training at meat processing, fish deboning, and fish smoking. In response, the research team sourced funds and startup materials, found accredited trainers, or mediated for the survivors to access available livelihood grants that met their desires.

At the close of the accompaniment program, the fish cages had completed one cycle of grow out and yielded income that allowed the fisherfolk organizations to distribute a modest dividend among its members after replenishing the stock for another grow out cycle. Home-based and association-run enterprises were also supplying processed meat and fish for the market. The more enterprising ones were supplying restaurants and market stalls. Meanwhile, individuals who raised the initial dispersal of hogs to term bought a suckling for the next people in the list to rear in their backyards.

5. Concluding notes

The sociotherapeutic model employed holds promise for generating a framework to direct psychosocial support efforts for communities in transition, as it picks up on emerging needs of communities in transition. Across the timeline of post-disaster recovery, local capacities for psychological first aid and basic life support skills should be in place to shore up self-help in anticipation of times when the disaster could render a community cut off from external emergency support. In transition, the stresses of social adjustment take a toll on social and family relations and put children at risk of neglect or lack of adult supervision. There is a need therefore to help transitional communities engage the issues of dispute resolution and developmentally appropriate child-minding for ways to establish community processes that address these needs. Persistent economic stressors can be alleviated by respecting what survivors find to be their comfort zones given their resources and interests. Thus, external support can be adjusted for timely and appropriate response through a process that encourages social cohesion and efficacy until some measure of community stability is achieved by survivors. Collective efficiency may indeed be enhanced by restructuring the social capital of disaster populations in transit, when undertaken with sensitivity not only to the individual recovery processes but also to the disaster-affected social context.

References

- Asia-Europe Meeting. (2014, June 4-6). Post-Haiyan Tacloban declaration. Retrieved 22 June 2014, from http://eeas.europa.eu/asem/docs/20140604_post-haiyan_tacloban_declaration_final_en.pdf
- Ilagan, G.T., Batican, E.B., & Limbadan, N.Z. (2011) *Tibay ng loob: Mindanao resilient community project report*. Davao City: Alternate Forum for Research in Mindanao and The U.S. Embassy – Manila.
- Ilagan, G.T., Timonera, B., & Benitez, J.B. (2012). *Recovery and resistance in the grassroots: The Mindanao resilient community project II report*. Davao City: Alternate Forum for Research in Mindanao and The U.S. Embassy-Manila.
- National Disaster Coordinating Council. (2010, September 27). Implementing rules and regulation of Republic Act No. 10121. Retrieved February 16, 2016, from http://www.ndrrmc.gov.ph/attachments/article/95/Implementing_Rules_and_Regulation_RA_10121.pdf
- Quismundo, T. (2014, June 7). ‘Tacloban Declaration’ on disaster preparedness drawn up. Retrieved June 15, 2014, from <http://globalnation.inquirer.net/106011/tacloban-declaration-on-disaster-preparedness-drawn-up>
- Rey, A. (2015, November 23.) RA 10121: The PH's disaster management law is up for review. Retrieved February 16, 2016, from <http://www.rappler.com/move-ph/issues/disasters/knowledge-base/93941-drrm-act-2010-review>
- Richters, A. (2013). Community-based sociotherapy program in post-Gacaca Rwanda. Retrieved July 12, 2013, from <http://www.annemiekrichters.nl/rwanda/new-sociotherapy-program-2013---2016>
- Taylor, C. (2004). *Modern social imaginaries*. North Carolina: Duke University Press.

SMARTPHONE OVERUSE: IMPLICATIONS ON QUALITY OF FACE TO FACE COMMUNICATION

Abdul Mujeeb Khan & Hazwanie Binti Kosnin

Faculty of Education and Human Development,, Sultan Idris Education University (Malaysia)

Abstract

The purpose of this study was to investigate the implications of excessive use of smartphones on quality of face to face communications. The research made use of the quantitative approach to study the main independent variables, smartphone overuse in retrospect for their possible effects to the dependent variable, quality of face to face communications. 111 undergraduate students of Sultan Idris Education University responded to two different instruments; Mobile Phone Dependency Questionnaires to evaluate the level of smartphone overuse and Interpersonal Communications Inventory to measure the quality of face to face communications. It was found that excessive usage of smartphone have significant negative relationship with quality of face to face communications. Regression analysis revealed that smartphone overuse and gender are the significant predictors of quality of face to face communications. Furthermore, there are significant differences in scores of both variables between gender; males reported to have high level smartphone overuse and low quality of face to face communications as compared to females. However, due to the limitations of this study, few suggestions for further research are discussed to fully understand this issue.

Keywords: *implications, Smartphone overuse, face to face communication.*

1. Introduction

Mobile phone technology had emerge and advanced rapidly in the past few years which allows any activity that can be performed on a desktop or laptop machine can also be performed through smartphones, a small, pocket size device (Rosen, Whaling, Carrier, Cheever & Rokkum, 2013). Due to smartphones' sophisticated functionalities and convenience, people become highly attached to these devices which become priorities in their daily lives (Zheng & Ni, 2006). In fact, for the past decade, smartphones have gained popularity all over the world (Ahn, Wijaya & Esmero, 2014).

Surprisingly, a recent joint study by Google Inc and Transparent Network Substrate (TNS) entitled Consumer Barometer revealed that Malaysia had leads the world in smartphone usage (Lee, 2014). Malaysia is one out of only five places in the world where smartphone usage (51%) are higher than computers (39%). The others are all also from Asia: China, Hong Kong, South Korea and Singapore. It implies that Malaysia is higher than Indonesia, United States and world's average (Wong, 2015).

Advancement in mobile phone technology had developed the function of mobile phones beyond for the purpose of voice communication (Ishii, 2006). The development of mobile phone technology has drastically changed the online environment in the past decade by allowing users to exchange ideas, feelings, and other media at an unprecedented rate. The mobile phone is among the most prominent kinds of information and communications technology (ICT) and is probably also the one that

Lang and Jarvenpaa (2005) suggested that mobile phone was different than other gadgets such as laptop because it was rarely separated and always with its owner all the time. Therefore, this could lead to the developments of deep relationship and users' will feel attached to their own mobile phones. Likewise, Yang and Lay (2011) indicate that mobile phone is not only as tools for communication, but also as tools for emotional contact among people. Mobile phone had become a must-have item now days thus more and more people develop the dependency towards mobile phone (Shih, Chen, Chiang, & Shih, 2012).

Al-Barashdi, Bouazza and Jabr (2014) investigated specific issues including smartphone and its features that made people addicted to smartphones. In addition, they also investigated its impact on academic achievement and addiction variation according to gender, field of study, parental education and family income they found that participants were mostly addicted to messaging. From 30.8% were categorised as heavy user, 26% as moderate level and 42.3% casual level. Interestingly, the result show

that males were more addicted than females, nothing significant emerged in relation to field of study, parental education and family incomes.

Meanwhile, Robert, Yaya and Manolis (2014) use the term 'invisible addiction' to describe the excessive use of mobile phones or an addiction towards them. Their research also indicates that mobile phone usage now days had crosses the line from a helpful tool to one that enslaves both users and society. User's time spent on social networking site, internet use and gaming are good indicators of possible mobile phone addiction.

In facts, several researchers highlighted that some mobile phone users exhibit serious problematic behaviors analogous to the diagnostic criteria for substance use disorders or pathological gambling (Merlo, Stone, & Bibbey, 2013; Alavi *et al.*, 2012) These symptoms include preoccupation with mobile phone-based communication, excessive time or money spent on mobile phones, use of cellular devices in socially inappropriate or even physically dangerous situations, adverse effects on relationships, increased frequency or duration of mobile phone communication, and anxiety when separated from one's telephone or when without an adequate cellular signal.

The adverse effects of smartphones include stress, sleep disturbance and symptoms of depression (Thomee, Harenstam & Hagberg, 2011). High frequency of mobile phone use at baseline was a risk factor for mental health outcomes at 1-year follow-up among the young adults. They found that high mobile phone use was associated with sleep disturbances and symptoms of depression for the men and symptoms of depression for the women at 1-year follow-up. In prospective analysis, overuse was associated with stress and sleep disturbances for women, and high accessibility stress was associated with stress, sleep disturbances, and symptoms of depression for both men and women.

Face to face communications were viewed as an important medium for effective communication. For example, Drussell (2012) conducted a survey to examine the impacts of texting and social networking on communication and conflict resolution. Participants were asked about general attitudes of communications and conflict resolution including their daily usage of social networking. Based on the survey, most of the participants agree that face to face communications was the good and effective ways to solve any conflicts with other persons. However, in contrast they were tend to use texting and social networking in order to communicate and resolved conflicts.

Besides, an ineffective communication can causes loneliness, conflicts, family problems, professional dissatisfactions, psychological stress, physical illness and even death, when communication breaks down. Perry (2010) examined differences in how face to face computer-mediated communication was experienced for individuals communicating with their romantic partner. The result revealed that communication satisfaction item analysis and interview reports suggest that couples have varying attitudes and uses for computer-mediated communication. Some couples report a hesitancy to use computer-mediated communication given the lack of non-verbal cues and risk of miscommunication while other couples report that computer-mediated communication is helpful in facilitating de-escalation of conflict and allowing partners to communicate more effectively around sensitive issues.

2. Objective

Since young adults were the highest user of smartphones, it was important for them to know any implications of problematic use of smartphones. By knowing these effects, one can classify a dependency symptom and avoid being addicted to smartphone. Besides, as humans, communications are the basic needs in our lives thus too much phone use can interfere with normal activities or cause conflicts with family and other people. Additionally, this research will add to the current knowledge regarding smartphone usage and its relationship to overall health.

1. To study the relationship between the smartphone overuse and quality of face to face communications among undergraduate students of Sultan Idris Education University (UPSI).
2. To examine the implications of excessive use of smartphones on quality of face to face communications among undergraduates' students of UPSI.
3. To investigate whether smartphone usage level and gender are the significant predictors of quality of face to face communications.
4. To discover the level of smartphone overuse and quality of face to face communication among undergraduate students of UPSI.

3. Methodology

This research used the appropriate quantitative approach to address the research questions. Quantitative research design provides good ways to clarify the cause and effect relationship for two or more variables by testing the hypotheses that were constructed before the data collections Specifically,

the quantitative research designs that are used for this study is correlational research design which was used in order to determine the relationship between two or more variables by using statistical data. Hence, it the data obtained from this research design allows quantitative predictions to be made.

3.1. Instruments

In this research, there were two different instrument that had been used; Mobile Phone Dependency Questionnaires (MPDQ) and, Interpersonal Communication Inventory (ICI). Besides, participants were asked about brief demographic information to obtain the background characteristic of participants.

3.2. Procedures

Participants were all participate voluntarily through convenience sampling. Participants were brief about general purpose of the study individually and all participants were given the right of participation in the research. All participants were also assured the anonymity and confidentiality of their research data. Besides, participants were encouraged to ask any questions at any point of the procedure and researcher addressed the questions to their satisfaction. Then, participants read and signed a written consent form before participating in the study.

Next, participants were give a self-report survey in the booklet form which included a demographic questionnaire, the Mobile Phone Dependency Questionnaires (MPDQ), the Interpersonal Communications Inventory (ICI). The survey took approximately 15 minutes to complete.

4. Data Analyses

The scores of all instruments were computed. The data was analysed by using a Statistical Package for the Social Sciences (SPSS) software version 20.

Meanwhile, inferential statistical analysis was used for hypotheses testing. Specifically, correlation analysis was run to find the relationship between both independent and dependent variables and multiple linear regressions was run in the next step to further examines the relationship between two types of variables: response variable; quality of face to face communications and predictor variable; smartphone overuse and gender.

5. Results

5.1. Profile of participants

In this research, all the participants that agree to participate must comply with the following criteria; undergraduates' students of Sultan Idris Education University, age range between 18 to 24 years and a smartphone user. The following data in Table 4.1 shows the characteristic of participants based on age, gender and race.

5.2. Demographic characteristics of respondents

There are a total of 111 participants involved in this research between age range from 20 to 22 (50 respondents and age range 23 to 24 (61 respondents). The participants were chosen from undergraduate students of Sultan Idris Educational University. There are more female participants (58%) ($n=64$) than males participants (42%) ($n=47$) who were participating in this research.

5.3. Correlation analysis

According to correlation analysis, the results indicated that excessive use of smartphone had strong negative correlations with quality of face to face communications, $r = -.747$, $n = 111$, $p = .000$. The result indicated that the increases in level of smartphone overuse were correlated with decrease in quality of face to face communications. Therefore, the null hypothesis was rejected. The results are summarized in Table below:

Table 1. Correlation between Smartphone Overuse and Quality Face to Face Communications

Measure	Smartphone Overuse	Quality of Face to Face Communications
Smartphone Overuse		-.747**
Quality of Face to Face Communications		-.747**

** $p=.0001$

5.4. Regression analysis

To elaborate further the implications of smartphone overuse on quality of face to face communications, multiple linear regressions was calculated to predict the quality of face to face communications based on their level of smartphone overuse and gender.

A significant regression equation was found ($F(2,108) = 75.7, p = .000$), with an R^2 of .584. It indicates that two predictors explained 58.4% of the variance. Thus, it can be conclude that both smartphone overuse ($\beta = -1.097, p = .000$) and gender ($\beta = -4.799, p = .010$) were significant predictors of quality of face to face communications. Therefore, the null hypothesis was rejected. The results were summarized in Table 2 and Table 3.

Table 2. Multiple Regression Analysis of Smartphone Overuse and Gender on Quality of Face to Face Communication

SOURCE	SS	df	MS	F
Regression	216.45	2	108.22	14.51*
Residual	805.44	108	7.46	
Total	1021.89	110		

* $p = .0001$

Table 3. Summary of Standardized Coefficients of Multiple Regression Analysis of Smartphone Overuse and Gender on Quality of Face to Face Communication

SOURCE	Unstandardized coefficients		Standardized coefficients		t
	B	Std. Error	Beta		
Overuse	-1.097	.099	-.709		-11.129**
Gender	-4.799	1.839	-.166		-2.609*

** $p = .000$ * $p = .010$

5.5. Independent sample t-test

An independent-samples t-test was conducted to compare the level of smartphone overuse and quality of face to face communications between genders.

Result showed that there was a significant difference in smartphone overuse between males ($M = 35.57, SD = 10.42$) and females ($M = 31.38, SD = 07.49$), $t(109) = 2.32, p = 0.02$. On average, males tend to have high level of excessive use of smartphone as compared to females. Thus, the null hypothesis was rejected.

Meanwhile, there was also a significant difference in quality of face to face communications between genders. Females ($M = 65.94, SD = 13.12$) reported significantly higher quality of face to face communications than males ($M = 56.63, SD = 14.24$), $t(109) = 3.55, p = 0.001$. Hence, the null hypothesis was rejected. The results are summarized in Table 4.

Table 4. Results of t-test for Smartphone Overuse and Quality of Face to Face Communication by Gender

	Gender Male			Female			t	df
	M	SD	n	M	SD	n		
smartphone overuse	35.57	10.42	47	31.38	7.94	64	2.32*	109
quality of face to face communications	56.53	14.24	47	65.94	13.12	64	3.55*	109

* $p < .05$.

6. Conclusion

To test the hypothesis, independent sample t-test, correlation and regression analysis was used. The result reported that there is significant difference between males and females participants' smartphone overuse scores and quality of face to face communications. Male participants were found to have high dependency towards smartphone and have low quality of face to face communications as compared to female participants. Overall, there were significant relationship between smartphone overuse and quality of face to face communications. The results suggested that gender and excessive use of smartphone were the significant predictors of quality of face to face communications.

References

- Acitelli, L. (1992). Gender differences in relationship awareness and marital satisfaction among young married couples. *Personality And Social Psychology Bulletin*, 18(1), 102-110. doi:10.1177/0146167292181015
- Ahn, H., Wijaya, M. E., Esmero, B. C. (2014). A systemic smartphone usage pattern analysis: focusing on smartphone addiction issue. *International Journal of Multimedia and Ubiquitous Engineering*, 9(6), 9-14. Retrieved on May 17, 2015 from <http://dx.doi.org/10.14257/ijmue.2014.9.6.02>
- Alavi, S. S., Ferdosi, M., Jannatifard, F., Eslami, M., Alaghemandan, H. & Setare, M. (2012). Behavioural addiction versus substance addiction: Correspondence of psychiatric and psychological views. *International Journal of Preventative Medicine*, 3(4), 290-294
- Alavi, S. S., Maracy, M. R., Jannatifard, F., Ojaghi, R. & Rezapour, H. (2014). The psychometric properties of cellular phone dependency questionnaire in students of Isfahan: A pilot study. *Journal of Education and Health Promotion*, 3(71). Retrieved on April 8, 2015 doi: 10.4103/2277-9531.134822 from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4113992/>
- Al-Barashdi, H. S., Bouazza A. & Jabr, N.H (2014). Smartphone addiction among Sultan Qaboos University undergraduate. *Journal of Social Sciene Research*, 5(2). Retrieved May 2, 2015 from www.jssronline.com

A STUDY OF VULNERABILITIES ASSOCIATED WITH EXCESSIVE INTERNET USE IN ADOLESCENCE

Clémentine Galan¹, Servane Barrault¹, Marie Grall-Bronnec², Nicolas Ballon^{3,4}
& Robert Courtois^{1,5}

¹Université François Rabelais de Tours, Département de Psychologie, EA 2114 "Psychologie des Âges de la Vie", Tours (France)

²Centre de référence sur le jeu excessif, Pôle Universitaire d'Addictologie et de Psychiatrie, Nantes (France)

³CHRU de Tours, Équipe de Liaison et de Soins en Addictologie, Tours (France)

⁴UMR INSERM U930 ERL, Tours (France)

⁵CHRU de Tours, Clinique Psychiatrique Universitaire, Tours (France)

Abstract

Introduction. Excessive Internet use (Internet addiction disorder) is considered a behavioral addiction (or addiction without substance). This disorder is developing along with societal and technological evolutions and it particularly affects teenagers who appear to be prone to risk behavior. In the DSM 5 (American Psychiatric Association, 2013), Internet addiction disorder is not yet recognized as an independent clinical entity, but it requires further research to be considered a separate addiction. Excessive Internet use also appears to be a possible media to another addiction (e.g. online gambling, pornography, compulsive shopping). The aim of this research is to study psychiatric comorbidities (depressive mood, ADHD) and personality traits associated with Excessive Internet use in adolescents.

Methods. Our population consisted of 602 French teenagers (mean age 15, 2 years). We used self-administered questionnaires. The *Internet Addiction Test* was used to measure Internet use in clusters (moderate use, problematic use and pathological use). To check vulnerability factors, we used the *Big Five Inventory* for personality, the *General Health Questionnaire-28* for psychological distress and *Wender Utah Rating Scale* for ADHD. Finally, we used the *Indice Canadien du Jeu Excessif* to measure gambling disorder.

Results showed that 35.2% (n= 212) adolescents reported a problematic or a pathological Internet use. Psychiatric comorbidities were positively correlated with the IAT. The personality profiles were low in both Agreeableness and Conscientiousness. The main activities of our teenagers were social networks, online video games, and music listening and video watching. There was an influence of gender on personality, comorbidities and on activities used on Internet.

Discussion. We found a personality profile (impulsivity, antagonism) close to the one in other behavioral addictions and psychiatric comorbidities which predispose teenagers to develop a pathological use of Internet. These vulnerabilities appear to be more important in Internet addiction disorder than in gambling disorder. Teenagers have different activities on the Internet. This study highlights the need to conduct further studies to suggest that Internet addiction disorder could be construed as a separate addiction and not a media to other addictions.

Keywords: *behavioral addiction, internet addiction disorder, adolescence, psychiatric comorbidities.*

1. Introduction

Excessive Internet use (Internet addiction disorder) is considered as behavioral addiction (or without substance). This type of addiction is distinguished by its addictive object which is common without apparent toxicity and used by all or a large number of people (Varescon, 2009). As substance addiction, behavioral addiction aims to provide pleasure or relieve tension and there is a failure of repeated behavioral control despite negative consequences to maintaining the addictive behavior (Goodman, 1990). There are different behavioral addictions, even if they are controversial in the current literature: gambling disorder which is currently the only one to be recognized in the DSM 5 (American Psychiatric Association, 2013), compulsive shopping, sex addiction (Rosenberg & Kraus, 2014), sport

(Weinstein & Weinstein, 2014), workaholism (Vaugois, 2006), addictions to social relationships, to food (Gearhardt, Corbin, & Brownell, 2009) and to the Internet (Young, 1998b) and video games.

The Cyberaddiction is defined as virtual dependency, through the Internet, resulting in a need of connection which doesn't match a person's real needs (Varescon, 2009) and has more or less negative impact on their life. This disorder seems difficult to define and is considered as an input factor in other addictive disorders (Décamps & Perrin, 2010). Internet use refers to different media and different activities: social networks, information retrieval, online games, online shopping or pornography (Lowenstein, 2005). Internet addiction disorder is growing with societal evolution and particularly affects teenagers who grew up with this kind of technology and can have risk behavior (Christakis, 2010). Misuse may lead to difficulties of socialization, problems at school and it can be associated with other problems such as addictive behaviors (Hautefeuille & Véléá, 2010). High rates of comorbidities thus relates with psychiatric disorders (Lejoyeux & Embouazza, 2013), including mood disorders, anxiety disorders (Kim et al., 2006; Wei, Chen, Huang, & Bai, 2012) and attention deficit hyperactivity disorder (ADHD) (Yoo et al., 2004). It has been found that people concerned with Internet addiction disorder present the following personality traits: low level of Conscientiousness, or impulsiveness, (Buckner V, Castille, & Sheets, 2012), low Agreeableness or antagonism (Servidio, 2014), low Extraversion (i.e., introversion), high Neuroticism or unstable mood (Dalbudak et al., 2013) and high Openness (Kuss, Van Rooij, Shorter, Griffiths, & Van de Mheen, 2013).

The aim of this research is (i) to study psychiatric comorbidities (depressive mood, ADHD) and personality traits associated with Internet addiction disorder (i.e., excessive use of the Internet) in adolescents and to see whether psychiatric disorders increase with the level of Internet use. We aimed to pay interest to (ii) activities linked to Internet use and to compare (iii) the factors associated with Cyberaddiction to those related to gambling disorder.

2. Methods

The sample was composed of 602 French teenagers, whose mean age was 15.12 years (\pm 1.22 years, range 12 to 18). 45.0% of them were males.

Internet use was assessed using the *Internet Addiction Test* (IAT) (Khazaal et al., 2008; Young, 1998a). A total score between 20 and 49 referred to a "moderate use" of the Internet, between 50 and 79 meant a "problematic use" of the Internet and a score greater than 80 suggested a "pathological use" of the Internet. We assessed depressive mood with the *General Health Questionnaire* (GHQ; 28 items), which consists of four subscales: "Social dysfunction", "Severe depression", "Somatic symptoms" and "Anxiety and insomnia" (Goldberg & Hillier, 1979). We assessed ADHD using *Wender Utah Rating Scale* (WURS; Ward, 1993) and personality traits using the *Big Five Inventory* (BFI; John, Donahue, & Kentle, 1991; Plaisant, Courtois, Réveillère, Mendelsohn, & John, 2010). Gambling disorder was assessed with the *Indice Canadien du Jeu Excessif* (ICJE) created in 2001 (Ferris & Wynne, 2001).

All the data were collected using self-administered questionnaires.

3. Results

3.1. Internet usage level

Two thirds of teenagers (64.5%, $n = 386$) shown a moderate use of Internet (stage 1), one third (34.5%, $n = 208$) were concerned with a problematic use (stage 2) and 0.7% ($n = 4$) at pathological use (stage 3). As for the rest, we had differentiated adolescents in stage 1 (moderate use) to stages 2 and 3 (problem and pathological use).

3.2. Psychiatric comorbidities

The use of Internet, measured by the IAT, correlated with depressive mood (.15 with "Social dysfunction", .27 with "Severe depression", .19 with "Somatic symptoms" and .23 with "Anxiety and insomnia" $p < .001$). The IAT was strongly associated with ADHD ($r = .41$, $p < .001$). It was also linked to Conscientiousness ($-.33$, $p < .001$) and Agreeableness ($-.21$, $p < .001$). Problematic or pathological Internet use was more strongly associated with depressive mood and ADHD than moderate use (see Table 1).

Table 1. Psychiatric comorbidities according to the type of Internet use

	Moderate use of Internet	Problematic or pathological use of Internet	Student's T test
ADHD (WURS)	M = 22,6 (\pm 15,57)	M = 33,83(\pm 19,75)	-7,57***
Social dysfunction (GHQ)	M = 7,51 (\pm 2,95)	M = 8,14 (\pm 3,57)	-2,30*
Severe depression (GHQ)	M = 4,80 (\pm 5,72)	M = 6,70 (\pm 6,10)	-3,73***
Somatic symptoms (GHQ)	M = 4,70 (\pm 3,99)	M = 5,61 (\pm 4,59)	2,48*
Anxiety and insomnia (GHQ)	M = 4,69 (\pm 4,91)	M = 6,22 (\pm 5,43)	-3,45***

* $p < .05$, ** $p < .01$, *** $p < .001$

3.3. Activities on internet

Activities on Internet are numerous and often combined. We chose to gather them together into three main categories: (a) those related to social networks, (b) those related to music, video and film (listening or viewing online, and download) and (c) those related to online video games. These three categories represented 90% of participants' favorite activities and did not include those related to the search of documents and information on the Internet, practical life, reading, gambling or pornography.

Table 2. Percentages of subjects and average weekly time following the activities and the type of Internet use

	All of teenagers		Moderate use		Problematic or pathological use	
	%	Average weekly time (h)	%	Average weekly time (h)	%	Average weekly time (h)
Social networks	55	7.9	62	6.5	61	10.2
Music and video	21	7.3	17	5.8	27	11.3
Video games	14	9	21	5.2	12	12.3

There was a significant difference in time spent for all teenagers in accordance with the three categories considered ($F(2, 537) = 7.58, p < .001$). Comparing with Bonferroni test, we saw that there was no significant difference between the average score of IAT for those reporting social networks as main activity compared to those reporting online video games as main activity. However, these two categories differed from the third (music, video, and movie) (respectively $p < .05$ and $p < .001$).

3.4. Internet addiction disorder versus gambling disorder

Gambling disorder measured by the ICJE was also correlated with depressive mood, (r ranging from .10 to .16) and ADHD (.18, $p < .05$). The ICJE was only correlated with Agreeableness (-.14, $p < .001$), but there were few pathological gamblers (ICJE score ≥ 8), they represented barely 2% ($n = 12$) of our sample.

3.5. Differences by gender

There was no significant difference according to gender for the score to the IAT, but boys were more concerned with a problematic or pathological Internet use (43% vs 30%), they were less to report social networks as their main activity (50% vs 70%), and significantly more to play online (28% vs. 5%). The boys had ADHD average scores higher than girls ($p < .05$), while girls scores in depressive mood were more significant ($p < .01$). Psychiatric comorbidity was higher for girls (correlations .45 between IAT and ADHD, .22 to .27 between IAT and GHQ subscales (depressive mood)). Internet use was related to a decline in Agreeableness and Conscientiousness in both boys and girls, but it was also associated with an increase in Neuroticism only for boys (.16, $p < .05$), and in Extraversion only for girls (.13, $p < .05$).

4. Discussion

Results showed that there were few adolescents with pathological Internet use, if one refers to the three levels proposed by Khazaal et al. (2008). Psychiatric comorbidities were found (especially for ADHD) and increased with the level of Internet use. Adolescents declaring social networks as their main activity on the Internet (particularly girls) and those reporting to play online video games (mostly boys) spent more time on the Internet than those who listened to music, watched videos or downloaded or streamed movies. Internet addiction disorder (i.e., excessive Internet use) was associated with a decrease in Conscientiousness (impulsivity) and a decrease in Agreeableness (antagonism). It also appeared more common in girls high in Extraversion and in boys high in Neuroticism. Internet addiction disorder shared psychiatric comorbidities (i.e., depressive mood and ADHD) with gambling disorder, but these were more

associated with an excessive Internet use. Furthermore, personality traits appear to be partially shared (only Antagonism is found in both).

The presence of psychiatric comorbidities, associated with excessive Internet use, and increases depending on the time spent, were expected and confirmed the literature (Ho et al., 2014; Kim, et al., 2006). It therefore appears to be a predisposition for teenagers to develop problematic Internet use, thus referring to several addiction's criteria of the DSM 5 as "spending a lot of time", "continuing to use despite the existence of physical or psychological problems" (American Psychiatric Association, 2013). Personality traits associated with Internet addiction disorder (impulsivity, antagonism) are found in other behavioral addictions. The difference with gambling disorder (where neuroticism is present) could be due to the period of life (Roberts, Walton, & Viechtbauer, 2006) or the fact that gambling concerns few teenagers. This questions whether pathological Internet use may concern the most sociable individuals who intensively invest the Internet to strengthen everyday life's social ties (Kraut et al., 2002).

Teenagers appeared to have a variety of activities on the Internet. Social networks represented their privileged activity, but more for girls than for boys. Boys played more online video games and were more present in problematic or pathological Internet use levels, without having a significantly higher IAT average than girls. This result is consistent with previous research demonstrating a greater prevalence of Cyberaddiction among adolescents and young adult males (Durak & Senol-Durak, 2014; Ko, Yen, Yen, Chen, & Chen, 2012).

All these results yet need to be confirmed and limitations should be noted due, among others, to the procedure (self-administered questionnaire) and therefore to the declarative nature of responses and social desirability. This study highlights the need to conduct further studies to suggest that Internet addiction disorder could be construed as a separate disorder/addiction and not a media to other addictions.

References

- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*. New-York, NY, US: American Psychiatric Press.
- Buckner V, J. E., Castille, C. M., & Sheets, T. L. (2012). The Five Factor Model of personality and employees' excessive use of technology. *Computers in Human Behavior, 28*(5), 1947-1953. doi: 10.1016/j.chb.2012.05.014
- Christakis, D. (2010). Internet addiction: a 21st century epidemic? *BMC Medicine, 8*(1), 61.
- Dalbudak, E., Evren, C., Aldemir, S., Coskun, K. S., Ugurlu, H., & Yildirim, F. G. (2013). Relationship of Internet addiction severity with depression, anxiety, and alexithymia, temperament and character in university students. *Cyberpsychology, Behavior, and Social Networking, 16*(4), 272-278. doi: 10.1089/cyber.2012.0390
- Décamps, G., & Perrin, L. (2010). Les multiples visages de l'addiction à Internet: le cas d'un étudiant à la recherche de partenaires sexuels. In L. Fernandez (Ed.), *Psychopathologie des addictions, douze cas cliniques*, (pp. 239-269). Paris, FR.
- Durak, M., & Senol-Durak, E. (2014). Which personality traits are associated with cognitions related to problematic Internet use? *Asian Journal of Social Psychology, 17*(3), 206-218. doi: 10.1111/ajsp.12056
- Ferris, J., & Wynne, H. (2001). L'indice canadien du jeu excessif. Rapport final : Soumis au Centre canadien de lutte contre l'alcoolisme et les toxicomanies. Retrieved December 2011, from Ottawa, US : CCSA-CCLAT <http://www.ccsa.ca/Fra/Priorities/Gambling/CPGI/Pages/default.aspx>
- Gearhardt, A. N., Corbin, W. R., & Brownell, K. D. (2009). Preliminary validation of the Yale Food Addiction Scale. *Appetite, 52*(2), 430-436. doi: 10.1016/j.appet.2008.12.003
- Goldberg, D. P., & Hillier, V. F. (1979). A scaled version of the General Health Questionnaire. *Psychological Medicine, 9*(01), 139-145. doi: 10.1017/S0033291700021644
- Goodman, A. (1990). Addiction: definition and implications. *British Journal of Addiction, 85*(11), 1403-1408. doi: 10.1111/j.1360-0443.1990.tb01620.x
- Hautefeuille, M., & Véléá, D. (2010). *Les addictions à Internet: de l'ennui à la dépendance*. Paris, FR: Payot.
- Ho, R., Zhang, M., Tsang, T., Toh, A., Pan, F., Lu, Y., . . . Mak, K.-K. (2014). The association between internet addiction and psychiatric co-morbidity: a meta-analysis. [10.1186/1471-244X-14-183]. *BMC Psychiatry, 14*(1), 183.
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). The Big Five Inventory--Versions 4a and 54. Berkeley: University of California, Berkeley, Institute of Personality and Social Research.

- Khazaal, Y., Billieux, J., Thorens, G., Khan, R., Louati, Y., Scarlatti, E., . . . Zullino, D. (2008). French Validation of the Internet Addiction Test. *CyberPsychology & Behavior, 11*(6), 703-706. doi: 10.1089/cpb.2007.0249
- Kim, K., Ryu, E., Chon, M.-Y., Yeun, E.-J., Choi, S.-Y., Seo, J.-S., & Nam, B.-W. (2006). Internet addiction in Korean adolescents and its relation to depression and suicidal ideation: A questionnaire survey. *International Journal of Nursing Studies, 43*(2), 185-192. doi: 10.1016/j.ijnurstu.2005.02.005
- Ko, C. H., Yen, J. Y., Yen, C. F., Chen, C. S., & Chen, C. C. (2012). The association between Internet addiction and psychiatric disorder: A review of the literature. *European Psychiatry, 27*(1), 1-8. doi: 10.1016/j.eurpsy.2010.04.011
- Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, V., & Crawford, A. (2002). Internet Paradox Revisited. *Journal of Social Issues, 58*(1), 49-74. doi: 10.1111/1540-4560.00248
- Kuss, D. J., van Rooij, A. J., Shorter, G. W., Griffiths, M. D., & van de Mheen, D. (2013). Internet addiction in adolescents: Prevalence and risk factors. *Computers in Human Behavior, 29*(5), 1987-1996. doi: 10.1016/j.chb.2013.04.002
- Lejoyeux, M., & Embouazza, H. (2013). Troubles psychiatriques et addictions. In M. Lejoyeux (Ed.), *Addictologie* (pp. 55-66). Paris, FR: Masson.
- Lowenstein, W. D. (2005). *Ces dépendances qui nous gouvernent : comment s' en libérer?* Paris, FR: Calmann-Lévy.
- Plaisant, O., Courtois, R., Réveillère, C., Mendelsohn, G. A., & John, O. P. (2010). Validation par analyse factorielle du Big Five Inventory français (BFI-Fr). Analyse convergente avec le NEO-PI-R. *Annales Médico-psychologiques, revue psychiatrique, 168*(2), 97-106. doi: 10.1016/j.amp.2009.09.003
- Roberts, B. W., Walton, K. E., & Viechtbauer, W. (2006). Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies. *Psychological Bulletin, 132*(1), 1-25. doi: 10.1037/0033-2909.132.1.1
- Rosenberg, H., & Kraus, S. (2014). The relationship of "passionate attachment" for pornography with sexual compulsivity, frequency of use, and craving for pornography. *Addictive Behaviors, 39*(5), 1012-1017. doi: 10.1016/j.addbeh.2014.02.010
- Servidio, R. (2014). Exploring the effects of demographic factors, Internet usage and personality traits on Internet addiction in a sample of Italian university students. *Computers in Human Behavior, 35*, 85-92. doi: 10.1016/j.chb.2014.02.024
- Varescon, I. (2009). *Les addictions comportementales: aspects cliniques et psychopathologiques*. Bruxelles, BE: Editions Mardaga.
- Vaugeois, P. (2006). La cyberdépendance: fondements et perspectives. (0978079744). from Centre québécois de lutte aux dépendances <http://www.santecom.qc.ca/Bibliothequevirtuelle/Cqld/09780797442.pdf>
- Ward, M. (1993). The Wender Utah Rating Scale: an aid in the retrospective diagnosis of childhood attention deficit hyperactivity disorder [published erratum appears in Am J Psychiatry 1993 Aug;150(8):1280]. *American Journal of Psychiatry, 150*(6), 885-890. doi: 10.1176/ajp.150.6.885
- Wei, H.-T., Chen, M.-H., Huang, P.-C., & Bai, Y.-M. (2012). The association between online gaming, social phobia, and depression: an internet survey. *BMC Psychiatry, 12*(1), 92.
- Weinstein, A., & Weinstein, Y. (2014). Exercise Addiction- Diagnosis, Bio-Psychological Mechanisms and Treatment Issues. *Current Pharmaceutical Design, 20*(25), 4062-4069.
- Yoo, H. J., Cho, S. C., Ha, J., Yune, S. K., Kim, S. J., Hwang, J., . . . Lyoo, I. K. (2004). Attention deficit hyperactivity symptoms and Internet addiction. *Psychiatry and Clinical Neurosciences, 58*(5), 487-494. doi: 10.1111/j.1440-1819.2004.01290.x
- Young, K. S. (1998a). *Caught in the net: How to recognize the signs of internet addiction--and a winning strategy for recovery*. Hoboken, NJ, US: John Wiley & Sons, Inc.
- Young, K. S. (1998b). Internet addiction: The emergence of a new clinical disorder. *CyberPsychology & behavior, 1*(3), 237-244. doi: 10.1089/cpb.1998.1.237

SELF-CONSTRUCTION THROUGH SELF-STARVATION: A FOUCAULDIAN NARRATIVE ANALYSIS OF MEMOIRS OF WOMEN WHO SELF-STARVE

Erica S. Freeman, M.A.

Psychology Department, Duquesne University (USA)

Abstract

Michel Foucault's engagement with themes of power-knowledge, resistance, and subjectification has a complex relationship to feminist approaches to political and psychological issues. Reading Foucault as consistent with feminist-oriented research, my paper contributes to the scholarship that has appealed to Foucault as an ally in the project of articulating interpretations of *anorexia nervosa* that critically contest DSM discourse. Appealing to the later Foucault, women's practices of self-starvation can be interpreted as projects of self-*construction* from within a context of social and political constraint. In an effort to distinguish women who appropriately carry the label *anorexia nervosa* from others who engage in practices of self-starvation -- and thus to foreground the uniquely anorectic ethical concerns and contradictions implicated in their projects of self-construction through self-starvation -- I compare the writings of political activist Simone Weil with two memoirs of *anorexia nervosa*, MacLeod (1981) and Hornbacher (1998). Prior to undertaking a comparison of the narratives, I grapple with the status of authorship and the use of narrative to "give an account of oneself" (Foucault, 1969; Butler 2005). I also distinguish personal narratives in general from historically-situated practices of confession in the form of personal narrative (Foucault, 1976/1978). Following these preliminary considerations, I reveal through thematic analysis of the narratives the role of Foucault's four modes of self-construction, as these modes are defined in the third volume of the *History of Sexuality*, in these women's self-construction projects. I conclude that anorectic self-starvation results in an ethical subjectivity that may be aptly termed "pathological," not for physiological or medical reasons as dictated by the DSM, but precisely because of the ways in which anorectic self-construction reinscribes phallic discourses to compensate for a power vacuum created by their own simultaneous rejection of and identification with those discourses. This "pathological" quality of anorectic subjectivity manifests, I argue, in specifically ethical situations, as a failure to respond to others who suffer.

Keywords: *anorexia nervosa, eating disorders, Foucault, ethics.*

1. Introduction

In order to distinguish women who appropriately carry the label *anorexia nervosa* from others who engage in practices of self-starvation -- and thus to foreground the uniquely anorectic ethical concerns and contradictions implicated in their projects of self-construction through self-starvation -- I compare the writings of political activist Simone Weil with two memoirs of *anorexia nervosa* written by MacLeod (1981) and Hornbacher (1998). Prior to undertaking a comparison of the narratives, I grapple with the status of authorship and the use of narrative to "give an account of oneself" (Foucault, 1969; Butler, 2005). I also distinguish personal narratives in general from historically-situated practices of confession in the form of personal narrative (Foucault, 1976/1978).

2. The ethics of personal narrative as a practice of freedom

Halperin's (1995) reading of Foucault (1976/1978) in some respects anticipates the later Foucault's reinterpretation of personal narrative as a practice of freedom. Halperin (1995) contends that personal narratives can be used strategically to contest bio-power (pp. 52-56). Put differently, speaking from a marginalized position can call into question that very positioning. Narrative in this case is not a confession of one's personal, hidden, authentic truth. Rather, it is a more or less explicit interrogation of sociopolitical norms. The power exercised through such narratives reveals the contradictions inherent in

what is tacitly assumed as normal in a given society. In this way, strategic norms can contribute to the exposure and “queering” of that norm through the ethical project of self-creation (pp. 56-62).

Foucault (1969)’s caution against assuming that the author is the sole origin of a text still stands, however, even in light of Halperin’s (1995) interpretation and Foucault’s own later transformation of his perspective. To assume that the author is unconditioned in her writing or speaking simply reinscribes the confessional subject of early modern Christianity and Romanticism. Rather, we must treat the author as the symbolic nexus of the several discourses that converge to inform and constrain the resulting narrative. I suggest that Hornbacher (1998), MacLeod (1981), and Weil (1947/1986, 1951/2012) can be read as authors in this sense. Each of them appealed to a discursive alternative (e.g., MacLeod (1981) appealed to the discourse of existential-phenomenology) to contest the hegemony of mainstream discourses or institutions.

Butler (2005) explains that Foucault (2001) “rewrote his earlier position” (Butler, 2005, p. 112), in such a way that he now advocated a view according to which “the self must appear in order to constitute itself” (p. 113). Yet an individual “sacrifices” itself it making itself appear (p. 114); the manifest self is not identical to the self before it makes its appearance. This ultimately humbling situation arises from several factors that both enable and constrain the very possibility of giving an account of oneself. Butler (2005) believes that each particular self emerges from both (1.) personal, singular, and embodied factors, and (2.) sociohistorical and linguistic factors. For the most part we cannot account for the influences comprising (1.). As for the second set of factors, Butler (2005) acknowledges that no one can account for themselves in a language that is wholly their own. We can, however, use language, in all its inadequacy, as well as the discursive limits to what is recognizable as human within a given society, to call certain problematic norms into question.

3. Case I: personal narratives of self-starvation

In *History of Sexuality, Volume II*, Foucault developed an “ethics of problematization” (Gutting, 2014), according to which individuals of relative privilege (as compared, e.g., with convicts and madpeople) construct an ethical self by relating to conduct norms as a problems to be solved or as projects to be completed. The *dispositif* operative in a given society conditions and constrains the ways these ethical projects can be undertaken, but not to the point of total determination. Foucault (1984/1985) explicated the range of freedom that such individuals have in terms of four dimensions that may be applied in case studies of individuals living in pre-Christian societies (e.g., ancient Greece) or in modern societies (pp. 25-32). In this section of the paper, I apply Foucault’s (1984/1985) analysis of self-construction as a framework in my analysis of two narratives of self-starvation as “accounts of oneself” in Butler’s (2005) sense. I appeal to this same framework in the third section as well, where I turn to the writings of Simone Weil, another woman who practiced self-starvation for ethical ends.

3.1. The fourth dimension of self-construction: subjection

Although Foucault (1984/1985) identified the mode of *subjection* as the second dimension of self-construction in his explication (p. 27), I have referred to it last because it is the most problematic in the case of the narratives of self-starvation under consideration in this section of the paper. By recognizing this dimension of the ethics of problematization, Foucault (1984/1985) suggested that an individual who undertakes this ethical project has in some way decided why or how it is useful -- in the sense of *chresis* (use) -- to submit oneself to the demands of the conduct norm in question (p. 37). Thus, subjection refers to the particular relationship an individual of relative privilege takes on with respect to the norms of conduct in her society.

Hornbacher (1998) and MacLeod (1981) recount their anorectic selves as having related to the patriarchal norms of self-control and invulnerability in modern Western societies in a complex and self-contradictory way that ultimately undermined their practice of self-starvation as an expression of autonomy within the constraints of these norms. On the one hand, they recall that they had rejected the assumption, crucial to the operation of these norms, that the worth and potential of an individual can be “read” in the shape and size of her body. According to these memoirists, their projects as anorexics was to insist that they could not be identified with their bodies. MacLeod remembers that, as a teenaged young woman,

when I looked in the mirror, I saw someone who appeared to me to be 'gross' -- a favorite word with anorexics, as Minuchin shows. I had been a thing of firm, clear outlines; now I seemed to splay out in all directions and to have assumed a shape, thanks to undue accretions of flesh, which bore no relation to the person I believed to exist within it. 'That,' I told myself, 'can't be me' (MacLeod, p. 41).

MacLeod suggests that the female body signifies, both to society as a whole and to the anorectic herself, inferiority. “What the anorectic girl believes to lie in store for her as a woman” is the following:
a passive role, a position of helplessness, a loss of self. It is what she has experienced already, but with the addition of responsibility, pain, and bodily suffering exemplified in the bearing of children and the shedding of blood (MacLeod, 1981, p. 68).

The anorectic attempts to control the extent to which her body appears voluptuous, and therefore hedonistic, through food restriction and, in some cases, also through excessive exercise.

On the other hand, as anorectics, Hornbacher (1998) and MacLeod (1981) also accepted patriarchal norms and endeavored to prove, through their practices of self-starvation, that they could be as masculine as any man. According to Hornbacher,

when a woman is thin in this culture, she proves her worth, in a way that no great accomplishment, no stellar career, nothing at all can match. We believe she has done what centuries of a collective unconscious insist that no woman can do -- control herself. A woman who can control herself is almost as good as a man. A thin woman can Have It All (1998, pp. 81-82).

Conforming to patriarchal norms seemed to both memoirists to be their only option for attaining autonomy within their milieu.

4. Case II: writings of Simone Weil

In the previous section, I argued that anorectic self-construction fails as a practice of freedom because the individuals who undertake this project simultaneously reject and identify with the relevant patriarchal norms in their societies. In this section, I apply these same four dimensions of self-construction to a reading of Simone Weil’s essays in order to demonstrate that her own practice of self-starvation can be understood as a project of self-construction, but that this project differs in significance from that of anorectic women.

4.1. The fourth dimension of self-construction: subjection

In keeping with her inspiration, the Stoics and the Neoplatonists, and also in keeping with both ancient Greek men who sought to become moderate and modern women such as Hornbacher (1998) and MacLeod (1981) who used to live as anorectics, Weil affirmed that desire and self-denial had a use (*chresis*). On her view, she, as an individual of relative privilege, ought to go hungry because giving one’s bread to the other so that she can eat is an act of love. Acts of love (*agape*) toward one’s neighbor are, according to Weil, ethical acts.

Weil made a crucial distinction between “being good,” which she believed was ultimately self-serving and egoistic, and “being loving,” which she understood as supernatural (1951/2012, p. 57). Grace working in and through an individual allows her to love others; otherwise, it would be impossible (pp. 33, 43). This is due not least to the fact that the neighbor we are supposed to love is not someone to whom we would normally pay attention. This is “a being, naked and bloody, unconscious on the road, and one who we do not know” and would thus easily overlook (p. 164). Hence Weil’s claim that “love sees the invisible” (p. 56). Love enlivens and illuminates the marginalized. It bestows an afflicted individual with power, such that, when seen with the eyes of love, she is recognized as existing and worthy of respect (1947/1986, p. 271).

5. Conclusion

Although somewhat paradoxical, Weil’s ethics are not contradictory in the way that I argued anorectic ethics, as narrated by Hornbacher (1998) and MacLeod (1981), are. Weil gave an account of ethics as a practice of freedom that strips the ethical subject of freedom so that the other may live and be recognized, ultimately so that the other may be free. In contrast, anorectic women, according to the memoirists studied in the previous section, engage in a fraught endeavor to acquire their own freedom by subjecting themselves more strictly and completely to the very same phallic norms that marginalized them in the first place. The anorectic ethical project therefore fails because the individual has yet to identify an alternative norm that could be appropriated as a means of genuine resistance against patriarchy. The failure of the anorectic project to establish a viable self-construct is evident in the way that MacLeod (1981), for example, became increasingly unresponsive to the plight of others the longer she starved herself.

References

- Butler, J. (2005). *Giving an account of oneself*. New York City, NY: Fordham University Press.
- Foucault, M. (1969). What is an author? In J. D. Faubion (Ed.). *Aesthetics, method, and epistemology: Essential works of Foucault, 1954-1984, Volume 2* (pp. 205-222). New York City, NY: The New Press.
- _____. (1978). *The history of sexuality, Volume I: An introduction*. R. Hurley, (Trans.). New York City, NY: Vintage. (Original work published 1976)
- _____. (1985). *The history of sexuality, Volume II: The use of pleasure*. R. Hurley, (Trans.). New York City, NY: Vintage. (Original work published 1984)
- _____. (2001). *Hermeneutics of the subject: Lectures as the College de France 1981-1982*. G. Burchell, (Trans.). New York City, NY: Picador.
- Halperin, D. M. (1995). *Saint Foucault: Towards a gay hagiography*. New York City, NY: Oxford University Press.
- Hornbacher, M. (1998). *Wasted: Coming back from an addiction to starvation*. Hammersmith, London: Flamingo.
- MacLeod, S. (1981). *The art of starvation: A story of anorexia and survival*. New York City, NY: Schocken Books.
- Meltzer, F. (2001). The hands of Simone Weil. *Critical Inquiry*, 27(4), 611-628.
- Weil, S. (1986). *Simone Weil: An anthology*. S. Miles, (Ed.). New York City, NY: Grove Press.
- _____. (2012). *Awaiting God: A new translation of Attente de Dieu and Lettre a un Religieux*. B. Jersak, (Trans.). Abbotsford, Canada: Fresh Wind Press.

“HOW CAN BYSTANDER INTERVENTION CHANGE?”: AN ONLINE QUALITATIVE STUDY IN ITALY AND BRAZIL

Elisa Guidi¹, Belinda Piltcher Haber Mandelbaum², Nicolina Bosco³, Andrea Guazzini³,
& Patrizia Meringolo³

¹Department of Information Engineer, University of Florence (Italy)

²Institute of Psychology, University of Sao Paulo (Brazil)

³Department of Education and Psychology, University of Florence (Italy)

Abstract

Intimate partner violence (IPV) is a pervasive social problem that has serious consequences for millions of women each year. Most of IPV studies address individual motivations for the abuse and attributes of the victim. Recently the focus has shifted to bystander intervention. Bystanders could play a critical role to reducing the prevalence of IPV, when they are motivated to safely and effectively act during an IPV incidents. Bystander approach become increasingly implemented as IPV prevention programs within the college campus. To develop these programs, it is necessary to better understand the factors that aid or hinder individuals in taking helpful action in the face of violent behavior.

The purpose of this study is therefore to explore how college students from two different universities (University of Florence – Italy and University of Sao Paulo – Brazil) interpret bystander opportunities and how their perceptions change in relation to the presence of a group of friends and with the friendship of the aggressor, describing cultural and gender differences.

49 Italian and 44 Brazilian students participated to two online group chats (one hour each one). We chose a virtual chat because the online format is configured as an ecological setting to communicate, and this is evident in the young generation grown with the new technologies. In the group discussion via chat two hypothetical situations of violence will be presented, one “less severe” and the other “more invasive”. Transcripts were analyzed using Grounded Theory techniques.

Italian and Brazilian participants reported an interrelated individual, relational and social factors that influenced their decision to act. Bystanders felt more effective helping a friend victim of IPV when in a group context rather than alone. Moreover, having a friendship with the aggressor increased their sense of self-efficacy to intervene. Finally, a gender difference appeared clearly for both cultures: Italian and Brazilian males chose more risky types of intervention than Italian and Brazilian females did.

In conclusion, our findings provides implications for bystander prevention intervention development. Prevention programs could increase community members’ sense of responsibility for ending violence, empowering them and offering concrete strategies in which bystanders might efficiently intervene in different IPV situations.

Keywords: *bystander, college students, domestic violence, prevention, cultural differences.*

1. Introduction

Intimate partner violence (IPV), defined as threats of or actual sexual, physical, or psychological harm perpetrated by a current or previous partner, is a social and health issue that affects more than one third of women globally (Lazarus & Signal, 2013). Victims of IPV may be women and men but women are the more likelihood to have highest injuries and/or other negative consequences (Beeble, Post, Bybee, & Sullivan, 2008).

An Italian national survey (ISTAT, 2015) reported that among 24761 women (21044 Italian and 3717 foreign) aged between 16 and 70 years, 31.5% suffered at least one episode of physical or sexual violence by a man during lifetime. Using the WHO multi-country study on women’s health and domestic violence data (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006), a Brazilian study found that among women aged 15- 49 years, 50.7% reported some kind of IPV (Ludermir, Schraiber, D’Oliveira, França-Junior, & Jansen, 2008).

IPV studies have usually focused on individual factors for the violence and attributes of the victim (Chabot, Tracy, Manning, & Poisson, 2009). A recent area of research is bystander intervention on sexual violence and IPV (Banyard, 2011). In order to involve community members in helping to recognize and prevent possible episodes of IPV, bystander intervention programs usually educate individuals about IPV and improve them to speak up and effectively act in the face of violence behavior (McMahon, 2010). Hence, exploring how people could help victims is critical to decrease the prevalence of IPV because informal helpers (e.g., friends, family, classmates, and coworkers) play an important role in buffering the negative effects of abusive relationship (Sylaska & Edwards, 2014).

The most important framework to understand bystander intervention is the classic work of Latané and Darley (1970), who described five steps that lead to an individual's decision to help someone that is living an emergency situation (Banyard, 2011). In order to intervene a bystander should 1) notice event, 2) interpret the situation as a problem, 3) feel the responsibility for helping, 4) decide the form of assistance, and 5) implement the action. This model have been evaluated across several emergency situations, including sexual violence and IPV (i.e., Katz, 1995, Banyard et al., 2007; Chabot et al., 2009).

Some studies explored when a bystander has more likelihood to help someone. When bystanders interpret the episode of IPV as more severe (i.e. high risk of injury to the victim), literature results showed that individuals are much more likely to help in this situations (Chabot et al., 2009). Research demonstrated that bystander responsibility to act may be influenced by a tolerance attitudes towards IPV, decreasing his/her sense of responsibility (Banyard, & Moynihan, 2011). Moreover, studies showed that the notion of self-efficacy in one's skills to change a behavior of someone is an important element in the decision making process to help (Burn, 2009). Finally, gender is another individual-level variable that has a key role for giving assistance. Men seemed to have less positive attitudes toward bystander interventions and to be less likely to engage in them than women (McMahon & Banyard, 2012). Moreover, other studies demonstrated that female bystanders are more likely to provide emotional support, while male bystanders are more likely to engage in risky actions to help others in need (Chabot et al., 2009; Van Camp, Hébert, Guidi, Lavoie, & Blais, 2014).

The model of Latané and Darley (1970) focuses mainly on individual factors and do not pay attention to other factors (i.e. relational and social) that has an impact on bystander intervention (Banyard, 2011). For example, little research investigated the influence of the relationship with the victim and/or the perpetrator on the bystander motivation to help. It emerged that a relationship with the victim was associated with more positive bystander perceptions while having a relationship with the perpetrator was mixed (i.e., bystander felt safer to act but they less recognized the situation as a problem) (Bennett & Banyard, 2016). With regard to social factors, some studies also demonstrated that bystanders are more willing to give help if they are in a group of friends than alone (Levine & Crowther, 2008), reducing the "bystander effect" (Latané & Darley, 1970).

2. Objectives

The aims of this study were to explore how college students from two different Universities (University of Florence – Italy and University of Sao Paulo – Brazil) interpret bystander opportunities and to understand which factors could impact on their choice to act towards two violence scenarios (from low to high severity). Specifically, we described how the relation (e.g., being friend to the aggressor) and social (e.g., presence of a group of friends) factors could be relevant elements in their decisions about taking action in different violence scenarios, highlighting possible cultural and gender differences.

3. Methods

3.1. Participants

Participants were 49 Italian (71% females; $M = 22.79$, $SD = 2.77$) and 44 Brazilian (55% females; $M = 25.16$, $SD = 5.08$) students who were involved in two online focus group.

3.2. Data collection and analysis

We developed two hypothetical vignettes in which participants witnessed about violence toward a female friend. Vignettes varied in terms of severity of IPV and places where the violence occurred. Each participant was involved in two online focus groups, which lasted 60-90 minutes. We did 15 online focus group with the Italian participants (8 for the first vignette and 7 for the second one) and 19 online focus group with the Brazilian participants (10 for the first vignette and 9 for the second one). We used online focus groups because internet gets increasingly an environment where individuals communicate and socialize, and this is particularly evident in youth, born and grown with the new technologies (Coyne,

Padilla-Walker, & Howard, 2013). Moreover, research shows that bystander programs may be effectively adapted to an online setting (Kleinsasser, Jouriles, McDonald, & Rosenfield, 2014).

At the beginning of each online focus group, trained facilitators explained the nature of the discussion, highlighting the group rules, and clarified how confidentiality would be maintained. After a vignette was presented in the virtual chat, participants were asked how they interpret the event, which is the best intervention to be implemented, what can be the risks or the benefits of their intervention, how the perception of the event changes if there is the presence of others bystander's friends and if they are friends of the aggressor too. The same procedure was implemented for the second vignette.

Transcripts were entered into the qualitative software program (Qualitative Content Analysis: QCAmap) (Mayring, 2014) and analyzed using Grounded Theory approach (Strauss & Corbin, 1990). Participants' responses were summarized, using a template that categorized them by topic area. These categories included bystander interpretation of the violence event, bystander behaviors and strategies to avoid negative consequences, effect of friends group on bystander intervention, and impact of friendship with the aggressor.

4. Findings

Overall, Italian and Brazilian students reported an interrelated set of individual, relational and social influences on their choices within bystander actions. Moreover, a gender difference appeared clearly for both cultures regarding the bystander behaviors, and some cultural differences too.

4.1. Bystander interpretation of the violence event

With regard to the vignette 1 (less severe episode), the majority of Italian and Brazilian participants, both females and males, recognized some problematic elements such as physical and verbal aggression, humiliation, extreme jealousy and control, and lack of trust. However, some Brazilian and Italian males believed that the boyfriend's violence could come from an inadequate behavior of the girlfriend (e.g., *"I would not want to play devil's advocate, but she puts in place some behaviors that might make suspect you a betrayal"*). Moreover, a minority of Italian students were not impressed with the episode (e.g., *"Honestly, there is nothing that strikes me, although not sharing any of the boy's behaviors. Surely this is due to the fact that we often see such scenes"*).

With regard to the vignette 2 (more severe episode), Italian and Brazilian participants recognized the high seriousness of the episode, but they differed in relation to the causes attributed to physical and psychological violence. While the Italian participants mainly attributed the violence to individual factors (e.g., jealousy, control, lack of self-esteem, past traumas, anger), the Brazilian participants perceived social factors as a male-dominated society that supports gender stereotypes as a root cause of violence against women (e.g., *"When male chauvinism converges into an intimate relationship ends up giving 'justification' for people to act violently as if they were acting as the society asks them"*).

4.2. Bystander behaviors and strategies to avoid negative consequences

There were some bystander behaviors common to both vignettes. Italian and Brazilian participants pointed out the importance to provide emotional, instrumental and informational support to the victim. They also highlighted that the victim should confide in someone she trusts (e.g., family, friends, etc.), or seek help from professional services. Concerning this last point, in the vignette 1 the professional services involved were more psychological while in the vignette 2 were battered women's shelter and police.

In both vignettes, Italian and Brazilian participants indicated two main negative consequences after a bystander intervention: the increase of violence and the loss of friendship. To avoid these problems participants reported that they would activate a safety social network, contacting their own and the victim's family and friends, and seeking help from the professional services for battered women. Brazilian participants in both vignettes would have also denounced the aggressor while Italian participants just in the case of vignette 2. Finally, in both cultures males participants would intervene with the perpetrator, blocking or talking to him (e.g., *"And even go talk to him, he has to be responsible for his acts"*), and in the vignette 2 threatening to report the violence to the police.

4.3. Effect of friends group on bystander intervention

In the vignette 1, few Italian male participants highlighted that the presence of friends could inhibit the bystander intervention (e.g., *"Maybe I would thought more to amuse me, obviously making a mistake. I think you act less within a group, you are inhibited"*).

The majority of Italian and Brazilian participants, in both vignettes, recognized that within a friends group the bystander intervention would be more effective because the group could inhibit other

violent actions of the aggressor (e.g., “*A group of people always gains strength of opinion, or at least intimidated by being greater physical strength*”) and persuade more the victim to being helped (e.g., “*Hearing the same thing to more people might help the victim to reflect more about the point of view given to her by her friends. She can ask more questions to herself, inquire more about the situation, aware of the support of the people next to her*”).

Within of friends group that tries to manage an IPV episode, in both culture, male participants are more willing to address to aggressor than female participants (e.g., “*The intervention would be consolatory to the victim from the girls, while from the boys I would expect an intervention of direct comparison with the aggressor*”).

4.4. Impact of friendship with the aggressor

Our findings show that, in both vignettes, the relationship with the perpetrator could increase the willing to help for male and female bystanders because they feel more in comfortable to speak with an aggressor friend than a stranger one (e.g., “*I feel safer to speak in his face because of the closer relationship*”). However, Italian female participants tended to have an emotion reaction (e.g., “*As a woman and knowing my brusque character in the situation I would be very upset with my friend and I would took up the defense of her, despite my friendship with him*”) while Brazilian female participants usually underlined that the priority is still the victim’s support (e.g., “*I would tell him that what he does is not legal and that is not good for anyone. But first I care about her to know if she is okay*”). Moreover, Brazilian male participants pointed out that male bystander may have a key role to persuade the aggressor (e.g., “*There are many men who act in this way without knowing who are perpetrators. Our education supports a male-dominated society. It can be a good attempt to open his eyes instead of creating fighting. There is a lack of "manhood" in our society... in other words men who educate others to be men*”).

5. Discussion and conclusions

Our findings are consistent with previous research suggesting that bystanders are less motivated to help in an IPV situations that are perceived as less severe as psychological violence (Chabot et al., 2009). In fact, participants identify the situation as more problematic and less safe to intervene in the high severity than the low severity condition. Consistent with broader past research (McMahon & Banyard, 2012; Van Camp, Hébert, Guidi, Lavoie, & Blais, 2014), our study show a significant gender differences: females less blame the victim of IPV and less engage in risk behavior to help others in need than males. As demonstrated by Levine and Crowther (2008), our analysis suggests that the bystander feels more comfortable to help someone if he/she is in a group of friends than alone. The gender differences appear relevant also within a group of friends that try to manage an IPV episode. In both culture, male participants are more willing to address directly the aggressor than female one. Our findings also show that the relationship with the perpetrator could more increase the willing to help for bystander males than females one. Moreover, our findings suggests that men could have a significant influence on others men, in order to do not act violence against women.

Limitation include a voluntary basis with more sensitive of the problem of IPV joining in the study. Nevertheless, this study also increases the knowledge about the ways in which bystanders interpret and act during different IPV situations, highlighting some gender and cultural differences.

In conclusion, in order to empower the community members to intervene in IPV situations, bystander intervention programs could help females and males to develop a wide variety of strategies that could be flexibly implemented across a range of bystander experiences (i.e., less or more severe episode, being in a group context or alone, having a relationship with victim and/or perpetrator).

References

- Banyard, V. L. (2011). Who will help prevent sexual violence: Creating an ecological model of bystander intervention. *Psychology of violence, 1*(3), 216-229.
- Banyard, V. L., & Moynihan, M. M. (2011). Variation in bystander behavior related to sexual and intimate partner violence prevention: Correlates in a sample of college students. *Psychology of Violence, 1*(4), 287.
- Banyard, V. L., Ward, S., Cohn, E. S., Plante, E. G., Moorhead, C., & Walsh, W. (2007). Unwanted sexual contact on campus: A comparison of women's and men's experiences. *Violence and victims, 22*(1), 52-70.
- Beeble, M. L., Post, L. A., Bybee, D., & Sullivan, C. M. (2008). Factors related to willingness to help survivors of intimate partner violence. *Journal of Interpersonal Violence, 23* (12), 1713-1729.

- Bennett, S., & Banyard, V. L. (2016). Do friends really help friends? The effect of relational factors and perceived severity on bystander perception of sexual violence. *Psychology of Violence, 6*(1), 64-72.
- Burn, S. M. (2009). A situational model of sexual assault prevention through bystander intervention. *Sex Roles, 60*(11-12), 779-792.
- Chabot, H. F., Tracy, T. L., Manning, C. A., & Poisson, C. A. (2009). Sex, attribution, and severity influence intervention decisions of informal helpers in domestic violence. *Journal of interpersonal violence, 24*(10), 1696-1713.
- Coyne, S. M., Padilla-Walker, L. M., & Howard, E. (2013). Emerging in a digital world a decade review of media use, effects, and gratifications in emerging adulthood. *Emerging Adulthood, 1*(2), 125-137.
- Garcia-Moreno, C., Jansen, H. A., Ellsberg, M., Heise, L., & Watts, C. H. (2006). Prevalence of intimate partner violence: findings from the WHO multi-country study on women's health and domestic violence. *The Lancet, 368*(9543), 1260-1269.
- ISTAT (2015). Report of National Institute of Statistics on Violence against women. *Survey multipurpose household survey. "Security on women"*. Retrieved November 26th, 2015, from: <http://www.istat.it/it/archivio/161716>
- Katz, J. (1995). Reconstructing masculinity in the locker room: The Mentors in Violence Prevention Project. *Harvard Educational Review, 65*(2), 163-175.
- Kleinsasser, A., Jouriles, E. N., McDonald, R., & Rosenfield, D. (2014). An Online Bystander Intervention Program for the Prevention of Sexual Violence. *Psychology of Violence, 5*(3), 227-235.
- Latané, B., & Darley, J. M. (1970). *The unresponsive bystander: Why doesn't he help?* New York, NY: Appleton-Century-Crofts.
- Lazarus, K., & Signal, T. (2013). Who will help in situations of intimate partner violence: exploring personal attitudes and bystander behaviours. *International Journal of Criminology and Sociology, 2*, 199-209.
- Levine, M., & Crowther, S. (2008). The responsive bystander: how social group membership and group size can encourage as well as inhibit bystander intervention. *Journal of personality and social psychology, 95*(6), 1429.
- Ludermir, A. B., Schraiber, L. B., D'Oliveira, A. F., França-Junior, I., & Jansen, H. A. (2008). Violence against women by their intimate partner and common mental disorders. *Social science & medicine, 66*(4), 1008-1018.
- Mayring, P. (2014). Qualitative content analysis-theoretical foundation, basic procedures and software solution. Retrieved November 26th 2015, from: <http://www.ssoar.info/ssoar/handle/document/39517>
- McMahon, S. (2010). Rape myth beliefs and bystander attitudes among incoming college students. *Journal of American College Health, 59*(1), 3-11.
- McMahon, S., & Banyard, V. L. (2012). When can I help? A conceptual framework for the prevention of sexual violence through bystander intervention. *Trauma, Violence and Abuse, 13*(1), 3-14.
- Sylaska, K. M., & Edwards, K. M. (2014). Disclosure of Intimate Partner Violence to Informal Social Support Network Members A Review of the Literature. *Trauma, Violence, & Abuse, 15*(1), 3-21.
- Strauss, A. L., & Corbin, J. M. (1990). *Basics of qualitative research (Vol. 15)*. Newbury Park, CA: Sage.
- Van Camp, T., Hébert, M., Guidi, E., Lavoie, F., & Blais, M. (2014). Teens' self-efficacy to deal with dating violence as victim, perpetrator or bystander. *International Review of Victimology, 20*(3), 289-303.

ANALYSIS OF COUNSELLING PROCESSES DURING MANDATORY PSYCHOSOCIAL COUNSELLING

Gabrijela Ratkajec Gašević¹ & Martina Čarija²

¹University of Zagreb, Faculty of Education and Rehabilitation Sciences (Croatia)

²Society for Psychosocial Assistance (Croatia)

Abstract

Mandatory psychosocial counselling is one of the measures imposed by the Croatian lawmakers for juvenile offenders (between 14 and 21 years of age) after committing an offence. In that manner, juvenile offenders are usually involuntary clients of mandatory psychosocial counselling. The research with juvenile offenders in counselling centres was conducted with the purpose of evaluating counselling processes with involuntary clients.

Twenty-three juveniles convicted of an offense and mandated to psychosocial counselling were included in this research. Counsellors assessed every session with the focus on content, perceived establishment of therapeutic relationship and perceived intra-psychological processes of minors/clients from counsellor perspective.

The goal of this paper is to establish the processes of change in the observed aspects of established therapeutic relationship, content of work and intra-psychological processes of minors. In order to determine these changes, pairwise comparisons between third, sixth and ninth session were made (using general linear model). Clients' insight into personal processes increases significantly as process of counselling progresses. The counsellors' perception of therapeutic relationship is also more positive as the counselling is in progress. More specifically, results show that during the counselling process the client's openness to establish a relationship with the counsellor and openness toward problem solving increases. Considering factors which define perceived working alliance, there are statistically significant differences in relation to task and bond, but not in relation to goal. Results show that perception of bond establishment and task achievement increases as the counselling process progresses.

Considering the content of the counselling, themes such as development of self-management skills, improvement of personal relationships, remodification of antisocial beliefs or prevention of antisocial behaviour are present during the whole counselling process while themes related to establishment of relationship and goals of counselling are more common for the beginning of counselling process.

Analysing obtained results, specificities at the beginning of counselling process were determined, which are primarily related to establishment of relationship and goals of counselling and establishment of relationship. Implications for the beginning of mandatory psychosocial counselling or counselling involuntary clients (juvenile offenders) will be discussed during this presentation.

Keywords: *mandatory psychosocial counselling, juveniles, counselling process, working alliance.*

1. Introduction

The counsellor is aiming to achieve a number of complex goals through the relationship with his client during the counselling process. Although many experts have debated about difficulties in defining all potential goals of counselling process (McLeod, 2001; Dryden, 2006; Sun, 2008), we will emphasize that important aims are that the client should understand himself better and, in particular, become aware of the degree to which his own deeply interwoven assumptions about himself and other people affect his daily perceptions and experience. This presents an especially difficult task when involuntary adolescent clients are at hand. The nature of mandatory counselling influences clients' understandings of the therapeutic process and clients' perceptions of the therapist, as well as the clients' lacking motivation can influence counsellors' perception of the client and the counselling process (Razzhavaikina, 2007). Those who attend counselling involuntarily usually believe they have been forced unnecessarily to the counselling process, they feel helpless, confined, frustrated, aggravated, angry, suspicious, anxious, and defensive (Osborn, 1999). Because of these negative characterizations of involuntary clients, authors in

the area of mandatory counselling agree that it is challenging and quite problematic to establish a relationship with a person who is required to be in counselling (Honea-Boles, & Griffin, 2001; Razzhavaikina, 2007; Trotter, 2015).

2. Objectives

The focus of this paper are juvenile offenders who are mandated to psychosocial counselling and who, in most cases, have not chosen to receive the type of service they are being given. More precisely, the goal of this paper is to establish the processes of change in the established therapeutic relationship, content of work and intra-psychological processes of juveniles which are very important aspects of establishing and maintaining a relationship with a minor/client but also very important aspect of treatment outcome. To gain insight, we have analyzed the counsellor's perception of characteristics and behavior of the juvenile during the counselling process, the perception of the established relationship content of the work at several points during counselling process. To this end, the goals are as follows:

- To determine in which of the observed aspects a change of the counsellors' perception of the juvenile's behavior appears during the counselling process (through 3rd, 6th and 9th sessions).
- To determine in which of the observed aspects a change of the counsellors' perception of the established relationship with the minor appears during the counselling process (through 3rd, 6th and 9th sessions).
- To describe the content of work during mandatory psychological counselling.

3. Methods

3.1. Sample

The starting point in forming a sample were counsellors carrying out mandatory psychosocial counselling in counselling centres, those who have expressed an interest in monitoring the counselling process i.e. ten counsellors from six counselling centres. In that manner, the sample is convenient. However, the validity of the sample is insured through the agreement that each counsellor will monitor the counselling process with the first two minors (males) and the first two younger adults (males) who, from the date of the counsellors' agreement on co-operation, check into counselling. Thus, the formation of the sample started in April, 2012, ended in June 2012, while the overall monitoring was completed in early 2013. The monitoring was completed for 23 juveniles. As the mandatory psychosocial counselling can be mandated to a person aged 14 to 21 years, the average age of the respondents in the sample was 17.22 (SD = 1.14). In 27.8% of the sample this specific obligation was imposed by the Municipal State Attorney's Office, as a substitute for criminal proceedings. As an educational measure, the Municipal Criminal Court imposed the special obligations on 44.4% in 5.6% by the County Criminal Court, while 22.2% of the sample received a measure by the Magistrates' Court. The highest percentage of young people committed crimes or offenses against property (38.9%), then against life and person (27.8%), and against the security of people, property and transport (16.7%). A somewhat smaller percentage of youth committed crimes / offenses related to drug abuse (11.1%) or against public order (5.6%).

3.2. Instruments

The goal of this study was to monitor the counselling process within the implementation of mandatory psychosocial counselling. Few aspects of the counselling process were observed solely from the counsellors' perspective: the characteristics and behavior of juveniles during the counselling, assessment of the established relationship with a juvenile, the themes and content of the work.

The counsellors have evaluated these aspects at the end of each session. The experience of juveniles' interaction and cooperation during the session was assessed through the *Perception of Juvenile's Interaction and Behavior Assessment Scale*. The scale consists of 23 items, divided in five areas: openness to the establishment of a relationship, resistance to counselling, openness to problem solving, and the potential for achieving and maintaining changes and active participation. Then, through the *Session Content Check – List* assessments were made from the content of each meeting. This scale consists of 20 items, divided in four areas: Goals, Skills, Relationships, Prosocial orientation. Every third meeting (i.e. on the third, sixth, ninth, twelfth and last meeting) counsellors assessed the quality of the established relationship through the *Working Alliance Inventory* (Tracey & Kokotovich, 1989). To determine the quality of the established relationship (or working alliance) Bordin's definition (1979) was used, which defines that the concept consists of three interrelated components: the client and counsellor's agreement on the goals of treatment (goal); client and counsellor's agreement on how to achieve these goals (task), and the development of relations between the client and the counsellor (bond). At the end of

the entire counselling process, counsellors reviewed the outcomes of treatment and the achieved goals. In this study, only the counsellor's estimations were gathered.

3.3. Data processing

Statistical Package for Social Sciences - SPSS, version 19.0. was used for the statistical analysis of the results. For the purpose of testing the hypotheses it was necessary to divide the results according to the ordinal number of the sessions. The descriptive statistics results are firstly shown and interpreted. To determine in which of the observed aspects a change of the counsellors' perception of the characteristics of juveniles and a change in the counsellor's perception of the established relationship appear during the counselling process, repeated measures analysis of variance (ANOVA) was conducted with the goal of comparing the differences between the 3rd, 6th and the 9th sessions.

4. Results

4.1. Changes in the counsellor's perception of the characteristics and behavior of juveniles during the counselling process

The way in which a counsellor perceives a person in treatment and its relationship to work is a key component in the experience of the established relationship. To gain insight in the matter we can use the *Perception of juvenile's interaction and behavior assessment scale*. The means show that during the counselling process openness to establishment of relationships and openness to problem solving increases while the resistance decreases as the counselling progresses. The potential for achieving changes and active participation represent constant features that do not vary during the counselling process (Table 1).

Table 1. Changes in counsellor perception of juvenile's interaction and behaviour and significance testing between repeated measures for dependent samples

Session	3 rd session		6 th session		9 th session		ANOVA					
	N	23	21	17	Sum	sd	Sum of Squares	Df	Mean Square	F	Sig.	
1		6.87	2.12	7.52	2.73	7.76	2.56	5.765	2	2.88	.622	.543
2		1.77	1.31	1.24	1.41	1.41	2.40	3.875	2	1.94	.665	.522
3		4.91	2.18	5.35	2.41	6.71	2.08	43.200	2	21.60	6.248	.006
4		5.48	1.50	5.26	1.88	5.59	2.29	1.911	2	0.96	.450	.642
6		5.35	1.92	5.96	2.06	5.88	2.16	6.125	2	3.06	.841	.441

1 - Openness to the establishment of relationship; 2 - Resistance to counselling; 3 - Openness to problem solving; 4 - Potential for achieving and maintaining changes; 5 - Active participation

In order to check any possible statistically significant changes in the counsellors' perception on some of these characteristics and behavior of the juvenile during the counselling process, the repeated measures of one-way ANOVA have been applied. The results of the simple analysis of variance for dependent sample indicate no statistically significant differences in the measurements on the third, sixth and ninth meetings for the factors Openness to the establishment of relationship ($F = 0.622$; $p = 0.543$), Resistance to counselling ($F = 0.665$; $p = 0.522$), Potential for achieving and maintaining changes ($F = 0.450$; $p = 0.642$), as well as for the Active participation factor ($F = 0.841$; $p = 0.441$). The results suggest that those characteristics are constant features. In contrast, measurements point to significant difference in measuring the factor Openness to problem solving ($F = 6.248$; $p = 0.006$). The ratio of means on this factor through three observed sessions is in accordance with the linear trend ($F = 12.653$, $p = 0.003$), and at this point and descriptive indicators where the estimate increases linearly as the counselling process progresses.

4.2. Changes in the perception of the established working alliance during the counselling process

In order to check changes in the perception of the established relationship during the counselling process, the repeated measures one-way ANOVA were applied. Basic descriptive indicators for assessing the quality of the established relationships and the testing of differences between assessments are displayed in the table 2.

Table 2. Descriptives on assessment of working alliance and significance testing between repeated measures for dependent samples

Session	3 rd session		6 th session		9 th session		ANOVA				
N	23		21		17		Sum of Squares	Df	Mean Square	F	Sig.
Areas	Sum	sd	Sum	sd	Sum	sd					
Task	16.87	3.91	19.00	3.21	20.06	4.81	116.98	2	58.490	5.76	.007
Bond	18.87	4.21	20.71	3.27	21.71	4.59	57.09	2	28.549	3.04	.062
Goal	16.09	2.48	15.90	3.14	18.82	2.07	112.04	2	56.020	12.23	.000

Descriptive indicators for assessing counsellor's perception of the quality of the established relationship with a juvenile point out to an increase in the areas of Bond and Task as the process progresses, while evaluation of the agreement on goals varies during the counselling process. In order to test the significance of the descriptive indicators and trends, the significance of differences between repeated assessments of the quality of the established working alliance was tested.

Results of the simple repeated measures analysis of variance indicate a statistically significant difference in measurements for factor Agreement on task through the third, sixth and ninth session ($F = 5.759$; $p = 0.007$). In other words, there is a statistically significant difference in the counsellors' assessment of agreement on tasks with juveniles. The sum ratio on this factor through three sessions is in accordance with the linear trend ($F = 8.577$; $p = 0.010$), and descriptive indicators also point to this where the estimate increases linearly as the counselling process progresses.

In relation to the factor Bond, results of the simple analysis of variance for dependent samples point to the lack of statistically significant differences in the estimates of the third, sixth and ninth sessions ($F = 3.036$; $p = 0.062$). In other words, the results indicate a constant in established bond of counsellor and juvenile.

Results of the simple analysis of variance for dependent samples indicate the presence of significant differences between the estimates of the third, sixth and ninth sessions for the factor Agreement on goals ($F = 12.226$, $p = 0.000$). The ratio of the sum estimated for factor Agreement on goals through three meetings is in accordance with a linear ($F = 13.156$, $p = 0.002$) and with a square ($F = 10.910$, $p = 0.004$) trend. This indicates the agreement on goals being higher at the beginning and at the end of the counselling. The agreement on goals is decreased in the middle of the counselling process.

4.3. Content and themes of the mandatory psychosocial counselling

Certain themes are widely present throughout the counselling process, such as: the establishment of responsibility, improvement of personal relationships (either family or friendship relations), or development of self-management skills. Some themes are mainly present at the beginning of the counselling process: establishment of therapeutic relationship and confidence, defining of short – term goals, defining the goals of this specific session and discussion about offence and consequences.

Although the defining of the goal of certain session should be present during whole counselling process, we can assume that at the beginning of counseling that theme demands much more time and attention. Topics related to the objectives generally are present at the beginning of counselling process, but as the counselling process progresses their presence in the conversation is reduced. Some of the themes are more frequent after the third session: resolving conflict in personal relationships, negotiation and conflict resolution, empowerment of some competences, discussion about plans regarding employment, discussion about triggers for relapse, discussion about challenges in the social environment.

5. Discussion

The first objective of this research was to determine how counsellors' perception of minors' characteristics and behavior during the counselling process is changing. Trend analyses of results in the 3rd, 6th and 9th sessions show that Openness to establish relationships and Openness to the counselling process improve through the three measuring points, but also that the Client's resistance decreases and that the Potential for achieving changes and Active participation are the constant features and do not vary. Problem solving openness increases through the 3rd and 6th sessions, but decreases through the 9th session. We can conclude that the counsellor's perception of the juvenile's openness towards problem solving is improving through time, as the counselling process develops. Even though counsellors include many individual traits in the way they establish relationships with clients, evidently, there are some common characteristics that lead to the client being more willing to work on the problem with the counsellor. More specifically, they lead to the client showing more behaviors that are sending a message to the counsellor that he is willing to work on the issue that contributed to the committing a criminal offense. Presumably, for this change to happen, unwilling clients primarily need to establish a sense of trust towards the counsellor. Also, it is important for the client to know that the counsellor is ready to accept the client without judging and that he or she is genuinely interested in what the client has to say. It

seems that at least some of these criteria are met during the first 9 sessions because clients start to show motivation for problem solving. Openness towards working on the problem increases through the 3rd and 6th counselling session, but then decreases at the end of counselling process, still being statistically higher than at the beginning. Probably, by knowing that the counselling relationship is ending, their motivation to solve the problems decreases, or maybe they have made some changes in their behavior, but it is evident that the counselling process had its impact because the motivation stays improved in comparison to the beginning. Both of these findings imply that the client's compliance to counselling is improved, even though this research didn't find any significant difference regarding the clients' resistance. Also, it was shown that the potential for achieving and maintaining changes and active participation are the constant features and do not vary in the context of brief counselling. This is a result contrary to the notion that empowerment, a crucial part of the counselling process, is described as the process of helping clients discover personal strengths and capacities so that they are able to take control of their lives. We can also presume that active participation is a characteristic that for some, especially involuntary clients, requires learning about how counselling works, on how to work on personal issues, and on how to develop a working alliance with the counsellor. These could be areas that simply require a longer lasting counselling process and/or psychotherapy. In all, it can be concluded that there is a significant improvement in the cooperation and willingness of the client i.e. in the client's attitude towards the counselling process, through the nine-session process or, more precisely, counsellors perceive juveniles as more cooperative to participate in counselling process.

The second objective of the paper was to establish how the counsellor's perception of the relationship with the juvenile is changing during the counselling process. The analysis of variance shows that the counsellor's perception of the agreement with the client on the goals of treatment is improved as the counselling process progresses. Also, the client and counsellor's agreement on how to achieve these goals, according to the counsellors, is also more aligned through passing of the sessions. The counsellor's perception of the development of relations with the client is also improved over time, but not on a statistically significant level. Since we already established that the client's openness towards problem solving and establishing a relationship is improved over time, the improvement of the agreement on what the goals are and how to achieve them between the client and the counsellor is expected. It is probable that, since the counsellors perceive the client as more willing to work on the problem and to establish a relation with them (which also includes a working alliance), they also perceive a better understanding with the client on what the goals and tasks are. Also, we can presume that with the changes perceived by the counsellor regarding the behavior and motivation of the client, there really is a change in the development of relations between the client and the counsellor, but this change is not detected by the used statistical tests and on a small sample. In all, we can conclude that there is a significant improvement of the established relationship, according to the perception of the counsellors.

Besides small sample size, the limitation of this research is the fact that evaluation and assessment of counselling process was made only from counsellor perspective, while more insight and broader perspective on established working alliance with involuntary clients would offer paired assessment from the juvenile and from the counsellor.

References

- Bordin, E.S. (1979). The generalizability of the psychoanalytic concept of the working alliance. *Psychotherapy: Theory, Research, Practice*, 16, 252-38.
- Dryden, W. (2006). *Counselling in a nutshell*. London: Sage Publications.
- Honea-Boles, P. (2001). The court-mandated client: Does limiting confidentiality preclude a therapeutic encounter? *TCA Journal*, 29(2), 149-160.
- McLeod, J. (2001). *An Introduction to Counseling*. Buckingham, Philadelphia: Open University Press.
- Osborn, C. J. (1999). Solution-focused strategies with 'involuntary' clients: Practical applications for the school and clinical setting. *Journal of Humanistic Counseling, Education & Development*, 37, 169-182.
- Razzhavaikina, T.I. (2007). *Mandatory counseling: a mixed methods study of factors that contribute to the development of the working alliance*. Doctoral thesis. University of Nebraska – Lincoln
- Sun, K. (2008). *Correctional counseling: a cognitive growth perspective*. Sudbury, MA: Jones & Bartlett Publishers.
- Tracey, T.J., & Kokotovic, A.M. (1989). Factor structure of the Working Alliance Inventory. *Psychological Assessment*, 1, 207-210.
- Trotter, C. (2015). *Working with Involuntary Clients, A Guide to Practice*. Routledge, London.

“LIVING TOGETHER” PREVENTION WORKSHOPS ON RADICALIZATION IN PRISON SETTING

**Carlos Velandia-Coustol¹, Charlotte Joly¹, Elhassania Baria², Cécile Martinelli²,
Philippe Castel³ & Marie Françoise Lacassagne⁴**

¹Psychologist, PhD Student, University of Bourgogne-Franche Comté (UBFC) (France)

²Probation officer, SPIP 21 (France)

³Professor of social psychology, UBFC (France)

⁴Professor of social psychology and Director of SPMS Laboratory, UBFC (France)

Abstract

We aim to introduce a field action set up in the prison field following the Paris attacks (07/01/2015) in order to create a talking and thinking space for new arrivals in jail. This action, based on prevention workshops (N=7), has been hosted each time by a probation officer and a psychologist, allowing about forty incarcerated men to think about each one's place as a citizen.

We used intergroup relations framework, specifically of social categorization metatheory (Abrams & Hogg, 2004; Tajfel & Turner, 1979, 1986; Turner et al., 1987), supplemented by theory of social partitions (Castel & Lacassagne, 2011, 2015). The methodology is based on empathy in relationship, identification and deconstruction of stereotypes and the need to think about collective beliefs and co-construction concept of "republican secularism". This is made through the solicitation of participants' personal, social and collective identities.

Resorting to a mixed methodology, integrating support and moments contrasting with commonly used ones in workshops and talking groups, allowed to break habits underlying social roles. The failure to mention requirement of action and imprisonment reason allowed participants to put across a definition of identity out of their reality of incarcerated individuals. Joint coordination with outside staff of prison system ensured speaker's as well as participants' participation, which favoured trust and dialogue (participants' private lives were discussed and gave rise to convivial moments). Each workshop took place over a period of three half-days: a) Creation of framework (for the action) and first interaction on the problems of relationships (inside/outside jail); brainstorming about citizenship and its contexts; exchange about religious beliefs and republican values, especially secularism.

Main thematic areas on which the participants worked, have been classified under three types of relationships: personal and interpersonal, intergroup, and institutional and societal. These types of relations led to relations improvement strategies: a/ significance of free thinking and taking ownership of decisions b/ usefulness of forbearance and of daily negotiation and accepting that one may not be always right, c/ questioning empathy and republican equality, resonating with Syrian migrants and d/ linking founding principles of religion and official documents of the Republic, leading to think about religious liberty and understanding acts of violence as a result of a radical interpretation and not as a specific religious belief.

This action has been favourably assessed and welcomed, either by funders or by participants, leading to a renewal in 2016. Extending the target audience not only aids improvement but also intervention and research programs, analysing relations between prisoner categories (foreigners/natives).

Keywords: *Prevention, jail, living together, Republic, social categorization.*

1. Context

Following the Paris attacks in January 2015, it became necessary to set up a collective action around the issue of living together. This action relies on previous experiences of rules of conduct in its diversity (work on social representations, the acceptance of the other, the confrontation to confinement, self-esteem...).

The "Living Together" workshop¹ has been proposed to the Inter-regional Department of Prison Services of East Central Dijon. The main objective of this project was to create a thinking space to bring

¹Proposed by E. Baria (probation officer) and C. Joly (psychologist and researcher at UBFC)

the prisoners to reflect upon how to relate with others and how to become part of society together. The focus of this workshop was to help prevention of radicalization and, more broadly, create conditions for the return of the prisoner into the civil society. During the implementation of the workshop, each group member (including speakers) is taken into account through its ability to reflect, analyse and build independent thinking. Here, it does not refer to an institutional discourse, but to incite thought and to accompany people and the groups through their reasoning and their questions.

Finally, a collaboration between the jail and university staff has been established to foster openness to the outside world through an external participant in the prison setting.

2. Theoretical framework

The theoretical framework, mainly psychosocial, refers to Social Identity Theory (SIT, Tajfel & Turner, 1979, 1986), Self-Categorization Theory (SCT, Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) and some developments in terms of Social Partitions Theory (Castel & Lacassagne, 2011, 2015).

The SIT (Tajfel & Turner, 1979, 1986) postulates that every individual has a personal and a social identity. When the situation allows the individual to act on his own behalf and in his singularity, he mobilizes his personal identity and functions in a generally expected manner within the framework of typologies identified in clinical psychology. When this individual is inserted in a social group (in-group) against another group (out-group), he mobilizes his social identity. This affiliation with the members of his group results in automatic bias of perceptions, evaluations and behaviours in an unfavourable way associated with out-group members. In other words, membership in a group eliminates the individual specificities and leads to a depersonalization (Lorenzi-Cioldi, 1988).

The SCT (Turner et al., 1987) shows the duality of identity (personal identities versus social identities) of individuals and dichotomizes social dimension to give a ternary character to the identity. Thus, the individual is able to activate a personal identity, a social identity but also a specific identity (collective). On the one hand, the individual becomes the actor of his identity mobilization; on the other hand, the mobilization happens at three levels (the sub-ordinate level corresponding to personal identity, the intermediate level corresponding to social identity and super-ordinate level corresponding to the specific identity).

The research on which these theories are based highlight that individual is in constant search of a positive identity. Depending on the situations in which he finds himself, he prepares for the one from which he can get the most benefits. He employs in this way, the so-called strategies of identity management (Ellemers, van Knippenberg, & Wilke, 1990). More specifically, when social interaction places the individual in a positive identity, he accepts and acts from his own determinants at this level. For example, those prisoners who achieve a positive identity during their reintegration present a lower risk of radicalization than those whose reintegration does not promote this type of identity.

Finally, social partitions theory (Castel & Lacassagne, 2011, 2015) while going deeper in the intermediate level, said that there are three types of intergroup positioning (oppositional partition, hierarchical partition, community partition) resulting in different discrimination mechanisms. The advantageous positions being sought by the members of each group, the positions occupied in the categorization do not generally lie in the same partition. To sum up, to get a positive identity, the individual can change the identity level or, in the categorical level, to adopt a favourable partition.

3. Our research

The purpose of this article is to present different workshops conducted during 2015 in a remand prison in France based on the different levels of identity in the understanding of radicalisation and sectarian aberrations.

Indeed, this action aims to solicit each of the identity levels so as to facilitate living together. The action itself, carried out during workshops, allows a provision of forum to fight against exclusion and discriminations, in order to work on the concept of vulnerability inside and outside the prison, and to reconcile prisoners with republican values. This project of prevention of radicalization extended to the acceptance and each one's place in society was offered to newcomers in the remand prison.

4. Method

4.1. Participants

44 men (aged between 18 and 58 years old) imprisoned in the previous month in the remand prison participated in the workshops, without distinction of crime.

4.2. Procedure

Groups: A list of newcomers was established, then shortlisted taking into account the safety rules conforming to life in prison and the requirements of movements in detention (prison leave, extraction). Written notices were sent to those concerned in the week prior to the workshop. Although the action was presented as mandatory, the prisoners who had expressed a formal refusal were exempted, giving way to those in the waiting list.

Workshops: 7 workshops took place between August and December 2015. The social and ethnic mix of participants was sought, and the speakers ensured the creation of a friendly climate (referring to each other by the first name, having coffee and friendly communication) to promote exchange, discovery and acceptance of others. Each workshop was conducted in 3 sessions of a half-day each (Table 1) while following the logic of identity levels.

Table 1. Session content based on identity levels

1 st session (individual level)	2 nd session (categorical level)	3 rd session (collective level)
<p>Presentation of the action & participants Workshop about interpersonal relations (in broad sense) Possibility to mobilize different identities but focusing on the uniqueness of each person</p> <p>Creation of the framework and group rules Built with the group: respect and freedom of speech, confidentiality, no mention of deeds, speaking on own behalf ("I"), possibility of contradiction and argument For speakers: egalitarian posture, possibility to share personal experiences.</p> <p>Exchanges around the question: What, in my opinion, makes relationship with others difficult or easy? Recalling everyday situations (inside and outside prison) to list the contexts, themes, conditions that could be conflicting for each participant (on three points: a) conduct that may be a problem, b) identification of facilitating/ triggering factors, c) identification of resources to improve oneself) Creation of an atmosphere of trust and sharing.</p>	<p>Brainstorming: What does being a citizen mean? What does the "citizen" word mean to you? Through words elicited spontaneously by the participants, this time aimed to enable categorical memberships and stereotypes about the relationship between them. The use of inducing the word "citizen" was to ask a possible resemblance to allow the expression of intergroup differentiation</p> <p>Debate over the concept of citizen Deeper reflexion about the reasons and explanations of the words listed in the brainstorming. Identification of categories and memberships evoking the plurality of the French society.</p>	<p>Analytical reading (common & different elements) of religious texts Reading and commentary of extracts of religious text to highlight the similarities and differences in ideas and form.</p> <p>Analytical reading of republicans texts and integrative vision Afterwards, the participants have also read republicans texts. The reflection led participants to make connections between religious practices and the concept of citizenship, highlighting the absence of conflict and the possibility of finding a place within French society regardless of religious belief.</p> <p>Workshop Evaluation Regarding the themes and the working method.</p>

4.3. Material

During the entire workshop, paper sheets were available. From Session 2, the use of a flipchart was necessary and from the session 3 onwards the following texts were distributed to the participants:

- Discourse on the Origin and Basis of Inequality Among Men (Rousseau, 1754);
- Gospel of John 13: 34-35; Letter of Saint Paul to the Colossians 3: 5-14 (Bible);
- Surah Al-Hujurat (apartments); Surah An-Nahl (bees); Verse 90 (Koran);
- Leviticus 19: 1-4, 11-18, 33-35 (Torah);
- French Constitution (1958, current version);
- Declaration of the Rights of Man and Citizen (1789);
- Universal Declaration of Human Rights (UN, 1948).

4.4. Data analysis

For all the workshops, the speakers took notes² on three aspects: a) group dynamics, b) the content of thinking and links made by the participants, c) few verbatim or specific examples (which were later anonymized). The creation of a workshop report allowed us to recover these elements. All reports constitute the corpus of our reflections.

5. Results

5.1. At the personal level

The results in terms of personal identity show a reflection on the living space. The participants' speech emphasized the differences but also the areas of relationship between the prison setting and the contexts of relations outside the prison.

In addition, the exchange focuses on two central themes of personal identity:

²Given that the recordings are banned or submitted in a controlled manner in the prison setting.

Personal problems and the changes experienced during confinement. The participants question the self-image and self-esteem prior to incarceration and in this new context that is perceived as threatening. This requires understanding the identity changes post their time in prison.

It also addresses the prison conditions and difficulties (physical and human confinement, privacy) but also the opportunity to make the time more rewarding during detention, through reflection on the offense (crime) and the ways to prevent recurrence. Although during the workshops the elicitation of crime was not planned, the building up of trust allowed a significant number of participants to discuss their reason for imprisonment. The aim of this approach was to signify it, not as identification factor but as a personal challenge to manage and as possibility for personal improvement through the identification of protective factors and possibilities of behavioural change.

The family as anchor of personal identity: The participants were also interested in relationships with family and friends, as contexts of relationships that may encourage criminal behaviour but also as protection factors.

The questions about their relationships, presence and example (negative or positive) concerning relatives, the existence or absence of personal and family project also served as anchor of the personal identity of participants.

5.2. At the categorical level

After the brainstorming session, we conducted frequency calculations. 203 words were produced during the seven workshops: 70 words were quoted only by one person, 20 words were quoted twice³ and 7 words were quoted three times⁴. The frequency of the other words is shown in Table 2.

Table 2. Words produced during brainstorming

Words	Frequencies				
	4	5	6	7	8
<i>Fraternity, Solidarity</i>	<i>Citizen, Equality, Taxes, Liberty, Prison, Republic, Vote</i>		<i>Responsibility</i>	<i>Respect</i>	<i>Rights, Duties</i>

The participants identified various identity groups on a variety of criteria, different partitions support in the prison context: nationality (Romanian, Spanish, Algerian ...), type of offense ("thief", "violent", "paedophile"...), ethnic (Gypsy, Maghreb, Western...), religious practices (Catholic, Muslim, atheist...) but also outside the prison ("prisoner" as opposed to "free", "citizens", "prison guards").

The words presented in Table 2 have been mentioned in relational contexts, highlighting the group memberships (e.g. the word "taxes" for identifying those who pay versus the members of the state; the word "respect" for acceptance of religious or ethnic difference).

The list has allowed researchers to highlight *stereotypes about different groups* (e.g. French people never go to jail, Gypsies are thieves) and *the fragility of certain groups* (e.g. French cannot claim another category membership) referring to discriminatory and racist behaviour and their impact in the relationships.

Finally, the *plurality of categorical memberships* was present in the participants' speech to suggest the possibility of having multiple remedies for positive categorical identity (e.g. the authors of sexual offense, usually being victims of violence, can protect themselves by claiming membership of a group with a high status in the prison context).

5.3. At super ordinate level

The reading of religious texts allowed the *recognition of different categorical identities* in super-ordinate interest of the French Republic and to consider, from a non-confrontational point of view, the place given to religion in a secular society, allowing meeting points to different religious affiliations.

The consideration of *republican values (secularism and citizenship)* as the axis of building of a super-ordinate perspective is expressed in different ways: a) For law, as well as for religion, "the problem is in the interpretation"; b) the "spirit of religions is to move towards the other, the problem is in the interpretation" c) have good relations with everybody, trying not to create difficulties, go meet each other.

The reading of the republican and religious texts allowed participants to find a place and an opportunity to speak as a resident in France in a positive way.

It was also discussed for the participants to reflect upon militarisation and. Participants reported that the dictatorial system with public executions could not constitute a valid social model; they mentioned the difference between Daesh and Islam because "no religion asks to kill other people" and because Daesh "proposes to mix things up, so that people, who feel discriminated and are fragile, radicalize easily".

³Help, Attacks, Constitution, Thinks, Democracy, Discrimination, Elections, Family, Justice, Secularism, Marriage, World, Sharing, Country, Individuals, People, Revolution, Society, Union, Living.

⁴Traffic, State, Humanity, Laws, Nationality, Property, Religions.

6. Discussion

Each session examined the identity level of the participants. From a theoretical point of view, whatever the requested level, building a positive identity can be a protective factor against radicalization.

At the personal level, incarceration leads to loss of identity that weakens the person making him vulnerable to extreme speeches. The use of reflection helps enhance that identity for understanding their relationship at the individual level by identifying facilitators of the offense and reflecting on resource factors. This entails, through thoughtful construction of a future, building a positive identity to deflect from the prisoner's identity. Different relationship improvement strategies were proposed by the participants: the notion of free will, the need to think for making good decisions, highlighting values such as honesty and sharing.

At the categorical level, the recurrent use of words "rights" and "duties", as well as "freedom", "equality", "fraternity" (motto of the French Republic) during brainstorming, lays a reference identity against which each group member can position himself and thus differentiate themselves from others.

In this differentiation, the presence of French people has given rise to the ambiguity of the position of France, its values such as citizenship, as opposed category to others rather than as shared collective (super-ordinate). The relationships with others has been widely questioned and taken within the prison context but also outside, with the need to make concessions, whether to keep to oneself, not to pay attention to unnecessary things, and to recognize that accepting the person is not the same as accepting the acts that led him/her to prison (especially in the case of the authors of sexual offense).

At super-ordinate level, replicating the strategies to improve both personal and categorical strategies, the participants, through the reading of various texts, noted the existence of similarities between the different groups represented by those texts. The deeper reflection and highlighting of these common points helped weaken the inter-group boundaries, opening the way to a possible membership in a super-ordinate group which needs to be strengthened.

7. Conclusion

The evaluation of the action, as much as with prisoners as partners, prompts us to maintain multidisciplinary and diversity in the groups because they allowed rich and varied exchanges. It also urges to maintain a friendly atmosphere in closed environment, insofar as it facilitates the freedom of speech and respect for everyone. However, it seems appropriate to go further in the safeguarding of the framework to promote free speech. Moreover, it seems interesting to consider group meetings at a fixed frequency (medium or long term) to consolidate the debate on citizenship and its implications on radicalization.

Our perspectives for the future concern in particular the establishment of similar workshops with incarcerated women because nothing suggests that radicalization and the need to create a forum is only a male preoccupation. In addition, we propose to examine the representations and deepen the diagnostic of inter-categorical relationships between prisoners, especially to understand the extreme positions better.

References

- Castel, P., & Lacassagne, M.-F. (2011). Contrat de communication et partitions sociales. In P. Castel, É. Sales-Wuillemin, & M.-F. Lacassagne (Eds.), *Psychologie sociale, Communication et Langage* (pp. 19–50). Paris, France: De Boeck.
- Castel, P., & Lacassagne, M.-F. (2015). Theory of social partitions and identity dynamics. In B. Mohan (Ed.), *Construction of Social Psychology* (pp. 93–104). Lisbonne: Portugal: inScience Press. Retrieved from <http://insciencepress.org/construction-of-social-psychology/>
- Lorenzi-Cioldi, F. (1988). Dynamique personnelle et identités sociales. In *Revue Internationale de Psychologie Sociale* (Privat., Vol. 2, pp. 239–256).

THE JACK'S ISLAND: PSYCHIC SANCTUARIES AND THEIR EFFECTS ON THE DYNAMICS OF THE ANALYTICAL RELATIONSHIPⁱ

Cláudia Carneiro

Graduate Program in Clinical Psychology and Culture, University of Brasilia/graduate student, psychologist, psychoanalyst (Brazil)

Abstract

The clinic of narcissistic personalities suggests an essential importance to the transference and countertransference issues in the dynamics of the analytic relationship for the development of psychoanalytic treatment. The author addresses this problem by using the concepts of psychic retreats, by John Steiner, and autistic barriers, by Frances Tustin, to describe a defensive arrangement of certain patients, that keeps them away from contact with the analyst and creates great obstacles to psychic development. A clinical situation is presented to illustrate the relationship between the psychic retreat and an intermediate solution, used by the patient, as defense to his psychological distress, considering the retreat is a defensive organization to dispense the object and accommodate the narcissistic pain. The author seeks to show how such a stubborn defense of the patient may produce an effect on the analyst in order to trigger his/her tendency to withdraw himself/herself to own defensive retreat. To this end, the author examines various times during the analytic process of a patient who resorted to the retreat whenever he felt threatened of keeping in touch with painful aspects by himself. In addition, the author uses the poetic prose to draw this type of personality and the situation experienced by the analytic pair. The defensive system of the patient is compared to the model of an island, described by the writer Carlos Drummond de Andrade, which is here used as a compass to think about the inner and isolated world of the patient. Aspects about transference and countertransference of psychic functioning of the analytic pair are addressed in this paper, from the reporting and interpretation of dreams, which were dreamt by the patient and the analyst. The patient used that solution to bear the anxiety and suffering, resulting from narcissistic fractures, as a mechanism that he had to deal with claustrophobic and agoraphobic anxieties. It is possible to notice that the engagement of the pair in the analytical experience provided conditions for the patient, with the participation of the analyst, to become more available to deal with his own anxieties.

Keywords: *psychic retreat, defense, transference, dream.*

1. Introduction

In this paper, we use the concept of *psychic retreat* as described by John Steiner (1997), to think about the mental state of a certain kind of patient that makes use of psychic defense to maintain distance from the contact with the analyst, creating great obstacles to his psychic development. The *psychic retreat* can be understood as a relatively quiet area and protection against tensions that keep the person out of reach, when any significant contact with the analyst is seen as a threat.

In this sense, we propose a relationship between *psychic retreat* and an intermediary solution found by the person to discard the object in order to accommodate (not confronting) his narcissistic pain. Besides that, we try to demonstrate how this kind of obstinate defense of the patient can have an effect on his analyst in a way to activate the analyst's tendency to hide his own defensive retreat, as suggested by Steiner (1997).

For this purpose, we introduce passages of the analysis of a patient who used to retreat to a psychic isolation, keeping himself away from emotional contact with the analyst to avoid what we call of claustrophobic pain. In spite of recognizing he needed help to deal with his psychic distress, he could not get out of his emotional exile. In Jack reports, as this patient will be called, such mental area was revealed

ⁱ The author acknowledges the support of Eliana R. Lazzarini, Master's and Doctorate Advisor of the Graduate Program in Clinical Psychology and Culture, University of Brasilia.

in dreams, in the daily routine and in his own life style. This “place” was described with a pictorial image of an island, protected by deep oceanic waters and sharks.

In this psychic arrangement represented in space terms, the patient retreats to his island and invites the analyst for a walk around it, however, not allowing him to explore that territory. It is a protected space such as an ecological sanctuary.

2. The island as a psychic defense

The mental island created by the patient had a form and outline similar to the island narrated in the prose by Carlos Drummond de Andrade, in his chronicle *Digression about the islands* (1952). We propose an imaginary promenade to Drummond’s island. This poetic construction was useful as a model to delineate the psychic work of the patient, and also of the analytical pair in the dynamic of transference and countertransference.

“When some funds comes to me, more than a million *cruzeiros*, I will buy an island: not too far from the coastline; not too near either, from there I can breathe the smoke and grease of the harbor. My island (and just imagine it I feel already like an inhabitant) will be in just a point of latitude and longitude, that being covered by winds, mermaids and plagues, not turns away far from the men nor obliges me to practice them daily. Because it is the science and I would say the art of living well; a relative scape, and a not so much confraternity” (Andrade, 1952/2011, p. 15).

The narrator dreams about an island not too far from the coastline, for the man cannot prescind totally from the other and the definitive isolation would mean the death; but not too near in order to be protected from the toxins, which are liberated from the conflicts and amorous divergences. The dreamt island has a just position such as to keep the inhabitant secure of tempests that threaten his shelter and the passions that chain his soul: a distance that will not put him so much far from the men, imposing a cold solitude on him, nor obliging him to a prolonged companionship.

Such intermediary solution seems to serve to the patient to manage his life and reduce his anguish, as much as possible. Also, to avoid a profound emotional contact with the analyst. So the patient kept the analyst in a relative distance, in which she felt him out of reach and she also surprised him wandering in proper islands. The presence of Jack has brought strong impact since the first meeting, which will be described below.

He tried to search for the analysis in a moment of despair, after a week absent from work by the impossibility of doing his tasks. He got drunk for several days and nights; when he called up the analyst, he was still under effects of alcohol, according to his reports. He said he needed urgently professional help and claimed he could die if left untreated. He asked for the first time in the early morning.

In the interview, and in the future meetings, his appearance called attention: a tall and smart man, who was always dressed up in a black suit. He had a young skin and a look of a middle-aged man. With this impeccable appearance, soon the beginning he reported his precarious state, of suffering and depression.

He was a young businessman of a multinational company whose career was constructed in the passages by the company’s offices in several countries. He was transferred to the city where he lives now for a few months and he emphatically rejected it. He wanted to come back to the USA where he was previously, but he had no expectations of going back. He had no friends and relatives there. He lived alone in a flat, which he called “his island”. His routine during the week was rarely broken: he used to spend all his time at the office and retreat to his “island” on weekends. He only used to leave on Monday, very early for his first commitment of the week, which he initiated with his analysis.

“In this so unreal island, at last, as the literature one, he builds his golden city and in it he resides by the effect of imagination, he manages it and even he tyrannizes it. The worth of his myth is that of the freedom of the islands” (Andrade, 1952/2011, p. 15).

Jack was well-educated and almost always very formal. The first months of analysis revealed a defense system to which he recurred to avoid anxiety. He drank compulsively; locked in his apartment; he avoided coworkers’ invitations and social contacts; he complained about his life in the new city and refused any attempt to adapt to it. His personal contacts were limited to homosexual meetings in search for sex. In such anonymous datings, he felt his control fantasy over objects acting out.

In his sexual datings, work relationships and also in his analysis transference, Jack demonstrated a strong negation that he could depend on the object. He did not feel free to have his sexual choices. He used to say: “*I can’t! It is a sin! Men must have sex intercourses with women. If I have sexual impulse for*

men, I'm not a real man". He kept inside himself a hangman; to feel secure and confident, he had to control any situation. His island had laws and rigid costumes; a private world in which he could transgress. His fantasy of hiding in his fortress-island, even while suffering, provided him a huge satisfaction.

According to Steiner (1997), when the object relations are part of a complex organization of the *self*, the facts of life that compose the internal reality of the patient become excessively difficult. Jack could not live freely his sexuality; he kept a fantasy of control of the object, he oscillated between hatred of everything which surrounded him and a strong feeling of abandonment. As a reaction to the analyst's interpretation, he said that the best place to live was his *fortress: or I reject everything and I'm locked, so I'm in charge; or I abandon myself, I get drunk. I am hostage of my fears.*

It seems that Jack used to isolate in his island, because, in my supposition, he could not suffer his experience of hatred of himself and to get contact with his pain, related a narcissist fracture. Steiner (1997) states that the patient feels prisoner of an omnipotent organization, and if the analyst recognizes this omnipotence, it is less probable that he tries to confront directly this organization. That recognition, observes the author, aids the analyst and the patient to share that state of omnipotence, without one or other ceding to it or wanting to face it aggressively. It can be understood by this way: if this unconscious fantasy could be recognized as an internal reality of the patient, it would be possible to comprehend it better and reduce its power over the personality.

In his defensive organization, Jack retreated, avoiding contact with unbearable truths. From the part of the analyst, it was common to experiment a feeling of impotence. In the first months of analysis, countertransference reactions were frequent: the analyst felt a strange discomfort every night before the sessions; she could not have a quiet sleep, she awoke anxiously and hurried to her office. The patient used to arrive strictly on time. The analytical work provided a greater contact in both of them, however, the patient oscillated between emotional states more integrated and others more defensive, sometimes causing the impression of a rock, like Paul Simon's verses (*I am a rock*, 1966). Frances Tustin (1990) used this lyrics to talk about her concept of autistic barriers in neurotic patients.

"I raised walls / A high and strong fortress / In which nobody can penetrate / I do not need any friendship. Friendship causes pain. / I am armored in my armor, / Hidden in my bedroom, / Saved in my womb / I do not touch anybody and nobody touches me. / I am like a rock / I am an island. / And a rock does not feel pain, / And an island never cries."

It is possible to make an analogy between the *mental state of a rock* of the patient and Tustin's description of a kind of autistic barrier in patients considered "normal" or moderately neurotic. They can react to the analysis presenting an encapsulated part of his personality with which the analyst keeps no contact (Tustin, 1990; Mitrani, 2013). According to Tustin, it means that the attention was deviated of the objective world which presents such a threat – the contact with the analyst? – for a subjective world, dominated by sensations that it is under his control (p. 28).

In the moments of defense recrudescence, when Jack was encapsulated inside his fortress, the analyst experimented anguish also isolated and deprived of mental images. Jack kept rigid and impenetrable. Two islands, one of them fighting to win the barriers and to get close to the other, which is in movement of escape.

As suggested in the described situation, imprisoned patients in a psychic retreat present great technical difficulties for the analyst (Steiner, 1997). The author warns the analyst needs to fight against his own tendency of adapting to those adversities and "doing a collusion with the defensive organization of the patient, retreating for his own defensive retreat" (p. 29). If the analyst can understand better such processes, adds Steiner, he will be able to be more available for the patient, making possible the contact.

3. Analyst's and patient's dreams

Steiner's citation can be exemplified by the dreams described below. Without extending about theme of homosexuality, that is not object of this work, I will examine some ideas in respect to Jack's conflict as to his sexual identity. I chose to expose two dreams because of the following reasons: the first dream because it was possible to perceive a tendency of the analyst to get close to the defensive organization of the patient. Besides that, the interplay between passivity and activity, in the dream, showed the sadomasochistic aspects involved in transference-countertransference relationship of the analytical pair. And the second dream because it illustrated how the patient could begin to develop the symbolic function in the transference relationship, little by little, from the emotional availability of the analyst, allowing some contact and growth of the analytic process.

The first one is a countertransference dream (dreamt by the analyst) and succeeded to the initial period of the analysis, in which the analyst lived a hard sense of discomfort in the sessions, as if she had

disappointed him. In this context, that dream can be understood in the model proposed by Thomas Ogden (2010). That is, it represents the psychic functioning of the analytical pair in that moment of the analysis, which reveals the transference-countertransference relationship whose understanding can provide significant advances in the analytic process.

The dream: *I was in a huge, dark and empty storehouse, with just one entrance gate, at the back, and an exit gate in front of me. The gates were open. Near the exit gate there was a small office table, and a man seated behind the mobile watched the scene. Jack entered the storehouse through the back gate and came towards me, standing behind me. Without reacting, I stayed there, passive and quietly. The abrupt entrance of a group of people in the storehouse interrupted the scene full of eroticism, under the approval of a third one.*

This dream revealed aspects of the transference-countertransference relationship of the analytic pair, that were present in the dynamic of the pair, but they were not transformed in conscious thinking to be offered to the patient. Without going deeper into the diverse elements of the Oedipus complex represented in the dream, we want to emphasize a function of this dream from the associations that occurred. It denounced the emotional state of the analyst submitted to the strength of sadistic impulses. As also, it made possible coming to a conscious level the emotional experience that both patient and analyst had not dreamt in the analytical situation.

When the analyst could unconsciously receive Oedipus' and pre-Oedipus' fantasies from the patient – to dream the patient's interrupted dreams, as suggested Ogden (2010), she made a movement of separating from the patient's defensive organization. This fact allowed her to talk to the patient about his way of relating to their objects.

About patient's and analyst's engagement in the analytical experience, Ogden (2010) suggests that it can generate conditions so that the patient, with his analyst's participation, could become more able to dream his undreamt dreams and interrupted dreams. The dreams dreamt by the patient and analyst are at the same time "their own dreams (and reveries) and those of a *third unconscious subject* who is both and neither patient and analyst" (p.28). Ogden proposes the analyst should, in the course of time, become conscious from the experiences in the *third analytic* and to talk to the patient about what happen in an unconscious level (between analyst and patient). And so, analyst can involve the patient in a conscious thought to dream his own experience.

Still about countertransference dreams, Ferro (1998) suggests that they witness the effort and how the analyst's mind begins to change the aggressiveness of patients. He proposes that those dreams become "self-analysis dream," which allow identifying the dark zones and providing the resumption of a profound work of analysis (p. 170).

In the second year of analysis, Jack related this dream: *The president of the Republic used to consult the former president, her opponent. After that, I had lunch with the president (female)... or president (male)? Which is the gender? Well, she was by my side, precisely, on my side, and on the left side there was a lady well dressed, in her fifties, blond, beautiful. I do not know who she was. She was not sexy, but beautiful. We exchanged greetings and she went away. Then the president (female) said me: don't you know her? – No! I answered. – She is Belinda. So I woke up.*

Jack's associations led him to the "unique Belinda he knew", whose history was very familiar to him: the character of the opera *Dido and Eneas* by the English composer Henry Purcell. Jack reproduced the story, as a dream dreamt in the session. *The opera is based on Eneida by Virgilio, and brings Dido's love, queen of Cartago, for Eneas. The widow Dido could not succeed in her passion for Eneas because she swore fidelity to the dead king. Dido tells her sister Belinda about her torments that she cannot confess. Belinda insists: "your sadness increases because you try to hide it". And she removes the veil that almost not hides the feelings of her sister: "you fell in love with him!" The end of the story is tragic: Dido is convinced by Belinda to get married, but a different fate is reserved to Eneas and Dido died of love. It is the story of a forbidden love.*

In Jack's dreams, the analyst was represented by a female object which did not provoke sexual impulses, but there is no doubt that her incursion in both of *Belinda's* scenes marked the presence of a third one. A confusion of roles also marked the unconscious fantasies of the patient, of a precarious oedipal character. Male and females figures compose a scene in which prevails an undefined object (president male or female and the bisexual connotation of Dido's name). In his internal reality, Jack performed the history of forbidden love represented in dream in relationships with friends and sexual partners, residents in other countries.

At a session occurred soon after the countertransference dream, Jack revealed that he could not talk about his sexual fantasies to the analyst because he feared to lose them, and the fantasies would not be exciting anymore. In her interpretation, the analyst told him that he feared she could steal his fantasies, since she was a woman (fact which he repudiated) and he could not share the fantasies with her, moreover he put her in place of a devouring mother. His narcissist fantasy of dispensing with the object had a

counterpart of needing the other – a double. The other would work as a mirror and identification support (Nasio, 1997; Zimerman, 1998), to reassure that he exists in fact, being able to be object of someone's love.

4. Conclusions

In order to deal with the pain of his narcissistic fractures, the patient searches an intermediary solution that we can name *neither so far, nor so near*, to cope with claustrophobic and agoraphobic anxieties (Steiner, 1987/1991). According to Steiner, it is a claustro-agoraphobic dilemma. In the poetry of Drummond, *a relative escape, and a not very rash fraternization*. If the patient moves from his island towards the coastline (that is, towards his objects), he will go back because he will not bear to have a closer emotional contact. If he distances himself too much from them, he will feel fragmented and agoraphobic. For these personalities, an emotional distance from the objects should be controlled (Steiner, id.).

This situation dates us back to the paradox described by Winnicott (1990): in the beginning of life, there is an essential solitude and this only can exist in conditions of maxim dependence. The author observes that the solitude state appears before the recognition of dependence and keeps hidden in the "capacity of the person being alone", being cared by a part of *the self*, which looks after the whole (p. 154). In Drummond's poetry: "There is a certain pleasure in thinking alone. It is an individual act, as being born and dying. After all, the island is the last freedom refuge, which in all parts it is searched to destroy. We should love the island" (Andrade, 1952/2011, p. 20).

References

- Andrade, C. D. (2011). Divagação sobre as ilhas [Digression on the islands]. In C. D. Andrade, *Passeios na ilha – divagações sobre a vida literária e outras matérias* [Tours on the island – digressions about the literary life and other subjects] (pp. 15-20). São Paulo: Cosac Naify. (Original essay published 1952).
- Ferro, A. (1998). *Na sala de análise: emoções, relatos, transformações* [In the analyst's consulting room: emotions, stories, transformations]. Rio de Janeiro: Imago.
- Mitrani, J. L. (2013). Tentar entrar nos longos ramos negros: ampliações técnicas do trabalho de Frances Tustin para a análise de estados autísticos em adultos [Trying to enter on the long black branches: technical applications of Frances Tustin's work for the analysis of autistic states in adults]. *Livro Anual de Psicanálise*, 27(2), 243-260.
- Nasio, J. D. (1997). O conceito de narcisismo [The concept of narcissism]. In J. D. Nasio, *Lições sobre os 7 conceitos cruciais da psicanálise* [Lessons about seven crucial concepts of psychoanalysis] (pp. 47-74). Rio de Janeiro: Jorge Zahar.
- Ogden, T. (2010). *Esta arte da psicanálise: sonhando sonhos não sonhados e gritos interrompidos* [This art of psychoanalysis: dreaming undreamt dreams and interrupted cries]. Porto Alegre: Artmed.
- Steiner, J. (1991). O interjogo entre organizações patológicas e as posições esquizo-paranoide e depressiva [The interplay between pathological organizations and the paranoid-schizoid and depressive position]. In E. B. Spillius (Ed.), *Melanie Klein hoje: desenvolvimentos da teoria e da técnica* [Melanie Klein today: developments of theory and technique] (B. H. Mandelbaum, Trad., Vol. 1, pp. 329-347). Rio de Janeiro: Imago. (Original work published 1987).
- Steiner, J. (1997). *Refúgios psíquicos: organizações patológicas em pacientes psicóticos, neuróticos e fronteirios* [Psychic Retreats: pathological organizations in psychotic neurotic and borderline patients]. Rio de Janeiro: Imago.
- Tustin, F. (1990). *Barreiras autistas em pacientes neuróticos* [Autistic barriers in neurotic patients]. Porto Alegre: Artes Médicas.
- Winnicott, D. W. (1990). Um estado primário do ser: os estágios pré-primitivos [A primary state of being: pre-primitive stages]. In D. W. Winnicott, *Natureza humana* [Human Nature] (pp. 153-156). Rio de Janeiro: Imago.
- Zimerman, D. E. (1998). A face narcisista da homossexualidade: implicações na técnica [The narcissist face of homosexuality: implications in technique]. In R. B. Graña (Org.), *Homossexualidade: formulações psicanalíticas atuais* [Homosexuality: current psychoanalytic formulations] (pp. 173-195). Porto Alegre: Artes Médicas.



POSTERS

LIFE VALUES AND CREATIVITY IN FUTURE PSYCHOLOGISTS AND MANAGERS

Leonor Almeida¹, Sara Ibérico Nogueira², Alexandra Nogueira³ & Joana Costa³

¹Faculdade de Ciências Humanas, Universidade Católica Portuguesa/Associate Professor (Portugal)

²Escola de Psicologia e Ciências da Vida, ULHT, Associate professor (Portugal)

³Faculdade de Ciências Humanas, Universidade Católica Portuguesa/Psychology Student (Portugal)

Abstract

With this study, we intend to describe comparatively the life values and the creative potential of 89 college students, 38 (42.7%) of Psychology and 51 (57.3%) of Management. The mean age is 20.16 years (SD = 3.133). The instruments used included the Life Values Inventory (Almeida, 2006) and the Test for Creative Thinking- Drawing Production (Ibérico Nogueira & Almeida, 2010), adapted for the Portuguese population. Considering the values variable, there are statistically significant differences in the values Achievement, Creativity, Economic Prosperity, Health and Responsibility in favor of future managers and Concern for Others in favor of future psychologists. Regarding the creativity levels there were not found statistically significant differences between the students of psychology and management. In fact, the average value of creativity is 18.62, well below the mean of the German population (31), the cultural context in which the TCT-DP was developed. No correlations were found between life values and creativity, except for Concern for Others, which negatively (and weakly) correlates with creativity ($r = .23$, $p = .03$). Considering the low levels of creative performance, it is important to alert to the need to promote, among students, the creative way of thinking, the generation of new ideas and the intention of assuming and risking a less conventional thinking style.

Keywords: *creativity, life values, college students, psychology, management.*

1. Introduction

There are few studies available in the literature establishing an association between the life values and the creative potential of an individual. According to Hoegl, Parboteeah and Muethel (2012), there are some values that can encourage creativity and are defined as the degree they believe that it's important to try new things, take risks and be creative and adventurous in their lives. There are differences in the values relating to the creativity in the different countries (e.g., Davidsson & Wiklund, 1977; Lee, & Peterson, 2000; van Everdingen, & Waarts, 2003, cit. in Hoegl et al., 2012).

The aim of this study is to characterize the values' system and levels of creativity in college students of Psychology and Management Degrees, by verifying if there are statistically significant differences between them and explore the association between the various values of life and the creative potential.

2. Method

2.1. Participants

In this study was used a non-probabilistic sampling method, specifically for convenience since both college students of Psychology and Management Degree were already organized into groups. An Informed Consent Term was signed by all participants before they begin to answer to the different instruments. The sample was composed by 89 students of Higher Education: 38 (42.7%) of Psychology Degree and 51 (57.3%) of Management Degree. In the overall sample, 58 are female and 31 male, with a mean age of 20.16 years (3,133). The participants from the Bachelor's Degree in Psychology were from the first and second years and the participants from the Bachelor's Degree in Management were from the 2nd year. The majority of the participants are Portuguese, single and live in Lisbon. It should also be noted that 12.4% acquired the worker-student status and that parents' professions are quite diverse. The sample's mortality corresponds to 3 college students.

2.2. Instruments

The assessment protocol consists in a socio-demographic questionnaire, which intended to characterize the sample, in an instrument that allows the evaluation of the life values of participants - Inventory of Life Values (Life Values Inventory; Crace & Brown, 1996; English version Almeida magazine, 2006) - and in another one, that assesses the level of creativity - Test for Creative Thinking (Test for Creative Thinking-Drawing Production; Urban & Jellen, 1986).

3. Results

It was realized a t-test for independent groups in order to analyze the differences in life values existing among students of Psychology and Management. There were statistically significant differences in Realization, Creativity, Economic Prosperity, Health and Physical Activity and Responsibility in favor of the Management's students. In this way, there were differences in Caring for the Other in favor of Psychology students. It was found further that the first, identified Privacy (13.45) and Economic Prosperity (12.86) as the most important values and the latter also the Privacy (13.84) and Caring for the Others (13,13).

In relation to the creativity levels, there weren't statistically significant differences between the Management and Psychology students.

4. Discussion

When comparing students of Psychology and Management in terms of its priority values we found statistically significant differences in Caring for the Others in favor of psychology students. There were statistically significant differences in Realization, Creativity, Economic Prosperity, Health and Physical Activity and Responsibility in favor of the future managers. As the literature suggests that the life values have the power to influence the different dimensions of a person's life, it was also realized an analysis of differences between female and male participants. It was found that girls prioritize Caring for the Others and the Loyalty to the Family and the Group, while boys prioritize the Economic Prosperity and Health and Physical Activity. Although the literature does not guarantee a source of solid and consistent information on the association between the life values and the creative potential of individuals, according to Hoegl, Parboteeah and Muethel (2012), there are some values that can promote creativity. These are associated with trying new things, take risks and be adventurous in life. The present study did not confirm this association, only found a negative, weak and statistically significant association between Caring for the Other and the creative potential evaluated.

References

- Almeida, L. (2005). Life Values Inventory (LVI): Um estudo com mulheres portuguesas. *Análise Psicológica*, 23, 187-199
- Almeida, L., Nogueira, S. I., Jesus, A., & Mimoso, T. (2013). Valores e criatividade em trabalhadores portugueses. *Estudos de Psicologia*, 30(3), 425-435
- Almeida, L., & Tavares, P. (2009). Valores de Vida em Estudantes Universitários de Cursos Tecnológicos e de Humanidades. *Avaliação Psicológica*, 8(2), 153-168
- Azoulay, P., Zivin, J., & Manso, G. (2011). Incentives and creativity: evidence from the academic life sciences. *RAND Journal of Economics*, 42(3), 527-554
- Bateson, P., & Nettle, D. (2014). Playfulness, Ideas, and Creativity: A Survey. *Creativity Research Journal*, 26, 219-222. DOI: 10.1080/10400419.2014.901091
- Brown, D., & Crace, R. K. (1996). Values in Life Role Choices and Outcomes: A Conceptual Model. *The Career Development Quarterly*, 44, 211-223
- Hoegl, M., Parboteeah, P., & Muethel, M. (2012). Cross-National Differences in Managers' Creativity Promoting Values. *Management International Review*, 52, 565-595. DOI: 10.1007/s11575-011-0114-z
- Kaufman, S. B. (2014). From Contretemps to Creativity. *Scientific American*, 30-31
- Tamayo, A., Mendes, A. M., & Paz, M. d. G. T. d. (2000). Inventário de valores organizacionais. *Estudos de Psicologia*, 5(2), 289-315
- Valentine, S., Godkin, L., Fleischman, G., & Kidwell, R. (2010). Corporate Ethical Values, Group Creativity, Job Satisfaction and Turnover Intention: The Impact of Work on Work Response. *Journal of Business Ethics*, 98, 353-372. DOI: 10.1007/s10551-010-0554-6 Books format:)

CONTRIBUTIONS OF PSYCHOLOGY IN EDUCATION AND PRACTICE OF PROFESSIONAL NUTRITION

Marta Fuentes-Rojas

Faculdade de Ciências Aplicadas, University Estadual de Campinas (Brazil)

Abstract

The goal of this research is to identify and discuss the contributions of the disciplines of psychology to undergraduate students of the nutrition course and to the professionals who are working in this field. In addition, this research seeks to understand the needs of other professionals, non-psychologists, to face emotional and behavioral factors that have direct influence on people's attitudes and health. Thus, a documentary study will be conducted in various institutions in the State of São Paulo which graduate professionals in nutrition and a field study with the course coordinators, psychology professors, students and working professionals. In accordance with this research, it is expected to identify concepts, themes of psychology and build strategies that offer extensive training, as well as strengthen research in psychology and nutrition that contributes to the professional practice of nutritionists, following the new demands of the population.

Keywords: Training, non- psychologists, psychology discipline, nutrition course.

1. Introduction

In the last decades, the decrease of infectious diseases through preventive measures and the increase of non-transmitted chronic diseases demonstrate the role of psychological and social aspects expressed by the populations' personality and lifestyle (Castiel, 1944 – Traverso-Yépez, 2001). Although the bio psychosocial model is mentioned, the biological model is preferred (Campos, 2000; Nunes, 2002), the importance of the social, psychological and ecological aspects are forgotten as mediators of the health-illness process.

The studies prove that the habits are associated with a more and more frequent number of diseases, whose treatment implies in the adoption of new behavior that contributes to minimizing the consequences (Viana; Almeida, 1998). In the intake of foods, for example, it is necessary to observe from the psychological and sociocultural point of view, as well as knowing the attitudes, beliefs and the psychological factors which influence the decision process (Marks, 2000; Viana, 2002; Hoga, 2004; Canesqui; Garcia, 2005).

In the context of food habits, in particularly in lifestyle as a whole, it's necessary to understand the process within the different disciplines, highlighting the need of an integrated work of the health care professionals in an interdisciplinary context, with the intention of identifying more efficient educational measures in health that somehow contribute to the change in habits and behavior related to health care (Brazil, 2001; Viana, 2002; Gattas, 2006; Vasconcellos, 2010).

So, many issues related to the role of psychology in the training of non-psychology professionals have emerged. It is believed that identifying contributions, establishing contents and offering new contents associated with the specific training of nutritionist staff, will allow the strengthening of the researches and the production of knowledge of nutrition psychology.

2. Objectives

To identify and discuss the contributions of the disciplines of psychology to the undergraduates in the nutrition course and to the professionals working in this area.

3. Methods

Qualitative and documentary study was done in three steps. In the first step the higher education Institutes which graduate professionals in nutrition of the state of São Paulo – public and private, were

identified. To the study of the curriculum building and the identification of the disciplines of psychology in it, a search on the website of the distinct Universities, Centers and Colleges of São Paulo state was done. The names of the Institutions of Higher Education accredited by MEC were collected in the “Conselho de Nutrição Região3-CN3”.

To get the curricula of the institutions the web page of each one of them was accessed and it was checked in each institution the publication of the program. The ones in which it was not possible to find information of the curricular chart on the website, it was sent a request by e-mail explaining the objectives of the study. The sample of the institutions had as a criterion of inclusion, the availability of the curricula on the site as well as in the Institution itself. An exploratory analysis (Sá-Silva; Almeida; Guindani, 2009) of the available programs was made with the objective of extracting from them information about the program and specifically about the psychology field. According to Minayo (2008), the exploratory analysis allows to find elements that make possible to better understand the role of psychology in the nutrition courses. To the documents analysis, the content analysis was used, according to Appolinário, (2009), Chizzote (2006), which consists of relating the frequency of the quotation of some themes and measuring the relative importance given to a certain subject. It assumes that a text contains meanings that can be absorbed, decomposing the content of the document in a way that it reveals details or relevant issues related to the object of the study.

The second and the third steps of this study are in progress. The second step is the analysis of the discipline programs whose content is the psychology. In the third step, interviews with the students of the last year, course coordinators and professors of psychology disciplines as well as with the professionals working in this field will be made. Saturation sample, must highlight the social individuals who have the attributes of the study, as the data become enough to understand the object of the study and allow the identification of analysis categories (Minayo 2008). To the analysis the content analysis technique of Bardin (2006) which will be used which will allow a selective reading of the material, the organization of the answers; the selection of the reports and the identification of the analysis category.

4. Discussion

We showed in this text, some data of the first step of this research. Many institutions that offer nutrition course were found in the Regional Nutrition Council, among them: 21 University Centers, 6 of which don't offer the nutrition course at the moment; 24 Colleges and 34 Universities among which 3 don't offer the nutrition course at the present moment. It is important to notice that in the first moment a search through the web sites of each institution was made, and it was noticed that some institutions don't give all the information about the course. The ones in which the site doesn't offer information about the course, it was found via telephone or e-mail contact, but the majority of them didn't reply to our request. They said that the nutrition course is either being restructured or that the coordinator is not authorized to give information about this course.

We had access to the curricular chart of 62 institutions, 19 of which do not offer any discipline in the field of psychology in the nutrition course. The majority of them are offered in the first year as a basic training discipline, offering from 30 to 60 hour classes of study. Within the total hour classes (between 3.240 and 4.428 hour classes). Different conceptions are noticed by the class hour of the psychology discipline within the curricular chart, according to different nominations given to the disciplines such as: psychology, human resources psychology, applied psychology in nutrition, health psychology, development psychology, interpersonal relations psychology, general development psychology. It is important to highlight that some institutions offer psychology as an online Course. There is no prerequisite to take this discipline. It is offered in most of the institutions by departments such as Education and Psychology apart from the nutrition course and it is not specific of the nutrition course training, it is understood as a basic area of study.

Analysing the nutrition course, that Canesqui; Garcia (2005) found out that the disciplines of social studies and humanities that follow the recommendations of the new guidelines of the Education Ministry, show distinct conceptions as it can be seen in the class hour, as well as in the contents leading to a basic disciplinary training of social science and humanities without explaining their contribution to the nutritionist training.

Although the new recommendation of the new guidelines lead to a biopsychosocial model, the biological model is still being preferred (Campos. 2000: Nunes, 2002), there is little reference to the commitment with the social transformations, to the ethical and humanistic education, hiding the social dimension, reducing the training of the professional to physiological and individual processes and the importance of the job market, confirming this last one in the presentation of the course on the sites of the searched institutions.

In the next step of the research we are supposed to analyze the content of the psychology discipline and to identify the elements that allow us to verify themes of psychology and their specification to the nutrition course. Simultaneously, through the reports of the professionals and the professor of the discipline we hope to identify topics in psychology which are relevant to the training of nutritionists, with a wider view contributing to the transformation of the society.

5. Conclusions

The findings up to the present moment in this study confirm the biological view of the nutrition course in the different institutions, not knowing the importance of the behavioral and social aspects that directly influence the human's habits and that are determinant in the population's health-illness process.

In the same way, little importance was given to the disciplines in social sciences and humanities, particularly psychology, in the curricula that were analyzed. The moment when this discipline is being offered is mostly at the beginning of the course when the students still don't know well about their own course and aren't mature enough to understand the meaning of the psychological aspects involved in the food habits and their reflection in the population health.

At the same time, it shows that it is required that psychology promotes proposals of change in its own area and in its role in the training of non-psychologists.

References

- Appolinário, F. (2009). *Dicionário de metodologia científica: um guia para a produção do conhecimento científico*. São Paulo, Atlas.
- Bardin, L. (2006). *Análise de conteúdo*. Lisboa: Edições 70.
- Brasil, Ministério da Saúde. (2001). Secretaria de Assistência à Saúde. *Programa Nacional de Humanização da Assistência Hospitalar*. Brasília (DF).
- Campos, G.W.de S. (2000). *Um método para análise e co-gestão de coletivos: a constituição do sujeito, a produção de valor de uso e a democracia em instituições: método da roda*. São Paulo: Hucitec. ISBN 85-271-0531-4.
- Canesqui, A. M.; Garcia, R. W. D. (2005). Ciências Humanas no curso de nutrição. In: *Antropologia e nutrição: um diálogo possível*. Ana Maria Canesqui e Rosa Wanda Diez Garcia (orgs). Rio de Janeiro: Editora FIOCRUZ.
- Castiel, L.D. (1994). *O Buraco e o Avestruz: A Singularidade do Adoecer Humano*. Campinas/SP: Papirus.
- Chizzotti, A. (2006). *Pesquisa qualitativa em ciências humanas e sociais*. Petrópolis, Vozes.
- Gattás, M.L. (2006). *Interdisciplinaridade: Formação e Ação na área da Saúde*. Ribeirão Preto: Holos, Editora. ISBN 85-86699-54-3.
- Hoga, A. K. (2004). A dimensão subjetiva do profissional na humanização da assistência à saúde: uma reflexão. *Revista Esc. Enfermagem - USP*; 38(1): 13-20. Acesso em maio de 2014. Disponível em <http://www.scielo.br/pdf/reeusp/v38n1/02.pdf>.
- Marks, D.F., Murray, M., Evans, B. Willing, C. (2000). *Health Psychology. Theory, Research and Practice*. London: Sage.
- Minayo, M. C. de S. (2008). *O desafio do Conhecimento; Pesquisa qualitativa em saúde*. São Paulo-HUCITEC. Rio e janeiro: Abrasco. 4 ed.
- Nunes, E.D. (2002). Interdisciplinaridade: conjugar saberes. *Saúde em Debate*, Rio de Janeiro, v.26, 249-258, set/dez.
- Sá-Silva, J. R.; Almeida, C. D. de; Guindani, J. F. (2009). Pesquisa documental: pistas teóricas e metodológicas. *Revista Brasileira de História & Ciências Sociais*. Ano I - Número I - Julho. Acesso em julho de 2014 disponível em: www.rbhcs.com. ISSN: 2175-3423.
- Traverso-Yépez, M. (2001). A interface psicologia social e saúde: perspectivas e desafios. *Psicologia em estudo*, Maringá – SP; v.6, n.2, p. 49-56. Jul/dez. Acesso em julho de 2014. Disponível em: <http://www.scielo.br/pdf/pe/v6n2/v6n2a07.pdf>
- Vasconcelos, E.M. (2010). *Educação popular e a atenção à saúde da família*. 5ª. Ed. São Paulo: Hucitec. ISBN 85-271-0511-X.
- Viana, V. (2002). Psicologia, saúde e nutrição: Contributo para o estudo do comportamento alimentar. *Análise Psicológica*, 4(XX). p. 611-624. Acesso em maio de 2014. Disponível em: <http://www.scielo.oces.mctes.pt/pdf/aps/v20n4/v20n4a06>.
- Viana, V.; Almeida, J. P. (1998). Psicologia pediátrica: Do comportamento à saúde infantil. *Análises Psicológicas*, Lisboa, v. 16, n. 1, mar. Acesso em maio de 2014. Disponível em: http://www.scielo.gpeari.mctes.pt/scielo.php?script=sci_arttext&pid=S0870-82311998000100004&lng=pt&nrm=iso.

EVALUATION OF THE QUALITY OF WEB RESOURCES FOR PARENTS

Arminda Suárez, Sonia Byrne & María-José Rodrigo
University of La Laguna (Spain)

Abstract

Web resources for online parental support are increasing nowadays, as more and more webpages are devoted to parents who are considering Internet as a tool for the child-rearing issues. These initiatives are widely supported by the Recommendation (Rec, 2006) of the Council of Europe for local policies promoting positive parenting. The webpages and blogs to parents are resources with many potential advantages because they provide parents with opportunities for autonomous learning, connecting many people around the world, with flexibility in the connection times. However, no previous studies have analyzed the formal quality, content and readability of the web resources for parents. This study tried to fill this gap by evaluating 100 web pages in Spanish. The results highlighted that the webpages more focused on child-rearing content are usually owner by universities or particular experts. The majority of webpages are aimed at informing and giving advises to parents. As one of the few exceptions, Webpage 'Positive Parent' involves an online program with structured contents to promote positive parenting, by creating a space for observation, reflection and joint learning for parents. Many child-rearing practices (e.g., time out) are just briefly described and do not give reliable information about how to use it with more effectiveness and when should be avoided. Likewise, the parental role is presented in a negative way, trying to warn parents of the dangers of inadequate parental behavior but few contents are devoted to identify the parental capabilities and strengths.

Keywords: *Quality, online parental support, positive parenting, child-rearing.*

STRESS IN LIFE TRANSITIONS DURING THE BASIC EDUCATION: EVOLUTION AND CHANGES ASSOCIATED WITH SEX/AGE

Cynthia Cassoni¹, Marta Regina Gonçalves Correia-Zanini²,
Edna Maria Marturano³ & Anne Marie Fontaine⁴

¹ University of São Paulo, Ribeirão Preto (Brazil) and University of Porto, PhD candidate (Portugal)

² University of São Paulo, Ribeirão Preto, PhD in Psychology (Brazil)

³ University of São Paulo, Ribeirão Preto, PhD, Professor of Psychology (Brazil)

⁴ University of Porto, PhD, Professor of Psychology (Portugal)

Abstract

Based on the bio-ecological model, transition periods within the compulsory education are able to cause stress which may compromise the physical and psychosocial development of children. This longitudinal study aimed to monitor stress symptoms along two transitional periods in the Brazil school system (the 1st and 6th year), focusing on changes along time, and gender differences. The sample comprises 25 boys and 27 girls (mean age at the first observation - 104.83 months) who answered the Childhood Stress Scale (Lipp & Lucarelli, 1998) in the 1st, 5th and 6th grade of elementary education. Results of repeated measures ANOVA suggest that year of school transition had a significant effect in the stress symptoms. Higher values were found in the 1st grade, and no significant differences were found between 5th and 6th grades. An interaction effect between year and gender was found. Girls showed higher stress symptoms in the 1th and 6th, and are less stressed in the 5th grade while boys showed higher stress symptoms only in the 1th grade and are less stressed in the 5th and 6th grade. Results point to the presence of stress in periods of school transition, with girls and boys reacting differently according to age. More research on gender and school transitions is needed, as well as studies regarding the efficacy of interventions targeting the decrease of childhood stress.

Keywords: school transition; children's stress; school development; gender.

1. Introduction

Passing from one school cycle to the next can be termed a school transition and entails several changes, among them the attendance of a new school with a different education system, the confrontation with an increasing number of teachers and their increasing rotation, as well as learning new curricula. While the transition to another school may affect the social network formed between classmates (Eccles, 1999; Prati & Eizirik, 2006), all changes may be considered as everyday stress sources (Byrne, Thomas Burchell, Olive & Mirabito, 2011; Marturano, 2008).

Some studies on school stress associate it with learning and academic performance (ENUMO, Stinger & Ribeiro, 2006; Helms, Fisberg Rock Ferrini, Martins, Siviero & Ataka, 2003; Sbaraini & Schermann, 2008). However, the literature shows no consensus when it comes to its impact on the course of the school years. Theoretically, it is expected that transitional periods such as the 1st year of *elementary school* (from 6 to 7 years of age) are potentially more stressful (Marturano, 2008). Nevertheless, existing empirical evidence, based on cross-sectional studies, is not consensual on this matter. If, according to results presented by Lipp, Arantes, Buriti & Witzig (2002), symptoms are more prevalent in the first school years, findings by Helms et al. (2003) suggest that the level of stress increases as the child progresses to later school years. Recently, in a longitudinal study, Web-Zanini (2013) found high intensity of stress in the 1st year of primary school, an increase in the 2nd year and a subsequent decrease in the 3rd year.

Moreover, a consensus could not be achieved as to whether differences can be found between boys and girls. Brazilian studies using the Child Stress Scale - ESI (Lipp & Lucarelli, 1998) indicate that girls have the highest negative effects (Bignotto, 2010, Calais, Andrade & Lipp, 2003; Lena, 2012). However, using the same scale, Helms et al (2003) and Pacanaro & Nucci (2005) found no difference

between the sexes, while Web-Zanini and Marturano (2015) observed differences only in psychophysiological reactions, in which boys exhibited the worse results.

Given these research findings, it is clear that gaps in the literature remain to be filled so that we can more thoroughly understand the symptoms of child stress throughout the school years. In an attempt to contribute to the advancement of that understanding, the present study aims to observe the symptoms of stress across two transition periods in the Brazilian school system (1st and 6th year), focusing on changes over time, and on differences between boys and girls.

2. Method

The study design is longitudinal, with assessments on the 1st, the 5th and 6th years of *elementary school*. The sample consisted of 25 boys and 27 girls aged approximately 6 to 8 years in the first observation (mean 104.83 months; standard deviation 3.47). They were all *elementary school* students in public schools of a medium-sized municipality, located in the state of São Paulo - Brazil. Participants responded to the Child Stress Scale (Lipp & Lucarelli, 1998) in the 1st year after the transition from nursery school to *elementary school*, and later in the transition from the first elementary school cycle to the second, from the 5th to the 6th year of schooling.

A mixed repeated measures ANOVA was used in order to assess the effects of time (1st, 5th and 6th year of EF), sex, as well as the interaction between both on stress symptoms. Prior statistical analyses were performed in order to verify assumptions of normality, homogeneity and sphericity. According to Maroco (2011), when the Mauchly test indicates a violation of the sphericity assumption, the F statistic with Greenhouse-Geiser correction is used.

Post hoc analyses, namely the Bonferonni test, permitted the observance of means and the detection of differences between the groups. When the effect of interaction between time and the sex was significant, it was conducted a repeated measures ANOVA separately for girls and boys. The assessment of the differences magnitude was conducted using Cohen's *d* and the classification considered was that proposed by Cohen (1992 apud Maroco, 2011).

3. Results

The repeated measures ANOVA showed that time exerted a medium size effect on stress symptoms [$F(1,638, 81.900) = 16.347; p < 0.001, \eta^2_p = 0.246$]. Of the three times compared, the 1st year presented the highest average ($M = 44.3, SD = 21.4$), followed by the 6th ($M = 33.0, SD = 15.7$) and the 5th years ($M = 28.6, SD = 15.7$). Significant differences were found between the 1st year, on the one hand, and the 5th and 6th years, on the other.

No difference was observed between the 5th and the 6th year. No gender effect was also detected on stress symptoms [$F(1,50) = 0.650, p > 0.424, \eta^2_p = 0.013$], but there was a significant interaction effect between time and gender, of small magnitude though [$F(1,638, 81.900) = 4.786; p = 0.016, \eta^2_p = 0.087$]. The repeated measures analysis by gender showed that girls experience peak stress symptoms in the 1st ($M = 41.4, SD = 18.1$) and the 6th year ($M = 38.7, SD = 18.0$), being both measures [$F(2, 52) = 4.555; p = 0.010, \eta^2_p = 0.149$] significantly different from those of the 5th year ($M = 30.1, SD = 15.2$); boys showed a significant reduction in stress symptoms [$F(1,359, 32.618) = 15.648; p < 0.001, \eta^2_p = 0.395$] on the 5th ($M = 27.0, SD = 16.3$) and 6 years ($M = 26.9, SD = 13.8$) compared to the 1st year ($M = 47.3, SD = 24.6$).

4. Discussion

Independently of gender, the first school year has revealed itself as the most stressful, corroborating the literature that acknowledges this initial year as a potentially more stressful transition period (Web-Zanini, 2013; Lipp, Arantes, Buriti & Witzig, 2002; Marturano & Gardinal, 2008). Contrary to what was expected, the 6th year, also marked by a school transition, did not show similar results, when compared to the 5th year. One can speculate that in the early years, children still lack the necessary resources to handle stressful situations associated to the changes inherent to transition processes, which they will eventually acquire in parallel with their development process and the accumulation of experience in everyday school life.

Although the differences between boys and girls were not significant, as already observed in the studies of Leme et al (2003) and Pacanaro and Nucci (2005), the interaction effect, although small in magnitude, can provide evidence that the stress trajectory was different for boys and girls. Boys evidenced more stress in the first year and reducing stress levels in subsequent years, a result similar to

that obtained by Lipp et al (2002) in a cross-sectional study from 1st to 4th year, which indicated lower percentages of stress in more advanced educational levels. As for the stress trajectory of girls, higher stress levels during periods of school transition were observed, as already hypothesized by Marturano (2008).

The lack of consensus regarding the results can be associated with different methodological designs (cross-sectional versus longitudinal studies). However, it can be assumed that, at least in part, the absence of consensus on stress trajectories in *elementary school* years may be due to sex differences, not in stress levels but in the symptoms trajectory. The results of the present study suggest that girls were more sensitive to transition periods, whereas boys appear to have resented the first transition but not the second. These findings, however, require verification by future studies.

References

- Bignotto, M. M. (2010). *A Eficácia do Treino de Controle do Stress Infantil*. Sao Paulo: Tese de Doutorado, Pontificia Universidade Catolica de Campinas.
- Byrne, D. G., Thomas, K. A., Burchell, J. L. Olive, L. S. & Mirabito, N. S. (2011). Stressor Experience in Primary School-Aged Children: Development of a Scale to Assess Profiles of Exposure and Effects on Psychological Well-Being. *International Journal of Stress Management*, 18(1), p. 88-111.
- Calais, S.L., Andrade, L.M.B., & Lipp, M.E.N. (2003). Diferenças de sexo e escolaridade na manifestação do stress em adultos jovens. *Psicologia: Reflexão & Crítica*, 16 (2), p. 257-263.
- Correia-Zanini, M. R. G. (2013). *Um estudo prospectivo sobre o percurso escolar de crianças nos primeiros anos do Ensino Fundamental*. Tese de Doutorado, apresentada à Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto/USP, 212p.
- Correia-Zanini, M. R. G., & Marturano, E. M. (2015). Sintomas de Estresse em alunos do 1o ano do Ensino Fundamental. *Revista da SPAGESP*, 16(1), 28-42.
- Eccles, J. S. (1999). The development of children ages 6 to 14. *The Future of Children*, 9, p. 30-44.
- Enumo, S. R. F., Ferrão, E. S. & Ribeiro, M. P. L. (2006). Crianças com dificuldade de aprendizagem e a escola: emoções e saúde em foco. *Estudos de Psicologia -Campinas*, 23(2), p. 139-149.
- Lemes, S. O., Fisberg, M., Rocha, G. M., Ferrini, L. G., Martins, G., Siviero, K. & Ataka, M. A. (2003). Stress infantil e desempenho escolar – avaliação de crianças de 1ª a 4ª série de uma escola pública do município de São Paulo. *Revista Estudos de Psicologia – Puc -Campinas*, 20(1), p. 5-14.
- Lena, M. S. (2012). Um estudo sobre a saúde de crianças usuárias de um serviço de saúde mental: a história de chapeuzinho amarelo (Dissertação de mestrado não publicada), Universidade Federal de Santa Maria, Santa Maria, RS.
- Lipp, M. E. N., Arantes, J. P., Buriti, M. S. & Witzig, T. (2002). O estresse em escolares. *Psicologia Escolar e Educacional*, 6(1), p. 51-56.
- Lipp, M. E. N. & Lucarelli, M. D. M. (1998). Escala de stress infantil: manual. São Paulo: Casa do Psicólogo.
- Marturano, E. M. (2008). Tensões cotidianas na transição da primeira série: um enfoque de desenvolvimento. *Psicologia em Estudo*, 13(1), p. 79-87.
- Pacanaro, S. V., & Nucci, E. P. D. (2005). Stress infantil: uma comparação entre meninos e meninas do ensino fundamental. Argumento. *Revista das Faculdades de Educação, Ciências e Letras e Psicologia Padre Anchieta (Jundiaí, SP)*, 13, p. 65-76.
- Prati, L. E. & Eizirik, M. F. (2006). Da diversidade na passagem para a quinta série do ensino fundamental. *Estudos de Psicologia*, 23(3), p. 289-298.
- Sbaraini, C. R. & Schermann, L. B. (2008). Prevalence of childhood stress and associated factors: a study of schoolchildren in a city in Rio Grande do Sul State, Brazil. *Caderno Saúde Pública*, 24(5), p. 1082-1088.

EFFECTIVENESS OF TEACHER TRAINING ON PROFESSIONAL DEVELOPMENT AND ATTITUDES OF PUBLIC ELEMENTARY SCHOOL TEACHER

Elenita M. Tiamzon (Ph.D.), Jose Roberto Alegre (Maed) & Lourdes Abiog (Edd)
World Citi Colleges (Philippines)

Abstract

The study focused on the effectiveness of teachers' training on professional development and attitudes of public elementary school teacher. In order to thresh- out effectiveness of training, variables such as instructional abilities, classroom management , interpersonal relationship, and work values were considered.

The main sources of data came primarily from the response of 126 teachers that underwent trainings from three public schools on the same division. The researchers utilized the descriptive survey method wherein the data needed for the study were gathered by administering the questionnaire/ checklist to the teachers in three consecutive days and retrieving back the questionnaire/ checklist forms same day of the administration. Purposive sampling was used in the study.

The study was anchored on four different theories; first is the theory of the dignified man by Sharon Y. Bringos; second theory is the Cognitive Theory; third theory is the Incentives Theories of Motivation; and the Expectancy Theory.

The study used the weighted mean, ANOVA, F- test, t- test and chi square in the treatment of the data to arrived at the results and findings of the study.

The study reveals that on the Instructional Abilities, the training was effective in the application of new teaching strategies learned from the training and inculcating breakthroughs through examples.

On the Classroom Management aspect, the training was effective in the motivation of pupils interests in every lesson and maintenance of an ideal classroom environment.

On the Interpersonal Relationship aspect, the training was effective in the participation in academic tasks by sharing of knowledge and collaboration with peers during free time.

On the Work Values aspect, the training was effective in the performance of job to the fullest expecting nothing in return and doing other related work without the supervision of principal.

Based on the findings, the researchers drew the following conclusion: that there exists significant difference on the aspects pertaining to effectiveness of training affecting the professional development and attitudes of public elementary teachers.

When subjected to getting the relationship with the demographic profile, sex was negatively related to the professional development. Female had higher levels of professional growth and better job performance compare to the male counterparts. Regardless of age, respondents have the same teaching competencies which could be attributed to the higher level of learning experience obtained through various training and seminar.

Keywords: *instructional abilities, classroom management, interpersonal relationship, work values and professional development and attitude.*

1. Conceptual Framework

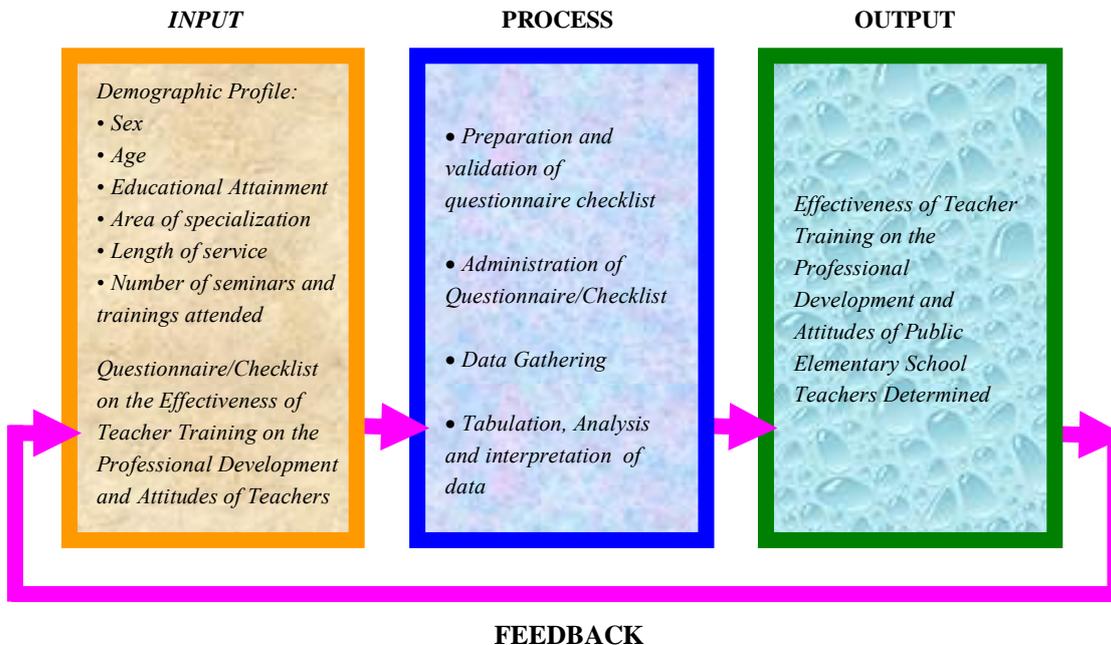
Based on the theories presented, a conceptual framework was designed in order to give direction to the study. The research model which guided the study was based from the Systems Approach by Coombs shown in figure 1 of the proceeding page.

2. Hypothesis of the study

The study tested the null hypothesis that:

There is no significant difference on the extent of effectiveness of teacher training on the professional development and attitudes of teachers of public elementary schools with respect to instructional abilities, classroom management, interpersonal relationship, and work values in terms of the demographic profiles.

Figure 1. A Research Paradigm Showing the Effectiveness of Teacher Training on the Professional Development and attitudes of Public Elementary School Teachers



3. Summary of Findings

The study used the weighted mean, ANOVA, F- test, t- test and chi square in the treatment of the data to arrived at the results and findings of the study.

The study reveals that on the Instructional Abilities, the training was effective in the application of new teaching strategies learned from the training and inculcating breakthroughs through examples.

On the Classroom Management aspect, the training was effective in the motivation of pupils interests in every lesson and maintenance of an ideal classroom environment.

On the Interpersonal Relationship aspect, the training was effective in the participation in academic tasks by sharing of knowledge and collaboration with peers during free time.

On the Work Values aspect, the training was effective in the performance of job to the fullest expecting nothing in return and doing other related work without the supervision of principal

4. Conclusion

Based on the findings, the researchers drew the following conclusion: that there exists significant difference on the aspects pertaining to effectiveness of training affecting the professional development and attitudes of public elementary teachers.

When subjected to getting the relationship with the demographic profile, sex was negatively related to the professional development. Female had higher levels of professional growth and better job performance compare to the male counterparts. Regardless of age, respondents have the same teaching competencies which could be attributed to the higher level of learning experience obtained through various training and seminar.

References

- Andrada, L. M., Ph. D. (2007). Module 2.3 -Grading for Performance. Teacher Education Council, Department of Education.
- Bilbao, P. (2007). Module 4-Professionalism and Personal Welfare. Teacher Education Council, Department of Education.
- Flojo, O. (2007). M.A.T. Module 6.1- Curriculum and Instruction: The Teaching of English Teacher Education Council, Department of Education.
- Gatmaitan-Borjal, W., Ed.D et al. (2007). Module 3 -Roles, Responsibilities and Accountabilities of a Filipino Teacher. Teacher Education Council, Department of Education.
- Guerrero, C. S. (2007). Module 2.2-Alternative Learning System. Teacher Education Council, Department of Education.
- Lamorena, M. B., & Chem, M.A.T. (2007). Module 6.4 -Curriculum and Instruction: The Teaching of Science Teacher Education Council, Department of Education.
- Llagas, A. T. (2007). Module 1-Educational Laws and Surveys Programs and Projects of the Department of Education. Teacher Education Council, Department of Education.
- Lozada, E. C. (2007). Module 5-School and Community Partnership. Teacher Education Council, Department of Education.
- Luis-Santos, L., Ed.D. (2007). Module 2.The Philippine Basic Education Curriculum. Teacher Education Council, Department of Education.
- Teacher Induction Program, Implementation Manual (2007). Teacher Education Council, Department of Education.

CLINICAL AND EDUCATIONAL APPLICATIONS OF LIVEIA: AN IMMERSIVE VISUALIZATION ENVIRONMENT

Liane Gabora

Department of Psychology, University of British Columbia (Colombia)

Abstract

The association between light and psychological states has a long history and permeates our language. LIVEIA (Light-based Immersive Visualization Environment for Imaginative Actualization¹) is a new immersive, interactive technology that uses physical light as a metaphor for visualizing peoples' inner lives and relationships. This paper outlines its educational value, as a tool for understanding and explaining aspects of how people think and interact, and its potential therapeutic value as a form of art therapy in which the artwork has straightforwardly interpretable symbolic meanings.

Keywords: *clinical tool, educational tool, immersive environment; interactive technology; light.*

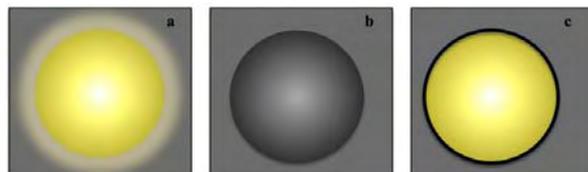
1. Introduction

The association between light and psychological states dates back to the 'dawn' of civilization (Zajonc, 1993). It appears in numerous religious traditions and permeates our language; for example, creative *spark*, moment of *illumination*, *flash* of insight, *brilliant* idea, *bright* versus *dim-witted* person, a ray of hope, and enlightened state. LIVEIA (Light-based Immersive Visualization Environment for Imaginative Actualization¹) is a new interactive technology that uses physical light as a metaphor for visualizing peoples' inner lives (Gabora, 2014, 2015). Visualization has proven effective for facilitating understanding of everything from weather patterns to stock market trends, but its potential to facilitate understanding of psychological phenomena is virtually untapped. LIVEIA uses properties of light and principles of optics (Holtmannspötter, & Reuscher, 2009; Reinhard, Khan, Akyuz, & Johnson, 2008; Valberg, 2005) to enable people to systematically depict the elusive aspects of human nature and mental processes, as well as specific situations they may find themselves in, using symbolic representations of themselves and others that can be explored and experimented with. This short paper will discuss its potential therapeutic value as a form of art therapy in which the artwork has straightforwardly interpretable symbolic meanings, and its educational value, as a tool for understanding and explaining many aspects of how people think and interact, including patterns of communication and miscommunication, how they come about, and how they could unfold over time.

2. Design

Light Metaphor Underlying the Technology. In LIVEIA, physical light is understood to represent 'inner light', which can refer to creative spark, life force, spiritual essence, or chi. An individual's psyche is represented by a sphere that amplifies and transforms light, as shown in Figure 1a. Users are shown how to use spheres to represent themselves and people with whom they interact, and instructed how to translate peoples' attributes—such as personality traits, areas of expertise, and so forth—into visible attributes of the spheres. For example, vibrant people are portrayed using a high intensity sphere while an individual with little life force is represented as having low light intensity, as shown in Figure 1b. Accessible, transparent people are depicted with transparent, thin-shelled spheres, while aloof people, or those who hide their true nature, depicted with opaque spheres that locally trap their light as shown in Figure 1c.

Figure 1. (a) A sphere of a material with a higher refractive index than air (e.g., crystal) traps and amplifies light (left). A sphere may appear dark because (b) its light is of low intensity (center), or (c) its light is obscured (right)

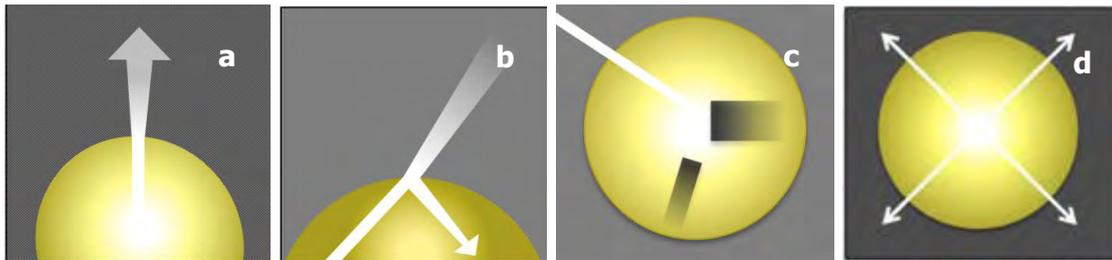


The more comfortable people feel with each other the more blurred their sphere surfaces when in close proximity. Thoughts are represented as beams of light with particular waveforms. Complex thoughts are depicted as superpositions of simpler waveforms. The greater the emotional valence associated with a thought, the more intense the beam. The vaguer or less well understood a thought or idea, the more diffuse the beam. Superficial personality traits are represented by color patterns on the sphere surface.

3. Therapeutic and educational applications

LIVEIA can be used as an educational tool for explaining aspects of how people think and interact, or as a form of art therapy in which the depiction has straightforwardly interpretable symbolic meanings. Perception of external stimuli is represented using beams of light that are intercepted by the sphere. Thoughts and ideas are represented as beams of light that originate within the sphere. The experience of being unable to clearly articulate what one is thinking or feeling is represented using a diffuse beam of light that diverges as it passes out of the sphere, as illustrated in Figure 2a. The less focused it is, the more it diverges.

Figure 2. (a) Because the inner surface of a sphere is concave, a beam of light diverges (becomes less focused) when it passes through the sphere. (b) When a beam (lower left) reaches the interior surface of a sphere, it breaks into two: a reflected beam (which returns into the sphere), and a refracted beam (which bends as it passes through). Due to the concavity of the sphere, the refracted ray diverges as it passes through, while the reflected ray converges (becomes more focused). (c) A beam (upper left) is distorted (scatters, reflects, refracts, or all three) when it encounters a fracture. A fractured sphere may contain shadowy regions that light cannot penetrate. (d) Light that originates from the center can radiate in any direction without refraction because wherever it contacts the surface it is perpendicular to it



Reflection on an Experience or Idea. It is also possible to depict how one can find a way of expressing a particular thought or emotion through the process of considering it from different perspectives, or *reflecting on* it. Reflection is literally depicted as reflection of a beam of light, as shown in Figure 2b. When reflected off the concave inner surface of the sphere, diffuse beams—representing vague thoughts and ideas—converge and come into focus. The user can thus document the process by which a particular problem is “bounced around in the mind” until it becomes sufficiently focused to be articulated and understood. The refracted ray depicts the perceivable signs (such as a facial expression of concentration) that one is engaged in focused reflection on a problem. Vague ideas are represented as diffuse beams that require much reflection. A thought or experience that is no longer being reflected upon is depicted as a spark of light within the sphere.

Deception. The proclivity to deceive others is highly correlated with a distorted perception of reality (Beck, 1990), and this too can be depicted in LIVEIA. A fracture (or impurity or vein of different material) will cause a beam of light to bend (refract), and change direction. Thus deception, i.e., bending the truth, is represented as the deliberate redirection of a beam of light through a fracture. In other words, bending the truth is represented as the bending of a beam of light. Lying to someone else is depicted as occurring at surface of the sphere, while lying to oneself is depicted as occurring within the sphere. Aspects of oneself or one’s life that one wants to avoid, i.e., the “shadow side” of the psyche, are depicted as fractured regions of the sphere that obstruct the natural flow of light, as illustrated in Figure 2c. Fracturing can represent, literally, a lack of integrity, a state wherein one is living with lies, or where one’s values are not in sync with ones’ actions, or one is living with memories that are too painful to face.

Enlightenment. A state of enlightenment is depicted as a sphere without fractures, such that the interior is uniformly lit, as in Figure 2d. Since there are no fractures blocking light from the core, an enlightened individual can communicate from the core of the self, as opposed to a superficial level. Mindfulness is depicted as the state of remaining alert to the presence of fragmentation or shadows and reflecting on them—considering them from different perspectives—to overcome them.

Users can depict scenarios involving one or more individuals, re-orient scenarios to get a new perspective on them, and make copies of scenarios to explore how they arose or what might happen next.

4. Discussion and conclusions

This paper has skimmed the surface of what is possible in LIVEIA, a fledgling immersive technology that enables people to explore and develop new ways of understanding themselves and others. LIVEIA provides a means of visualizing and understanding other psychological phenomena in addition to those discussed here, such as wholeness versus fragmentation, integrity versus lack of integrity, closeness versus isolation, harmony versus lack of harmony, potentiality versus actualization, and the process by which experiences are assimilated and by which ideas are born and take shape. LIVEIA aims to effect understanding and positive transformation through imagery that works at an intuitive gut level by enabling people to visualize and play with their inner worlds.

LIVEIA grew out of earlier applications of optics to model cultural evolution (Gabora, 1999, 2002). More broadly, it is part of a research program aimed at developing a scientific framework for cultural evolution based on the hypothesis that what evolves through culture is the web of understandings that constitutes an individuals' ways of seeing and being in the world—sometimes referred to as 'worldviews' (Gabora 2000a, 2013; Gabora & Aerts, 2009). The goal behind LIVEIA was to complement this objective, impersonal approach to the study of cultural evolution with an intuitive and engaging platform that facilitates the ability to visualize ones' worldview as part of an evolving tapestry of interacting worldviews, and prompt micro-moments of reflection on one's myriad ways of being and relating affect, however slightly, the process by which human culture evolves.

The research program opens further avenues of investigation. One such avenue is to using LIVEIA to better understand and track creative processes, and test theories about how creativity works (Gabora, 2000b). Another avenue involves getting a better grip on what is meant by the term inner light, for example by assessing the extent to which people agree in their assessments of the degree to which someone exudes (or obstructs) inner light. This could be accomplished using a modified version of a research protocol that has been used to assess the extent to which there is agreement amongst people's assessments of the degree of authenticity in creative performances (Henderson & Gabora, 2013).

The project is at an early stage. We are currently seeking collaborators in computer graphics, optics, and digital art to assist with building and testing an enhanced prototype.

References

- Beck, A. Freeman, T. & Associates. (1990). *Cognitive Therapy of Personality Disorders*. New York: Guilford Press.
- Reinhard, E., Khan, E. A., Akyuz, A. O., & Johnson, G. M. (2008). *Color Imaging: Fundamentals and Applications*. Wellesley: A K Peters.
- Gabora, L. (1999). Weaving, bending, patching, mending the fabric of reality: A cognitive science perspective on worldview inconsistency. *Foundations of Science*, 3(2), 395-428.
- Gabora, L. (2002). Amplifying phenomenal information: Toward a fundamental theory of consciousness. *Journal of Consciousness Studies*, 9, 3-29.
- Gabora, L. (2000a). Conceptual closure: Weaving memories into an interconnected worldview. In (G. Van de Vijver & J. Chandler, Eds.) *Closure: Emergent Organizations and their Dynamics. Annals of the New York Academy of Sciences*, 901, 42-53.
- Gabora, L. (2000b). Toward a theory of creative inklings. In (R. Ascott, Ed.) *Art, Technology, and Consciousness* (pp. 159-164). Intellect Press, Bristol, UK.
- Gabora, L., & Aerts, D. (2009). A model of the emergence and evolution of integrated worldviews. *Journal of Mathematical Psychology*, 53, 434-451.
- Gabora, L. (2013). An evolutionary framework for culture: Selectionism versus communal exchange. *Physics of Life Reviews*, 10(2), 117-145.
- Gabora, L. (2014). Physical light as a metaphor for inner light. *Aisthesis*, 7(2), 43-61.
- Gabora, L. (2015). LIVEIA: A light-based immersive visualization environment for imaginative actualization: A new technology for psychological understanding. In S. Latifi (Ed.) *Proceedings of the 12th International Conference on Information Technology: New Generations* (pp. 686-691). Washington DC: IEEE Conference Publishing Services.
- Henderson, M. & Gabora, L. (2013). The recognizability of authenticity. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.) *Proceedings of the 35th Annual Meeting of the Cognitive Science Society* (pp. 2524-2529). Austin TX: Cognitive Science Society.
- Holtmannspötter, D. & Reuscher, G. (2009). *Optical Technologies*. Berlin: Springer.
- Valberg, A. (2005). *Light, Vision, Color*. West Sussex, England: Wiley.
- Zajonc, A. (1993). *Catching the Light*. New York: Bantam.

SELF-CONTROL AS A MEDIATOR BETWEEN NORMATIVE BELIEFS AND ALCOHOL USE/ CIGARETTE SMOKING INITIATION AMONG ADOLESCENTS

Marianna Berinšterová & Olga Orosová

Department of Educational psychology and Health psychology, Faculty of Arts, Pavol Jozef Šafárik University in Košice (Slovak Republic)

Abstract

Early adolescence is a period in which there is a high risk of substance use initiation. The aim of this research was to explore the mediating role of self-control in the relationship between descriptive normative beliefs (DNB) regarding the number of friends who use alcohol/smoke cigarettes and the initiation of alcohol use/ cigarette smoking during the period between the points of data collection among early adolescents in Slovakia. The sample consisted of 1298 pupils ($M_{age}=11.52$). The data were collected as part of an evaluation study of the school-based prevention program Unplugged (project APVV 0253-11) which was carried out in September 2013 (T1; pretest) and in April 2014 (T2; 3-month follow-up). The Self-control scale and questionnaires from the international study ESPAD were used. The controlled variables included gender, perceived socioeconomic status and participation in the program Unplugged.

A mediating effect of self-control was found in the relationship between the DNB regarding the number of friends who used alcohol and the initiation of alcohol use ($z=1,998$; $p<0,001$). Furthermore, it was also found in the relationship between the DNB regarding the number of friends who smoked cigarettes and the initiation of smoking ($z=2,321$; $p<0,001$). There was no association found between participation in the program Unplugged and delaying the initiation of alcohol use or smoking. Further research is needed in order to evaluate the long term effect of Unplugged and its mediators in the relationship between substance use and variables corresponding with the social influence approach.

Keywords: *self-control. alcohol use/tobacco cigarette smoking initiation. adolescents. unplugged.*

1. Introduction

Early adolescence is a period in which there is a high risk for substance use initiation. Early experimentation with smoking and alcohol use has been shown to be associated with more advanced substance use (Lanza, Collins, 2002). This is one of the reasons for one of the goals of prevention programs which is to delay the onset of first using these substances (Cuijpers, 2003). The social influence of the social network of an individual has been identified as an important determinant of substance use initiation (Olds, Thombs, 2001). In addition, beliefs regarding the prevalence of substance use amongst others have been also shown to be causally related to substance use behavior (Berkowitz, 2004). Finally, self-control is one of the possible internal resources with a protective effect in terms of substance use (Wills, Ainette, 2008).

2. Objectives

The aim of this research was to explore the mediating role of self-control in the relationship between descriptive normative beliefs (DNB) regarding the number of friends who use alcohol/smoke cigarettes and initiation of alcohol use/ smoking during the time between the data collection points (3 months apart) among early adolescents in Slovakia.

3. Design

The representative sample consisted of 1298 pupils ($M_{age}=11.52$, $SD=0.61$; 45.5% of females), from 62 Slovak primary schools, which were randomly selected. The data were collected as a part of an

evaluation study of the school-based prevention program Unplugged which was carried out in September 2013 (T1; pretest) and April 2014 (T2; 3-month follow-up).

Linear and logistic regression as well as a Sobel test were used to explore the relationships between descriptive normative beliefs about the number of friends who drink alcohol/smoke, self-control and alcohol use/smoking initiation. The conditions for mediation analysis were checked (Baron, Kenny, 1986).

4. Methods

In order to explore the dependent variables, single items from the questionnaire of the international study ESPAD (Hibell et al., 2012) were used. The wording of the selected items was: *On how many occasions (if any) during your lifetime have you had any alcoholic beverage to drink/you smoked cigarettes?* (7- point scale: never – 40 times or more).

The descriptive normative beliefs regarding the number of friends who drink alcohol/smoke was measured by the following items (Hibell et al., 2012): *How many of your friends would you estimate drink alcoholic beverages/smoke cigarettes?* (5-point scale: none – all).

Self-control was measured by the Self-control scale – short version (Finkenauer, Engels, Baumeister, 2005). Eight negatively formulated items selected by principal component analysis were used. All items were assessed on a 5-point scale. Perceived socioeconomic status was measured by the item: *How well off is your family compared to other families in your country?* (7-point scale: very much better off – very much less off) (Hibell et al., 2012).

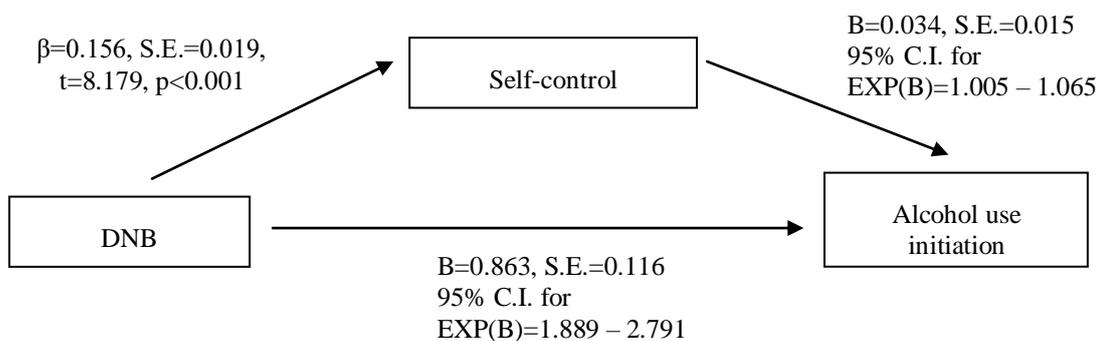
In the performed analyses, the following variables were used as control variables: gender, perceived socioeconomic status and participation in the program Unplugged.

5. Results

The model explored the mediational role of self-control in the relationship between DNB and alcohol use initiation. The first condition for mediation is the relationship between the independent variable and mediational variable. The linear regression model which explored the association between DNB and self-control was significant ($F=19.435$; $p<0.001$). A negative association was found between DNB and self-control (Figure 1).

The second condition for mediation is the relationship between the independent variable and the dependent variable. The model of binary logistic regression explored the association between DNB regarding the number of friends who use alcohol beverages and alcohol use initiation within the mentioned time range. The model was found to be significant ($X^2=72.8$ $p<0.001$) and explained between 9.3% and 14.8 % in the dependent variable. A higher level of DNB was associated with a lower level of self-control (Figure 1). In the third step of the mediation analysis, the association between the independent and the dependent variable was explored controlling for the intended mediator. The model of logistic regression explored the association between DNB and alcohol use initiation controlling for self-control. This model was found to be significant ($X^2=61.56$, $p<0.001$) and explained between 8.8% and 14% of variance in the dependent variable. A higher level of DNB and lower level of self-control were associated with alcohol use initiation (Figure 1). A mediating effect of self-control was found in the relationship between the DNB regarding the number of friends who use alcohol and alcohol use initiation ($z=1.998$; $p<0.001$). An association between the program Unplugged and the delay of the initiation of alcohol use and smoking was not found.

Figure 1. Mediation model: Self-control as a mediator in the relationship between descriptive normative beliefs and alcohol use initiation



The second mediational model explored the mediational role of self-control in the relationship between DNB regarding the number of friends who smoke cigarettes and smoking initiation within the

defined time range. The linear regression model which explored the association between DNB and self-control was significant ($F=8.69$, $p<0.001$). A higher level of DNB was associated with a lower level of self-control (Figure 2).

The model of logistic regression explored the association between DNB and smoking initiation. The model was significant ($X^2=77.64$, $p<0.001$) and explained between 9.1% and 16.0% of variance in the dependent variable. A higher level of DNB was associated with smoking initiation (Figure 2). The third model explored the association between DNB and smoking initiation controlling for self-control. The model was found to be significant ($X^2=71.38$, $p<0.001$) and explained between 9.2% and 16.6% of variance of the dependent variable. A higher level of DNB and a lower level of self-control were associated with the initiation of smoking. A mediating effect of self-control was found in the relationship between the DNB regarding the number of friends who smoke cigarettes and the initiation of smoking ($z=2.321$; $p<0.001$). An association between the program Unplugged and the delay in the initiation of alcohol use and smoking was not found.

Figure 2. Mediation model: Self-control as a mediator in the relationship between descriptive normative beliefs and alcohol use initiation



6. Discussion and conclusion

The aim of this research was to explore the mediation effect of self-control in the relationship between descriptive normative beliefs regarding substance use and initiation of alcohol use and smoking. This relationship has been confirmed for both explored substances. These findings contribute to the knowledge about the influence of normative beliefs on early adolescents' substance use (Elek, Miller-Day, Hecht, 2006) and emphasize the protective role of self-control (Wills, Ainette, 2008). The modification of normative beliefs as well as self-control promotion seem to constitute an important part of substance use prevention programs. However, an association between prevention program participation and a delay in the initiation of substance use was not found. Further research is needed in order to evaluate the long term effect of Unplugged, and its mediators in the relationship between substance use and variables corresponding with the social influence approach.

References

- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173.
- Berkowitz, A. D. (2004). The social norms approach: Theory, research and annotated bibliography. *Higher Education Center for Alcohol and Other Drug Abuse and Violence Prevention. US Department of Education.*
- Finkenauer, C. Engels, R. C. M. E. & Baumeister, R. F. (2005). Parenting behaviour and adolescent behavioural and emotional problems: The role of self-control. *International Journal of Behavioral Development*, 29, 1, 58–69
- Elek, E., Miller-Day, M., & Hecht, M. L. (2006). Influences of personal, injunctive, and descriptive norms on early adolescent substance use. *Journal of Drug Issues*, 36(1), 147-172.
- Hibell, B., Guttormsson, U., Ahlström, S., Balakireva, O., Bjarnason, T., Kokkevi, A., & Kraus, L. (2012). *The 2011 ESPAD Report. Substance use among students in 36 European Countries.* Stockholm: Modintryckoffset AB.
- Lanza, S. T., & Collins, L. M. (2002). Pubertal timing and the onset of substance use in females during early adolescence. *Prevention Science*, 3(1), 69-82.
- Olds, R.S., & Thombs, D.L.(2001) The relationship of adolescent perception of peer norms and parent involvement to cigarette and alcohol use. *Journal of School Health*, 71, 223–228.
- Wills, T.A. Ainette, M.G. (2008). Good Self-Control as a Buffering Agent for Adolescent Substance. *Psychology of Addictive Behaviour*, 22(4), 459–471.

EVALUATION SPANISH ONLINE PROGRAM “POSITIVE PARENT”

Arminda Suárez, Juan-Antonio Rodríguez & María-José Rodrigo
University of La Laguna (Spain)

Abstract

This study analyzed results of the evaluation of the Spanish online program 'Educar en Positivo' (<http://educarenpositivo.es>). Sixty users were surveyed to examine changes in online parenting support and satisfaction with the module completed, as a function of their sociodemographic profile, their level of experience with the Internet, and their general and educational use of Internet resources. Results showed that parents changed their views of online support, the benefits thereof and parenting skills. Participants reported greater satisfaction with the program's usability, the module content, and their perception of parental self-efficacy. These findings are modulated by level of Internet experience and educational use of web-based resources, suggesting the importance of improving parents' digital literacy and promote Internet use for educational purposes. In sum, this program offers a space for Spanish-speaking parents to learn and exchange experiences, thereby filling a gap in ensuring the promotion of positive parenting in this large community of potential users.

Keywords: *Online parenting support, program satisfaction, program evaluation, Internet experience, use of web-based educational resources.*

COMMUNICATION SKILLS AND FRIENDSHIP OF THE YOUTH IN JAPAN

Koshi Makino

Department of Business Administration, Setsunan University (Japan)

Abstract

Friendship and romantic love relationship are important human relations in youth in Japan. In addition, communication skills are indispensable for those two relations. This study investigates the love-related disclosure to friends. When new love relations were built, it may happen to tell the relations to close friends. However, in late years there seems to be the youth who does not tell it. Therefore, in this study, I investigate whether young people introduce their steadies to their close opposite-sex friends or not. Moreover, I clarify the reasons why they do introduce their steadies to opposite-sex friends or why they do not introduce. Participants were 100 university students (who have experienced romantic love before, 50 males and 50 females).

About 50 % male students tended to introduce their lovers to close opposite-sex friends, but about 30% tended in female. As a result of factor analysis to the reasons why they introduce, 4 factors were extracted: Request from a friend, Pride of the steady, Desire to make friends with a friend, and accidental opportunity. ANOVA by sex for 4 factors was carried out. The result showed that males tended to introduce to be proud of them than females. About the reason why not to introduce, 4 factors were extracted: Problems in the love relationship, Unclear love relations, No chance, and Discord of relationships. ANOVA by sex for 4 factors was carried out. The result showed that males tended not to introduce because there were some problems or discord in the romantic relationship than females.

Keywords: *communication skills, friendship, romantic love relationship, opposite-sex friend, steady.*

1. Introduction

Communication skills are a part of social skills, which work more directly for interpersonal relationship. Makino(2010) have researched on communication skills of junior-school students and communication skills training for them in Japan. Makino(2012) examined the association between communication skills and friendship, their mental health. According to Makino (2012), as the person who had high communication skills for the same-sex, the friend relations were good and the mental health state was good. Communication skills are indispensable for both friendship and romantic love relationship. This study examined relationship between romantic love relationship and friendship among young people in Japan.

2. Objectives

The purpose of this study was to investigate the love-related disclosure to friends. When new love relations were built, it may happen to tell the relations to close friends. However, in late years there seems to be the youth who does not tell it. Makino(2015) researched on the reasons why they do introduce their steadies to the same-sex friends or why they do not. Therefore, this study research on whether young people introduce their steadies to their close opposite-sex friends or not. Moreover, this study research on the reasons why they do introduce their steadies or why they do not introduce. This research will make a substantial contribution to romantic relationship and friendship if it becomes clear why they do not introduce particularly.

3. Methods

3.1. Participants

The participants were 100 university students(who have experienced romantic love before, 50 males and 50 females; $M_{age}=20.24$), enrolled in different departments of two Japanese universities.

3.2. Procedure

Participants completed a questionnaire in the classrooms. They received course credit for completing the questionnaire. The questionnaire was presented as a study about daily life among university students. They were told to answer the questions without discussing them with others.

3.3. Measures

The questionnaire was made up of two kinds of questions plus demographic items. It took about 15 minutes to complete.

Love experiences in the present and past. Do you have a steady now? (Yes, No) And have you ever experienced romantic love before?(Yes, No)

Intention to introduce one's steady to opposite-sex friends. Only the students who have experienced romantic love at least once answered the next question. Do you introduce your steady to your close opposite-sex friends? (Yes, No)

The reasons to introduce or Not to introduce one's steady to opposite-sex friends. The self-report scale about the reasons was made originally. It included 14 items for reasons to introduce and 15 items for reasons Not to introduce, which were rated on a five-point scale (1=strongly disagree, 5=strongly agree). Examples of those items were "I want to be proud of the face of my steady to opposite-sex friends.", "I have two steadies now." and so on.

4. Results

4.1. Intention to introduce one's steady to opposite-sex friends

According to the result, 38 % of participants have a steady now altogether. But when I mediate man and woman, 24% of men have a steady and 52% of women have. Female had higher ratio to have a steady now than male. About the intention to introduce one's steady, 41% of participants will introduce one's steady to their opposite-sex friends altogether. But when I mediate man and woman, 48% of men will introduce and 34% of women will do (Figure1 and Figure2). Male had higher ratio to introduce one's steady to the opposite-sex friends than female.

Figure 1. Intention to introduce one's steady to opposite-sex friends (Male)

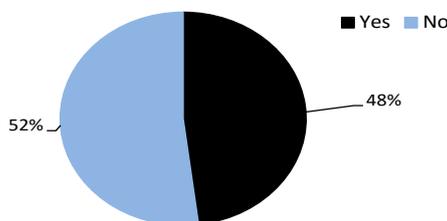
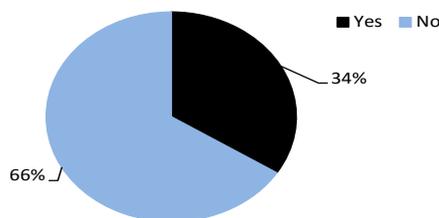


Figure 2. Intention to introduce one's steady opposite-sex friend (Female)



4.2. The reasons to introduce one's steady to opposite-sex friends

As a result of factor analysis to the reason items, 4 factors were extracted: Request from a friend, Pride of the steady, Desire to make friends with a friend, and Accidental opportunity. The request from a friend factor means the reason that he or she was asked to introduce one's steady by close friends. The pride of the steady factor means that he or she would like to be proud of one's steady to close friends. The desire to make friends with a friend factor means that he or she want one's steady to become a friend of friends. The accidental opportunity factor means that there was an opportunity when the steady met close friends accidentally.

4.3. Sex differences of the reasons to introduce one's steady

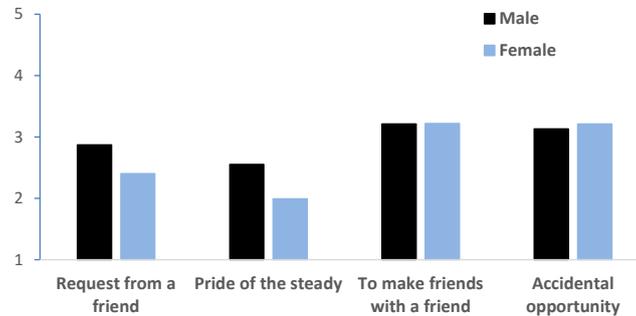
ANOVA by sex for 4 factors was carried out. The result showed that males tended to introduce to be proud of them than females ($p < .05$, Figure 3). There was no significant difference in three other factors.

4.4. The reasons NOT to introduce one's steady to opposite-sex friends

As a result of factor analysis to the reason items, 4 factors were extracted: Problems in the love relationship, Unclear love relations, No chance, and Discord of relationships. The problems in the love

relationship factor means there are some problems in the present romantic love relationship, so he or she cannot introduce. For example, the steady is a married person, or the steady is the same-sex and others. The unclear love relations factor means that he or she is not sure they are steady or not, so cannot introduce. The no chance factor means there was no opportunity to introduce to close friends. The discord of relationships factor means that the relations of two are bad now, or he or she may part from a steady.

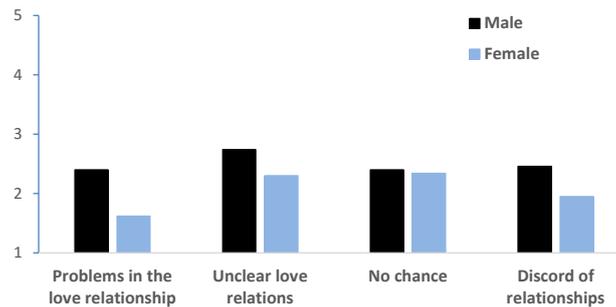
Figure 3. Sex differences of the reasons to introduce one's steady



4.5. Sex differences of the reasons NOT to introduce one's steady

ANOVA by sex for 4 factors was carried out. The result showed that males tended not to introduce because there were some problems or discord in their love relationship than females ($p < .05$, Figure 4). About the unclear love relations factor, males tended not to introduce because he or she is not sure they are steady or not than females ($p < .10$). There was no significant difference in no chance factor.

Figure 4. Sex differences of the reasons NOT to introduce one's steady



5. Conclusions

Males tended to introduce one's steady to their opposite-sex friends than females in Japan. There are 4 factors among the reasons to introduce. Males tended to introduce to be proud of their steadies than females. On the other hand, there are 4 factors among the reasons not to introduce. Males tended not to introduce because there are some problems or discord in their present romantic relationship than females.

References

- Makino, K. (2010). A Development of the Communication Skills Training for Junior High School Students (3). — The Effects of Communication Skills Training on Junior High School Students in Japan. — *Journal of Business Administration and Information*, Setsunan University, 18(1), 1-9.
- Makino, K. (2012). The Communication Skills and Friendship in Adolescence — The Sex and Grade Differences of Communication Skills for Friends of the Same and Opposite Sex — *Journal of Business Administration and Information*, Setsunan University, 20(1), 17-32.
- Makino, K. (2015). A Study on Friendship of the university student — Reasons to introduce a steady to the same-sex friends, reasons not to introduce. — The 56th Annual meeting of JSSP, 346, October 31-November 1, Tokyo, Japan.

"NORMALITY" AT A LIBRARY IN THE REPUBLIC OF KAZAKHSTAN

Yoriko Sano¹ & Norihiro Kuroishi²

¹Kanto Gakuin University (Japan)

²Japan Professional School of Education (Japan)

Abstract

The purpose of this study was to investigate the normality and affective reactions in central Asia. Experimental questionnaire research was conducted in Republic of Kazakhstan. 194 Kazakh university students (87 males, 100 females, 7 others; mean age was 19.54, $SD=1.49$) participated in this research. The questionnaire asked respondents to rate their sense of normality and emotions, imagining a given situation as described below. When one (i.e. respondent him/herself) conformed/derogated a norm in public, others confirmed/derogated the norm. Specifically, the situation that one and/or others conformed a norm was the story described to study quietly at a library. In contrast, the story in derogation condition was the situation that one and/or others call friends on cell-phones and talk for a while at a library.

ANOVAs were conducted to examine the effects of the norms on sense of normality and emotions. Participants reported higher sense of normality, when they imagined that they got line with those around them even if they themselves derogated from a social norm. Also, higher positive emotion and lower negative emotion were found in the situation that participants acted the same as others around. This tendency was salient in both one and others confirmed to the social norm. It was suggested that these results of the normality and affective reactions were influenced by whether people behave as the same way as others or not. These findings were consisted generally in previous studies conducted in others Asian countries, such as Japan, South Korea, China, and Nepal.

Keywords: *sense of normality, affective reactions, social norm, culture.*

1. Introduction

This study investigated the effects of injunctive norms (i.e. the social rules we have to comply) and descriptive norms (i.e. the perceptions of actual behavior showed by almost all people) on the sense of normality and affective reactions in Republic of Kazakhstan. Previous studies have indicated that descriptive norm has stronger effects on human behavior than injunctive norm (e.g., Cialdini, Reno, & Kallgren, 1990). It is shown that people feel more relief and highly consider themselves as normal when they get line with others around despite people do not conform to the injunctive norm (Kuroishi & Sano, 2009). A series of studies we have done demonstrated that the relations between injunctive/descriptive norms and affective reactions seem to be cultural common tendency. In particular, almost same tendencies were found consistently in Japan, China, South Korea, and Republic of Nepal (e.g., Sano & Kuroishi, 2011, 2013; Sano & Kuroishi, 2015). The purpose of this study was to examine the effects of injunctive/descriptive norm on sense of normality and affective reactions in Republic of Kazakhstan.

2. Methods

Experimental questionnaire research was conducted in Republic of Kazakhstan. Self3(confirm, do not conform, derogate) × Others3(confirm, do not conform, derogate) between-subject factorial design was used in this study. The questionnaire asked the respondents to their anticipated sense of normality (9 items, the scale which was made by Sano et al., 2010) and affective reactions (positive affect, negative affect, calmness, the scale were made by Ogawa et al., 2000) when they imagined themselves in the some library settings. In “confirm” condition, self/others studied quietly in the university library. In “do not confirm” condition, self/others were taking incoming calls on their cell-phones but quickly hanging up. In “derogate” condition, self/others called a friend on your cell-phone and talked for a while. First, respondents read one of the 9 stories and rated their sense of normality and affective reactions. Second,

they were asked about injunctive norm in the library (i.e. “In general, better to quiet down at university library”). All items were rated on 5-point Likert scale.

3. Results

194 Kazakh university students (87 males, 100 females, 7 others; mean age was 19.54, $SD=1.49$) participated in this research.

Almost all respondents considered that being quiet is required in a library. Means of sense of normality and affective reactions are shown in Figure 1, 2, 3, 4. Self (3) × Others (3) ANOVAs were performed on sense of normality and affective reactions.

Figure 1. Means of Sense of Normality

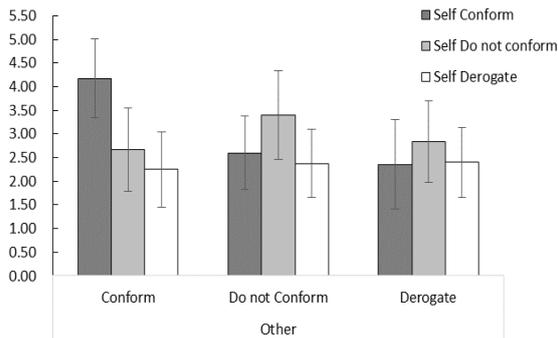


Figure 2. Means of Positive Affect

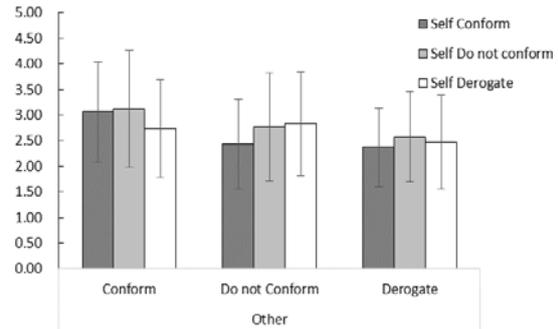


Figure 3. Means of Negative Affect

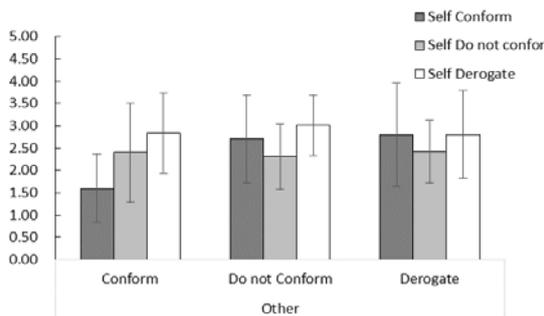
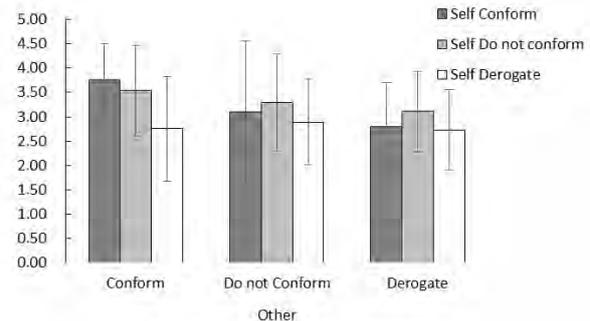


Figure 4. Means of Calmness



In sense of normality, the effect of interaction was found ($F(4,192)=13.04, p<.001$). When others conformed to the injunctive norm, participants in “self conform” condition considered themselves as more normal than “self do not confirm” condition and “self derogate” condition. When others did not conform to the injunctive norm, participants who acted in similar fashion reported higher sense of normality than “self derogate” condition. Also, the main effect for self and main effect for others were found ($F(3,192)=11.18, p<.001$; $F(3,192)=4.86, p<.01$). “Self conform” and “Self do not conform” conditions showed higher sense of normality than “Self derogate” condition. “Others conform” and “Others do not conform” conditions showed higher sense of normality than “Others derogate” condition.

In positive affects, only the main effect for others were found ($F(3,192)=2.85, p<.05$). “Others conform” condition reported higher positive affects than “Others derogate” condition.

In negative affects, the effect of interaction was found ($F(4,190)=3.58, p<.01$). When others conformed to the injunctive norm, participants in “self conform” condition showed lower negative affects than “self do not confirm” condition and “self derogate” condition. In addition, “self do not conform” condition reported lower negative affects than “Self derogate” condition in “Others conform” condition. When others did not conform to the injunctive norm, participants who acted in similar fashion showed lower negative affects than “self derogate” condition. Also, the main effect for self and the main effect for others were found ($F(3,190)=5.91, p<.01$; $F(3,190)=3.12, p<.05$). “Self conform” condition showed lower negative affects than “Self derogate” condition. “Others conform” condition showed lower negative affects than “Others derogate” condition.

In calmness, only the main effect for self were found ($F(3,190)=3.52, p<.05$). “Self conform” condition reported higher calmness than “Self derogate” condition.

4. Discussion

As a result, Kazakhstan people think themselves as “normal” when they get into line with others around, especially when others conform to injunctive norm. In addition, it was shown that taking the same behavior as others around had effects on negative emotions. In particular, when people behave in a similar manner, they tend to report lower negative emotion. This result is almost exactly the same pattern as others Asian cultures such as Japan, China, South Korea, and Republic of Nepal. The results of calmness were differ from previous findings. Previous studies found that people reported higher calmness when they behaved the same way as others around. Kazakh people generally showed similar pattern to previous studies but no significant differences in results obtained by ANOVA. It is necessary to investigate effects of injunctive/descriptive norms among Western culture.

Acknowledgment

We are deeply grateful to Ms. Ainash Dussanova who was willing to help us to collect the data in Republic of Kazakhstan.

References

- Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology*, 58, 1015-1026.
- Kuroishi, N., & Sano, Y. (2009). Are normative Japanese happy? : Reconsideration of "Futsu" conception among Japanese. *Educational Study*, 51, 43-54.
- Ogawa, T., Monchi, R., Kikuya, M., & Suzuki, N. (2000). Development of general affect scales. *Japanese Journal of Psychology*, 71, 241-246.
- Sano, Y., & Kuroishi, N. (2011). How do you feel when you are normal at a library? : Cross-cultural study between China and Japan. Poster presentation at the 9th Biennial Conference of Asian Association of Social Psychology, at Yunnan Convention Center, in Kunming, China.
- Sano, Y., & Kuroishi, N. (2013). How do you feel when you are normal at a funeral? : Cross-cultural study between Japan, China, and South Korea, 10th Biennial Conference of Asian Association of Social Psychology, Yogyakarta, Indonesia.
- Sano, Y., & Kuroishi, N. (2015). How do you feel when you are normal? : In the case of Nepalese (2). Poster Presentation at the 62nd annual meeting of Japanese Group Dynamics Association.
- Sano, Y., Kuroishi, N., & Erlandsson, A. (2010). How do you feel when you are normal? : In the case of Japanese. Poster Presentation at the 74th annual conference of the Japanese Psychological Association.

FACTORS RELATED TO THE PARENTAL BURDEN OF CHILDCARE IN JAPAN

Mizuka Ohtaka

Department of Politics and Public Administration, Faculty of Law, Yamanashi Gakuin University (Japan)

Abstract

The parental burden of childrearing is considered as a cause of declining birth rate and that it has an adverse effect on children's development (Matsuda, 2010). How, then, can this burden be reduced? This study aims to answer this question. This study examined the factors related to the burden of childrearing by analysing the data from the 'Questionnaire survey of children and childrearing, 2012 (Survey Research Centre)' secondarily. The survey targeted 3,000 Japanese parents over 18 years old, with children aged 0–6 years. A total of 2,592 valid responses were analysed. The results indicated that parents who feel a greater burden of childrearing tend to be women rather than men, be older, have more children, have less income and be mothers without regular work. On the other hand, those who feel a lesser burden are parents who have relatives, friends and acquaintances who take care of children in emergencies and who have neither anxieties nor worries about childrearing. In addition, even if the parents have anxieties and worries about childrearing, their burden is eased by asking relatives, acquaintances and medical workers and by gathering information from specialised magazines and internet sites. This suggests that support from others is important in order to tackle the anxiety of childrearing and ease the burden felt by parents.

Keywords: childrearing, support, Japan.

1. Introduction

Japan's declining birth rate is one of its major social problems, and may concern the sustainability of its labour force and social security. The Ministry of Health, Labour and Welfare (2006) cites that isolation and increase in parental burden of childrearing contribute to social background. Matsuda (2010) also indicates that parental burden of childrearing is a fundamental problem affecting the declining birth rate in Japan.

Previous studies have focused on mothers' anxieties about childrearing as a major factor concerning the burden of childrearing (Matsuda, 2008; 2010; Tanaka & Lowry, 2013). Matsuda (2010) analysed more than one survey data and validated that mothers who worry about childrearing do not desire to give birth to more children and their children's psychological development delay. Therefore, childrearing worries and anxieties are key factors affecting parental burden of childrearing.

These previous studies, however, have only targeted mothers. Although Japanese fathers spend less time with their children due to long work hours, they desire to participate in childrearing (Kawano, 2014). Such a gap between actual and ideal childrearing may lead to fathers getting worried. Thus, this study targets not only mothers but also fathers and examines the relation between the parental burden of childrearing and childrearing anxieties and worries.

Furthermore, what are the measures that can reduce their burden of childrearing for parents worried about childrearing? Previous studies have indicated that social support is effective. For example, support from spouses and kin significantly relieves mothers' childrearing depression or neurosis (Tanaka & Lowry, 2013) and mothers who have non-kin social networks, such as friends and acquaintances, do not worry about childrearing (Matsuda, 2008). In addition, this study proposes expert support is also a helpful measure, because parents must have problems with childrearing which cannot be solved without specialised knowledge, skill or advice.

2. Methods

I analysed the data from the 'Questionnaire survey of children and childrearing, 2012 (Survey Research Centre)' secondarily. The survey sample was constituted of parents over 18 years of age having

children aged 0–6 years, living in Japan; *Valid responses*: 2,592 parents (valid response rate: 86.40%); *Date*: October 2012; *Method*: Internet (self-administered).

2.1. Variables

Regarding 'Burden', the respondents were asked, 'How do you feel about childrearing?'; for their responses, they could choose from 'Very fun', 'Rather fun', 'Cannot say', 'Rather hard' and 'Hard'. This study recorded 'Very fun' as '1', 'Rather fun' as '2' and 'Cannot say', 'Rather hard' and 'Hard' as '3'.

For 'Income', the respondents were asked to choose 'Income of household' from '1. Less than 3 million yen', '2. Less than 5 million yen more than 3 million yen', '3. Less than 10 million yen more than 5 million yen' or '4. More than 10 million yen'.

For 'Relatives', the respondents were asked 'Do relatives live near enough to be able to reach your home within 30 minutes?'; they answered '1. Yes' or '0. No'.

Respondents were asked 'Do you have relatives, friends or acquaintances taking care of your children in emergencies?'; they answered '1. Yes' or '0. No'.

For 'No worry', the respondents were asked 'How do you cope with anxieties or worries about childrearing?' This study recorded 'I have neither anxieties nor worries about childrearing in particular' as '1' and the other choices as '0'. The other 'Measure' choices were as follows: asking 'Relatives', 'Acquaintances', 'Nursery staff', 'Office' and 'Medical worker', 'Information gathering' and 'Other'.

3. Results

3.1. Respondents

The mean age of the 2,592 respondents was 37.26 (SD = 5.12) years. Men comprised 49.31% (= 1,278) of the analysis target and women 50.69% (= 1,314).

3.2. Multiple Regression Analysis

This study used a multiple regression analysis to examine the factors correlated with parental burden of childrearing. Table 1 shows the results.

First, the results of Model 1 (whose dependent variable is 'Burden' and independent variables are demographic variables, 'Emergency' and 'No worry') indicate that parents who feel a greater burden of childrearing tend to be older, are women rather than men, have more children, have less income and are mothers without regular work. In contrast, those who feel a lesser burden are parents who have relatives, friends and acquaintances who take care of children in emergencies and who have no anxieties or worries about childrearing.

Next, limiting the analysis target to the parents who have anxieties and worries about childrearing, seven measures to cope with anxieties and worries were added as independent variables in Model 2. The results indicate that their burden is eased by asking relatives, acquaintances and medical workers and by gathering information from specialised magazines and internet sites.

Finally, Model 3 limits the analysis target to fathers and Model 4 limits the analysis target to mothers who have anxieties and worries about childrearing. Comparing these results, it was concluded that tough mothers with regular work feel a lesser burden than other mothers, there is no connection between the fathers' burden of childrearing and whether their spouses work regularly or not, and asking relatives reduces fathers' burden, but living near relatives reduces mothers' burden. Although asking medical workers and gathering information ease mothers' burden, such an effect is not found for fathers' burden.

4. Discussion

This study proved that anxieties and worries over childrearing are a key factor of not only mothers' but also fathers' burden of childrearing. Therefore, it is essential to resolve parents' anxieties in order to reduce parental burden of childrearing. Then, asking acquaintances is an effective means for reducing childrearing burden of both fathers and mothers in common. These findings propose that social support is valuable to parents for lightening their burden of childrearing.

However, technical support, such as asking medical workers and gathering information from specialised magazines and internet sites, reduces only mothers' burden of childrearing but fathers'. This might be because mothers are the main providers of childcare (Kawano, 2014). In case children have some difficulties and need special support, mothers primarily have duty and responsibility to ask experts and gather technical information and deal with problems. In the connection, while father's childrearing

burden is reduced by asking relatives, it is that relatives live near to ease mothers' childrearing burden, because mothers may have more practical burden and need more concrete support than fathers.

As this study found the characteristics of parents who tend to feel a greater burden of childrearing, particular attention should be paid to older mothers with more children or less income without regular work or social network in emergencies. However, concerning mothers' work status, this study showed that it affects mothers' childrearing burden but fathers' and Matsuda (2010) indicated that the correlation between mothers' work status and childrearing worries may possibly be spurious, further examination is needed.

Table 1. Multiple Regression analysis

Dependent Variable: Burden				
	β			
Model	1	2	3	4
N	2,481	2,263	1,054	1,209
Age	.06**	.06*	.06†	.05†
Gender (0. Men, 1. Women)	.18** *	.22** *	/	/
Number of children	.08** *	.09** *	.10**	.08**
Income	-.05*	-.02	-.05	.00
Father's work; Regular	.00	.00	.00	.00
Father's work; Non-regular	-.02	-.02	-.05	.00
Mother's work; Regular	-.08***	-.07**	-.03	-.11***
Mother's work; Non-regular	.02	.03	.04	.03
Relative	-.03	-.03	.01	-.07*
Emergency	-.09***	-.08**	-.10**	-.06†
No worry	-.06**	/	/	/
Measure; Relatives		-.04†	-.06†	-.03
Measure; Acquaintances		-.12***	-.07*	-.18***
Measure; Nursery staff		-.01	-.00	-.01
Measure; Office		.03	.01	.05
Measure; Medical workers		-.06**	-.05	-.08*
Measure; Information gathering		-.05*	-.05	-.06*
Measure; Other		-.01	-.01	-.01
R ²	.07	.09	.05	.09

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Acknowledgement

The data for this secondary analysis 'Questionnaire survey of children and childrearing, 2012 (Survey Research Centre)' was provided by the Social Science Japan Data Archive, Center for Social Research and Data Archives, Institute of Social Science, The University of Tokyo.

References

- Holloway, S. D. (2010). *Women and family in contemporary Japan*. New York: Cambridge University Press.
- Kawano, S. (2014). A sociocultural analysis of childrearing support for mothers of preschoolers living in Tokyo. *Japan Forum*, 26, 46-64.
- Matsuda, S. (2008). *Naniga kosodate wo sasaerunoka (What support childrearing)*. Tokyo: Keiso shobo.
- Matsuda, S. (2010). *Yuragu kosodate kiban (Wavering childrearing base)*. Tokyo: Keiso shobo.
- Tanaka, K. & Lowry, D. (2013). Mental well-being of mothers with preschool children in Japan: The importance of spousal involvement in childrearing. *Journal of Family Studies*, 19, 185-195.

PSYCHOLOGICAL FACTORS RELATED TO EMIGRATION PLANS AMONG UNIVERSITY STUDENTS

**Marta Kulanová¹, Olga Orosová², Rafael Mikolajczyk³, Janina Petkeviciene⁴,
Andrea Lukács⁵ & Michal Miovsky⁶**

¹*Department of Psychology, PJ Safarik University in Kosice (Slovak Republic)*

²*Department of Educational Psychology and Psychology of Health, PJ Safarik University
in Kosice (Slovak Republic)*

³*Department of Clinical Epidemiology, Bremen Institute for Prevention Research and
Social Medicine (Germany)*

⁴*Faculty of Public Health, Medical Academy, Lithuanian University of Health Sciences (Lithuania)*

⁵*Faculty of Health Care, University of Miskolc (Hungary)*

⁶*Department of Addictology, First Faculty of Medicine, Charles University in Prague (Czech Republic)*

Abstract

Background: The relationship between psychological factors and emigration plans (EP) has not been sufficiently explored.

Objectives: The objective of this study was to examine whether personality factors and perceived social support are related to EP.

Method: Data from the large longitudinal study SLICE (Student Life Cohort in Europe) were used for the analysis. This study was conducted online and carried out in five European countries – the Czech Republic, Germany, Hungary, Lithuania and Slovakia (N=2075, 69.8% women, average age = 18.68, SD=0.17). The EP were identified by a single item measure assessing whether students plan to go abroad in the next two years. Logistic regression was used to explore the factors influencing EP and adjusted for country and sex. A short version of the Big Five (Goslings' TIPI) and the MSPSS (perceived social support from family, friends and significant others) were used for the measurement of personality factors and social support, respectively.

Results: 15% of students reported EP. The model explained about 15.3% of the variance in the EP and correctly classified 84.8% of the cases. It showed that higher openness to experience (OR=1.142; 95% CI 1.07 – 1.22) and lower social support from family (OR=0.961; 95% CI 0.935 – 0.987) were related to the reported EP. The other explored variables did not display a significant association with the outcome.

Conclusion: The findings indicate that personality factors and perceived social support are associated with EP, pointing towards deeper motivations beyond the economic and environmental drives of emigration.

Keywords: *plans to emigrate, personality factors, social support, university students.*

1. Introduction

The findings of many studies have suggested that besides economic factors, there are non-economic – interpersonal and intrapersonal factors which also play a significant role in deciding to emigrate or to return from living abroad. Jokela (2009) has found that greater openness to experience and lower agreeableness predict higher migration within a country as well as out of a country. Camperio Ciani et al. (2007) and Canache et al. (2013) have further detected that openness to experience and extraversion are significant predictors of emigration tendencies. In the study of Tabor and Milfont (2011), it has been confirmed that a greater willingness to experience change and novelty seeking are related to emigration behaviour. There can also be a significant influence of interpersonal relationships. Sheikh et al. (2012) have found that among students, strong family ties is the most frequent factor linked to wishing to stay in the country of origin. Finally, the findings of Piotrowski and Tong (2010) have further supported the fact that people are more willing to stay at home or come back from abroad when they have significant attachments to their children, partner or parents.

2. Objective

The objective of this study was to examine whether personality factors (specifically personality factors of the Big Five model) and interpersonal factors (specifically perceived social support) are related to emigration plans on a sample university students from five studied European countries.

3. Methods

3.1. Sample

The data from the large longitudinal study SLICE (Student Life Cohort in Europe) were used for the analysis. The sample consisted of 2075 students (69.8% women; average age = 18.68; SD = 0.17). Data were used from the first data collection (T1) conducted in 2011/2012. For this reason, the main proportion of the sample were first year university students (85%). This study was conducted online and carried out in five European countries – the Czech Republic (16.5%), Germany (12.7%), Hungary (5.3%), Lithuania (42%), and Slovakia (23.4%). The students were then asked to complete an online questionnaire which had been advertised on posters on the university's websites and noticeboards.

3.2. Measures

The online questionnaire collected information about gender, country, and the year of study. Their emigration plan was assessed by an item asking whether the students planned to go abroad within the next two years. There were only two possible answers, so the dependent variable was dichotomous. In order to measure personality factors, a short version of the Big Five – TIPI – Ten Item Personality measure (Gosling, Rentfrow, Swann, 2003) was used (Cronbach's alpha: 0.95). The five sub-scores were used in the data analyses, which measured the five factors of personality – extraversion, agreeableness, conscientiousness, emotional stability and openness. A higher score represented a higher level in each given factor. Cronbach's alphas for the subscales were: 0.8 for extraversion, 0.81 for agreeableness, 0.83 for conscientiousness, 0.8 for emotional stability and 0.82 for openness to experience.

The interpersonal factor of perceived social support was measured by the MSPSS – Multidimensional Scale of Perceived Social Support (Zimet et al., 1988). This scale consisted of three sub-scales measuring three sources of the social support, namely: Perceived social support from family (FAM), perceived social support from friends (FRI) and perceived social support from significant others (SO). A higher score indicated a higher level of perceived social support. Cronbach's alpha was 0.98, for the subscales: 0.97 for family, 0.96 for friends, 0.97 for significant others.

3.3. Statistical analyses

Non-parametric statistical comparisons (Chi-square test of independence) of the proportions of EP among the countries were used. Due to dichotomous character of the dependent variable, logistic regression in SPSS 16.0 was used to assess the factors (continuous variables) related to emigration plans, adjusting for country and sex.

4. Results

It was found that 15.1% of students reported having emigration plan in the next two years. Plans to emigrate were least frequent in Hungary and the Czech Republic. These two countries did not differ significantly from one another. Emigration plans were most frequent in Lithuania and Germany, which also did not differ significantly one from another. All other countries differed significantly in the proportion of emigration plans. These proportions are shown in Table 1.

Table 1. Proportion of emigration plans among students according to country and sex, respectively

	yes	no
Czech Republic	8 (2.3%)	335 (97.7%)
Germany	65 (24.6%)	199 (75.4%)
Hungary	1 (0.9%)	110 (99.1%)
Lithuania	195 (22.4%)	676 (77.6%)
Slovak Republic	44 (9.1%)	442 (90.9%)
Females	227 (15.7%)	1217 (84.3%)
Males	86 (14%)	528 (86%)
Total	313 (15.1%)	1762 (84.9%)

The logistic regression revealed that the model with country and sex explained 13.1% of the variance. The addition of personality factors and perceived social support in the model increased explained variance to 15.3% in emigration plans and correctly classified 84.8% of the cases. The most significant variable related to emigration plans was openness to experience (OR=1.142; 95% CI 1.07 – 1.22). Thus, a higher score of openness to experience indicated a higher likelihood of having an emigration plan. The other significant association, but in the opposite direction (OR=0.961; 95% CI 0.935 – 0.987), was found with perceived social support from family. A lower score of perceived social support from family indicated a higher likelihood of having an emigration plan. The other explored variables did not display a significant association with the outcome.

5. Discussion

The findings of this study are consistent with other studies and partly confirm that there is a relationship between personality factors, especially openness to experience and having a plan to emigrate (Jokela, 2009; Camperio Ciani et al., 2007; Canache et al., 2013; Tabor and Milfont, 2011). This study extends previous findings by examining perceived social support as an interpersonal psychological factor in relation to emigration plans in different countries. The results have shown that the examined countries differ significantly in reporting emigration plans, and moreover, having this plan may be determined by different factors in different countries. However, the observed differences between countries could not be explained with the current data. This can be considered as a limitation of the present study. Further exploration of this topic is therefore necessary and a more detailed examination of the country differences in emigration plans would be of interest. Further research could also improve the examination of emigration plans by operationalizing it a multidimensional construct and exploring it as a complex phenomenon.

6. Conclusions

In summary, a higher openness to experience has been found to be linked with a greater likelihood of having a plan to emigrate. On the contrary, a higher level of perceived social support from the family has been linked with a greater likelihood of not having such a plan. The findings have further indicated that there are deeper motivations beyond economic and environmental drives for emigration. These motivations have a naturally psychological background and fall into intrapersonal and interpersonal domains. The current research findings have also emphasized the importance of examining these psychological variables as relevant in emigration plan motivation processes.

Acknowledgements

This work was supported by Research and Development support Agency under the contract No. APVV-0253-11, VEGA 1/0713/15.

References

- Camperio Ciani, A. S., Capiluppi, C., Veronese, A., Sartori, G. (2007). The Adaptive Value of Personality Differences Revealed by Small Island Population Dynamics. *European Journal of Personality*, 21, 3-22
- Canache, D., Hayes, M., Mondak, J. J., Wals, S. C. (2013). Openness, extraversion and the intention to emigrate. *Journal of Research in Personality*, 47, 351-355.
- Gosling, S. D., Rentfrow, P. J., Swann W. B. Jr. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 37, 504-528.
- Jokela, M. (2009). Personality predicts migration within and between U. S. states. *Journal of Research in Personality*, 43, 79-83.
- Piotrowski, M., Tong, Y. (2010). Economic and Non-Economic Determinants of Return Migration: Evidence from Rural Thailand. *Population-E*, 65, 2, 333-348.
- Sheikh, A., Naqvi, S. H. A., Sheikh, K., Naqvi S. H. S., Bandukda, M. Y. (2012). Physician migration at its roots: a study on the factors contributing towards a career choice abroad among students at a medical school in Pakistan. *Globalization and Health*, 8, 43.
- Tabor, A. S., Milfont, T. L. (2011). Migration change model: Exploring the process of migration on a psychological level. *International Journal of Intercultural Relations*, 35, 818-832.
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, 52, 30-41.

IMPORTANCE OF PSYCHOANALYSIS FOR SOLVING THE PROBLEM OF ECONOMIC SECURITY OF A PERSONALITY IN RUSSIA

Olga Medyanik

Department of Political Psychology, St. Petersburg State University (Russia)

Abstract

To get full understanding of the operation of the market mechanism, one should have a good grip of the psychology of economic security of a personality which is inherent to that sphere and try to gain a more detailed insight into the large number of problem factors, such as the need in financial security, financial uncertainty, economic risk, financial anxiety, fear of losing money, fear of wasteful spending, economic status, degree of financial freedom, and belief in stability of the financial system of the country. Since these problems have not escaped – we can even say that the amount of negative economic expectations in modern Russia has increased – it is very important that clinical psychologists and specialists in the field of psychoanalysis should pay attention to early identification of causes of emotional disturbances of an individual as a result of financial problems and develop methods of psychological care.

Keywords: security of a personality, economic risk, financial anxiety, fear of losing money, degree of financial freedom.

1. Introduction

A person who performs his or her economic activity in a context of uncertainty in a volatile economic environment invariably looks for ways to overcome the crisis and consequently takes on a risk, which is difficult to foresee or estimate. The problem of prediction of threats to economic security of a personality as a measure to avert occurrence of such threat and hence prevent economic and psychological damage to the personality still remains an open question. The stability of personal and family income, the problem of poverty, the debt behavior, provision of conditions to prevent offenses against private property and family investment give rise to special psychological anxiety among citizens.

2. Objectives

Today a personality feels instability of the political and economic system as a result of variability of the “rules of the game” and economic insecurity. Distrust in contractors and agents in the financial sphere and the defenselessness of private actors against companies and firms are visible, as well as the defenselessness of players in financial market against the government and the confidence in the absence of legislative protection of a private investor.

To get full understanding of the operation of the market mechanism, one should have a good grip of the psychology of economic security of a personality which is inherent to that sphere and try to gain a more detailed insight into the large number of problem factors, such as the need in financial security, financial uncertainty, economic risk, financial anxiety, fear of losing money, fear of wasteful spending, economic status, degree of financial freedom, and belief in stability of the financial system of the country. Undoubtedly, these problems are psychological, if not psychopathological, in many respects. Therefore, to our opinion, psychoanalysis and its methods should once again come to help to find solutions to these problems and play a certain role in optimization of economic security of a personality.

3. Discussion

If we want to analyze psychological theories of attitude to financial saving, we can start with S. Freud. In his work “Character and Anal Eroticism” Freud was the first to pay attention to the fact that an adult’s attitude to money may be determined by his or her infantile sexuality traits. “Happiness, he wrote,

is a deferred fulfillment of a prehistoric wish. That is why wealth brings so little happiness: money is not an infantile wish" (S. Freud, 1997).

Discussion of psychological disturbances which may prompt questions of investment, spending of money, and debt behavior problems may also be found in works of such psychoanalysts as Alfred Adler and Karl Abraham. In his book "Haben oder Sein?" (Fromm, 1976) Erich Fromm described an immature personality who measured its value with money and property, as distinct from more developed personalities who did not think that their value for the society depended on the amount of money they had in the bank.

Psychoanalysis considers desire for money as a consequence of unconscious hoarding processes which start in infancy when a child delays defecation, perceiving fezzes as its first wealth (it may consider them as toys, or use them to attract the parents' attention). Such a manner of a child will then be transformed into an economic behavior. A child who refrains from defecating will grow into an economic adult, and a child who does not, into a spender.

In Europe, especially in well-to-do families, they use to habituate children to regular call of nature, discipline, orderliness, and persistence, which plays an important role in the development of the European type of character with inherent desire for money-making, wealth, and power. The progress of the development of Europe, starting from XV-XVI centuries, was largely achieved through robbing of other nations – colonies. Internal and external contradictions were covered up by the inflows from colonies. West Europe still serves as a sort of "well-being island" where personality interests, personal benefit, and rights of an individual come to the fore.

When it comes to the particularity of psychoanalysis of economic behavior in Russia, one might as well say that it is rooted in unconscious concentrated history. Even N.A. Berdyaev was looking for the difference between the Russian and the European nations. To N.A. Berdyaev's opinion, the Russian culture is a collectivist one. "The individualism of cultural creative work was overcome in Russia, an attempt was made to create a nation-wide collective culture. But through what a culture breakdown! It occurred after the whole upper cultural layer, all creators had been thrown down and forced out of life." (N. Berdyaev, 2006)

The Russian nation is noted for a specific sense of community which needs to be understood not sociologically, but psychologically. One might say that the Russian nation has a developed "collective soul" focused on the opinion of communities, and an established model of financial security where the interests of society and the state on the whole are always at the fore. Yu. Kuznetsov and V. Nikolsky, when describing the traits and mentality of the Russian nation, exactly described the roots of such a collective consciousness. "Only the state may protect an individual and his/her family against financial problems. It is only such concepts as "fair" or "unfair" that count, but not "profitable-unprofitable" as with the western nations. Hence its constant desire to solve all issues "all together" becomes clear. Historically the idea of "financial fairness", antagonism against wealthy and successful people, distrust of private financial institutions, fear of personal responsibility permeate the economic consciousness of man in our days of "creation" of market economy. In the soul of a Russian, this aspect of the cultural complex has taken the form of fear of admission of own responsibility. A western soul is much more ordered, rational, mind-driven than a Russian soul which also has an essential irrational, unorganized, and unordered element inside." (V. Nikolsky, 1999)

The insecurity of financial standing and the constant threat of smashup have developed an "easier" attitude to property, whether own or outsider's, in the Russian man. For example, in the Ancient Russia "... theft committed in order to feed a guest was not a crime". The idea of incorrectness and even wickedness of man's desire of prosperity has been common in Russia since olden times. Thus, F.M. Dostoyevsky wrote in high dudgeon, "I will better want to travel for life in a Kyrgyz tent than to adore the Deutsch method of wealth accumulation. Here they have a Vater everywhere in each house, who is dreadfully moral and remarkably honest". (F. Dostoevsky, 1989)

Sociocultural differences caused by economic reasons show in the sphere of negative emotions: guilt, anxiety, stress, fear of unemployment, discomfort occurring as a result of loss of control of one's financial standing. Historically these trends are weakly expressed in Russian people, since the planned distribution system and the market system form the attitude to money and wealth in a different way. In the planned distribution system which existed in Russia as recently as 20 years ago had advantages valuable for the mental health. They include confidence in the future (when social guarantees of wages and pension are available and there is no fear of robbery by the bank). The market system, though providing more opportunities for earning and promoting development of capabilities and self-actualization, at the same time generates more dangers which result in stresses and neuroses due to risks in economic behavior, fear of robbery, detachment, absence of empathy, monetary fanaticism.

Unfortunately, when solving all issued related to money an individual too often listens not to reason, but to fear. It is the fear of losing money that make him/her choose uninteresting but promising

(in the eyes of others) profession and do an unloved job for years. An actor is afraid of talking about money for various reasons, ashamed of showing too much interest in them or, to the contrary, full lack of knowledge of financial subtleties. Various fears adding a large dose of stress to the everyday life of man now include fears related to online thefts, delays in disbursement of loans, multi-level financial pyramids, "bargain" purchases, and economic crisis. The fire also accompanies investment of money in ventures and impossibility of keeping one's savings due to the continuous escalation of inflation.

All the aforementioned problems today are key problems in the work of psychoanalysts. Psychoanalysis can disclose a lot of masked motives and desires of an individual, which is very important for finding the cause of a problem. For example, the sense of guilt is most often associated with money. The ideal of economy and moderatism rooted in the family makes people feel guilt not for accumulation, but for spending of money. The sense of guilt related to money may cause depression, distrust, and even self-abhorrence in a person. Trying unconsciously to reduce such a sense, a person may develop various psychosomatic symptoms in him/herself, such as the fear of losing money. As puts it O.S. Deineka, in such a case money start to control the person; they prescribe where he/she should live and whom he/she should communicate with, they restrict the social activity of the person in no lesser degree than they promote it. Therefore a wealthy person may easily lose control over him/herself. And maintenance of control both over external situation and one's own emotions create delusions of security (O. Deineka, 2012).

From the psychoanalysis point of view, inability of nouveau riche to cope with their wealth is explained by the loss of self-discipline. An individual in whom the skills of self-control and self-discipline are not developed needs external restrictions which provide him/her with a sense of security. For many people, large amounts of money mean an opportunity to spend them without thinking about the future, and this uncontrolled behavior causes a sense of alarm. Whatever paradoxical it may seem, but a sudden loss of wealth means for such people a return to "normal" life, ordered and comfortable. Another important emotion associated with money is the sense of security. Psychoanalysts think that when people reach adulthood they accumulate money in order to never find themselves in a difficult situation which they may have experienced in their childhood. Fromm wrote that when a person find him/herself in a situation of long-term absence of money, lack of money even for a living (as a result of unemployment, smashup, social or natural disasters), his/her mind starts to degrade, occupational skills and qualification are lost, the mode of life simplifies. The person gradually turns into a social outcast who can easily be involved in social actions of various types, because the social space tolerates no emptiness (E. Fromm, 1998).

4. Conclusions

Finally it is important to note that many psychoanalytic studies lead up to the conclusion that the desire of wealth itself for a personality is nothing else but a need in emotional security, a sort of emotional hunger caused by the fact that the most vital requirements of the person, such as a need for sleep, food, lodging, communication with father or mother, were not satisfied in his/her infancy. Since these problems have not escaped – we can even say that the amount of negative economic expectations in modern Russia has increased – it is very important that clinical psychologists and specialists in the field of psychoanalysis should pay attention to early identification of causes of emotional disturbances of an individual as a result of financial problems and develop methods of psychological care.

References

- Nikolsky, V (1999). Introduction into the theory of national security. M.: "Verny".
Freud, Z. (1997). "Character and Anal Eroticism". Minsk: Pot-pourri.
Berdyayev, N. (2006). Self-Knowledge: Selection. M.: mir knigi, literature.
Deineka, O. (2012). Psychology of Economic Policy. In: Chrestomathy to the training manual on political psychology. St. Petersburg: Kolo.
Dostoevsky, F. (1989). The Player. L.: Nauka.
Freud, Z. (1900). "Interpretation of Dreams".
Freud, Z. (1905). "Psychopathology of Everyday Life".
Fromm, E. (1976). "To Have or To Be?".
S.Ferenczi. (2000). The Ontogenesis of the Interest in Money. In S. Ferenczi, Theory and Practice of Psychoanalysis . M: Universitetskaya Kniga.
Fromm, E. (1998). To Have or To Be?. Kiev: Nika-Center.

EXAMINING WOMEN'S AUTONOMY-SUPPORTIVE VS. CONTROLLING INTERPERSONAL STYLES TOWARD THEIR SPOUSES WITH REGARD TO EATING REGULATION: ARE THEY ASSOCIATED WITH WOMEN'S OWN EATING GOALS AND TO MEN'S RELATIONSHIP QUALITY AND WELL-BEING?

Noémie Carbonneau¹ & Marina Milyavskaya²

¹Department of Psychology, Université du Québec à Trois-Rivières (Canada)

²Department of Psychology, Carleton University (Canada)

Abstract

Many women report that they would like their spouse to change their eating habits (Tucker & Anders, 2001). Based on Self-Determination Theory (Deci & Ryan, 1987), we posit that this desire can translate into women adopting an autonomy-supportive or a controlling interpersonal style with their partner with regard to eating regulation. *Purpose:* One purpose of this study was to examine how women's autonomy-supportive vs. controlling interpersonal style would relate to their spouse's well-being and relationship quality. Another purpose was to examine whether women who are perceived by their spouse as relatively more autonomy-supportive personally pursue different eating regulation goals than women who are perceived as relatively more controlling. *Methods:* Married couples from the province of Quebec were recruited by a professional survey firm. Eighty-one couples (mean age 45.57 years old) completed an online questionnaire. Men reported on their psychological well-being, relationship quality, and perception of their partner's interpersonal style (i.e., autonomy-supportive vs. controlling) with regard to eating. Women reported on their personal health- and appearance-oriented eating regulation goals. ANOVAs were conducted to compare women who were rated as relatively more autonomy supportive versus relatively more controlling by their spouse. *Results:* Men who perceived their spouse as relatively more autonomy-supportive (vs. controlling) reported higher well-being and relationship quality. In addition, women perceived as relatively more autonomy-supportive were more likely to personally pursue health-related (but not appearance-related) eating regulation goals. *Conclusions:* Overall, these findings improve our understanding of eating regulation in the context of marital relationships.

Keywords: *Eating regulation; autonomy support; controlling interpersonal style; marital relationships.*

1. Introduction

Many women report that they would like their spouse to change their eating habits (Tucker & Anders, 2001). Based on Self-Determination Theory (Deci & Ryan, 1987), we posit that this desire can translate into women adopting an autonomy-supportive or a controlling interpersonal style with their spouse with regard to eating regulation. Autonomy-support includes providing choice to the partner, acknowledging his perspectives, offering informative and constructive feedback, and encouraging him to express himself authentically rather than pressuring him to be or behave in a specific way (Deci & Ryan, 1987; La Guardia & Ryan, 2007; Ryan & Deci, 2004). Conversely, a controlling interpersonal style involves pressuring the spouse to think, act, or feel a certain way (Soenens & Vansteenkiste, 2010). One purpose of the present study was to examine how women's autonomy-supportive vs. controlling interpersonal style would relate to their spouse's well-being and relationship quality. Based on past research (e.g., Deci et al., 2006) that has showed that the receipt of autonomy support is associated with a variety of benefits, it is expected that men who perceive their spouse as autonomy-supportive (vs. controlling) with regard to eating regulation should report higher levels of psychological well-being and relationship quality.

Another purpose of this study was to examine whether women who are perceived by their spouse as relatively more autonomy-supportive have different personal eating regulation goals than women who are perceived as relatively more controlling. Recent research has proposed that individuals can focus on intrinsic or extrinsic aspirations when regulating their eating behaviours (e.g., Putterman & Linden, 2004;

Verstuyf, Vansteekiste and Soenens, 2012). For example, some individuals attempt to regulate their eating behaviours in order to reach a slender and physically attractive body (extrinsic motivation) whereas other individuals are predominantly focused on becoming healthier (intrinsic motivation). Research has found that regulating one's eating behaviours out of concern for one's appearance is associated with negative outcomes, while focusing on health appears beneficial (Putterman & Linden, 2004; Verstuyf et al., 2012). Based on past research, we posit that women who are perceived by their partner as relatively more autonomy-supportive should report personally pursuing eating regulation goals for more health-oriented and less appearance-oriented reasons than women who are perceived as relatively more controlling.

2. Material and methods

2.1. Participants and procedure

Participants were 81 married couples from the province of Quebec, in Canada (mean age = 45.57, $SD = 13.39$ years). On average, couples had been together for 12 years and 4 months ($SD = 5$ years and 5 months). Participants were recruited by a professional survey firm and completed an online questionnaire.

2.2. Instruments

2.2.1. Demographic variables. Participants completed a demographic information section that included questions on age, relationship status, and relationship length, among others.

2.2.2. Men's perceptions of their spouse's interpersonal style. Men were asked to report on their spouse's autonomy-supportive and controlling style with regard to eating regulation using the 6-item autonomy support subscale developed by Koestner, Powers, Carbonneau, Chua and Milyavskaya (2012) and the 14-item scale assessing the partner's controlling style used in Carbonneau, Carbonneau, Cantin, and Gagnon-Girouard (2015).

2.2.3. Men's psychological well-being. The measure of men's psychological well-being was comprised of positive and negative affect and life satisfaction. Men completed a nine-item scale of affect (Emmons, 1992) that included four positive (e.g., joyful) and five negative (e.g., frustrated) items, and the five-item "Satisfaction with Life Scale" (Diener, Emmons, Larsen, & Griffin, 1985). Psychological well-being was calculated as the mean across the measures (after reversing the negative affect score).

2.2.4. Men's relationship quality. Men's relationship quality was assessed using the six-item Quality of Marriage Index (Norton, 1983).

2.2.5. Women's personal eating regulation goals. Women were asked about their personal eating regulation goals. Using Verstuyf et al. (2012) scale, two types of goals were assessed, namely appearance-oriented (3 items) and health-oriented (3 items) eating regulation goals.

3. Results

Two groups were created based on whether women were perceived by their spouse as having a relatively more autonomy-supportive ($n = 46$) or controlling ($n = 35$) interpersonal style with regard to eating regulation. ANOVAs were then conducted in order to examine the differences between the two groups. Results showed that autonomy-supportive women personally pursued more health-oriented eating regulation goals ($M = 6.56$, $SD = 0.57$) than controlling women ($M = 6.19$, $SD = 0.93$), $F(1,80) = 5.06$, $p < .05$. Meanwhile, autonomy-supportive women ($M = 4.86$, $SD = 1.64$) did not significantly differ from controlling women ($M = 4.82$, $SD = 1.39$) in terms of appearance-oriented eating goals, $F(1,80) = .011$, $p = .92$. In addition, the spouses of autonomy-supportive women reported higher psychological well-being ($M = 3.22$, $SD = 0.59$), $F(1,80) = 4.66$, $p < .05$, as well as higher relationship quality ($M = 6.45$, $SD = 0.59$), $F(1,80) = 12.65$, $p < .01$, than controlling women ($M = 2.92$, $SD = 0.64$, for well-being; $M = 5.87$, $SD = 0.87$, for relationship quality).

4. Discussion

This study examined some differences between women perceived as autonomy-supportive vs. controlling by their spouses with regard to eating regulation. Results showed that women perceived as autonomy-supportive (vs. controlling) were more likely to personally pursue health-related eating regulation goals. It may be that such an intrinsic orientation for one's own behaviour facilitates the ability to take another's feelings and perspective into consideration, preventing these women from pressuring their spouse into thinking or acting a certain way. Results also showed that men benefit from having an autonomy-supportive spouse as they report higher relationship quality and well-being when their spouse presents an autonomy-supportive (vs. controlling) style with regard to eating regulation. An important limitation of the present findings is that data was collected at a single time point, which prohibits determination of direction of effect between the variables. Future research using longitudinal data is warranted. Overall, findings of the present research are important as they improve our understanding of eating regulation in the context of marital relationships.

References

- Carbonneau, N., Carbonneau, E., Cantin, M., & Gagnon-Girouard, M.-P. (2015). Examining women's perceptions of their mother's and romantic partner's interpersonal styles for a better understanding of their eating regulation and intuitive eating. *Appetite, 92*, 156-166.
- Deci, E. L., La Guardia, J. G., Moller, A. C., Scheiner, M. J., & Ryan, R. M. (2006). On the benefits of giving as well as receiving autonomy support: Mutuality in close friendships. *Personality and Social Psychology Bulletin, 32*, 313-327.
- Deci, E. L., & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology, 53*(6), 1024-1037.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment, 49*, 71-75.
- Emmons, R. A. (1992). Abstract versus concrete goals: Personal striving level, physical illness, and psychological well-being. *Journal of Personality and Social Psychology, 62*, 292-300.
- Koestner, R., Powers, T. A., Carbonneau, N., Milyavskaya, M., & Chua, S. N. (2012). Distinguishing autonomous and directive forms of goal support: Their effects on goal progress, relationship quality, and subjective well-being. *Personality and Social Psychology Bulletin, 38*, 1609-1620.
- La Guardia, J. G., & Ryan, R. M. (2007). Why identities fluctuate: Variability in traits as a function of situational variations in autonomy support. *Journal of Personality, 75*, 1205-1228.
- Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and the Family, 45*, 141-151.
- Putterman E , Linden W (2004). Appearance versus Health: Does the reason for dieting affect dieting behavior? *Journal of Behavioral Medicine, 27*, 185-204.
- Ryan, R. M., & Deci, E. L. (2004). Autonomy is no illusion: Self-determination theory and the empirical study of authenticity, awareness, and will. In J. Greenberg, S. L. Koole, & T. Pyszczynski (Eds.), *Handbook of experimental existential psychology* (pp. 449-479). New York: The Guilford Press.
- Soenens, B., & Vansteenkiste, M. (2010). A theoretical upgrade of the concept of parental psychological control: Proposing new insights on the basis of self-determination theory. *Developmental Review, 30*, 74-99.
- Tucker, J. S., & Anders, S. L. (2001). Social control of health behaviors in marriage. *Journal of Applied Social Psychology, 31*, 467-485.
- Verstuyf, J., Vansteenkiste, M., & Soenens, B. (2012). Eating regulation and bulimic symptoms: The differential correlates of health-focused and appearance-focused eating regulation. *Body Image, 9*, 108-117.

THE IMPACT OF DWELLING'S FUNCTIONALITY ON HOME ATTACHMENT¹

**Sofya Reznichenko, Sofya Nartova-Bochaver, Natalya Dmitrieva,
Aleksandra Bochaver & Ekaterina Braginets**

Higher School of Economics, National Research University, Moscow (Russia)

Abstract

In terms of increasing social mobility, migration processes and weakening of territorial and socio-cultural identity, it is important to study place (home) attachment. Based on the environmental psychology researches of place attachment phenomenology (Scannell & Gifford, 2010) and home environment preferences (Coolen, 2011) we define home attachment as close emotional and cognitive bonds with one's home environment and functional satisfaction with its content leading to the individual desire to maintain closeness with home. The aim of the study was to examine how home attachment is interconnected with the ideal (desired) and actual home environment's multilevel functionality. Our tools were: developed by authors Functionality of Home Environment Questionnaire, The Personal Relevance of Home Environment and Home Attachment Scale. In total, 13 variables were investigated. Participants were 346 adults ($M_{age}=26,6$, $SD=10,5$; 138 males, 208 females), living in Moscow. There has been found that: home attachment is strongly predicted by the real image of home, while the ideal image has little effect on home attachment. The relationship between home attachment and home environment's functionality is gender-specific: women's are more sensitive to the affordances of real home environment than men, whereas ideal home has a stronger impact on men's home attachment; men's and women's home attachments are predicted by the different functional characteristics. People with low level of home attachment are more sensitive to the factors of personal relevance.

Keywords: *ecological psychology, home attachment, home environment, questionnaire, functionality.*

1. Introduction

The relationship between humans and their living environment is an important, but insufficiently explored research subject in social psychology, human geography, migration policies and environmental psychology. Obviously, home is the primary ontological human space. Plenty of examples from the international literature, art and cinema have shown that home environment is a multifactor resource for maintaining well-being, identity, self-efficacy, social belonging and rootedness, carrying functional, semantic and emotional value.

2. Objectives

Based on the classical and contemporary researches of the environmental and personality psychology, the analysis of studied subject is conducted from three levels: 1) *affordances-level*, where affordances are the objective opportunities and functions of the environment permitting different activities (Coolen, 2011); 2) *environmental friendliness-level*. The congruity/discrepancy between the environmental content and the personal needs satisfaction shows the level of personal friendliness of this environment. Friendly environment is characterized by satisfying human needs, stimulating and compensating inhabitants' development, encouraging personal growth and sense of self-usefulness in people. 3) *place attachment-level*. Place attachment is defined as a deep emotional bond with a local community, culture, or natural factors and perceived significance of the particular place as a meaningful one, providing comfort and satisfying the person's needs (Scannell & Gifford, 2010). In the current study, these key constructs are considered in relation to home environment.

3. Design

The aim of our study was to explore the relations between home attachment and functionality of real and ideal home environment. In our study the ratio of functionality of real and ideal modality of

¹ Supported by Russian Scientific Foundation, project № 14-18-02163.

home environment is an indicator of environmental friendliness: the greater the discrepancy between these variables is, the less home environment can meet the personal needs and the less friendly it is. We have formulated the following research hypotheses. 1) Home attachment is positively associated with functionality and friendliness of home environment. 2) The relations between home attachment and home environment's functions are gender-specific. 3) People with low level of home attachment are more sensitive to the home environment's affordances and friendliness compared with strongly attached people. Participants were 346 respondents ($M_{age}=26,6$; 208 females, 138 males), living in Moscow in their own apartments.

4. Methods

To achieve the research aims, we have developed three questionnaires. The first is "Home Attachment Questionnaire" consists of 14 direct questions (e.g., "I identify strongly with my home") assessed with 5-point Likert scale. The questionnaire has a single-factor structure and it reflects the overall level of home attachment (Reznichenko et al., 2015).

To measure the friendliness of home environment, we have developed a tool set consisting of two scales ('Functionality of Home Environment Questionnaire' (FHEQ) and 'The Personal Relevance of Home Environment Questionnaire' (PRHEQ)). These questionnaires included constructs associating with a specific need or affordance of home environment (Nartova-Bochaver et al., 2015a).

The FHEQ consists of 55 statements with the Likert scale for each item from 1 to 7, it finds the individual's relationship to the ideal home environment and has the following scales: 1) *Usability* includes the description of everyday functions without which home becomes inconvenient. 2) *Development* describes the home environment properties stimulating personal development 3) *Stability* reveals providing psychological and physical stability. 4) *Security* reflects needs for self-presentation, presentation of resident's status and power. The PRHEQ contains 54 constructs (e.g. needs for privacy, for storage, etc.). Each construct is given by two statements; there are 108 items in total. This questionnaire is designed to explore views about the real model of home environment. The questionnaire includes 7 scales. 1) *Home environment management* describes the possibility of controlling home. 2) *Resource* includes constructs associated with home supporting. 3) *Self-presentation* is associated with the inhabitants' possibility to personalize their own space. 4) *Ergonomics* is associated with the views on the home environment usability. 5) *Home alienation* concerns with the reasons of home estrangement. 6) *Flexibility scale* determines the ability of home environment to be dynamic and to respond to the variable resident's needs. 7) *Historicity scale* reflects the home links with personal, family, and general past.

5. Results

Prior correlation analysis has shown that home attachment is strongly associated with Personal Relevance of the home environment (8 relations, $p < .001$) and has a weak relationship with Functionality of ideal home environment (3 relations, $p < .01$; 2 relations, $p < .05$). Regression analysis has confirmed that home attachment is strongly predicted ($p < 0.001$) by PRHE-factors, especially by Resource and Ergonomics. As can be seen in Table 1, the Functionality characteristics of ideal (desired) home environment have less significant contribution to home attachment, while Pragmatism of ideal home does not affect home attachment at all. The ratio of PRHE and FHEQ and Home alienation are anti-predictors ($p < 0.001$) of home attachment.

Table 1. The Multiple Regression Analysis Results: PRHE and FHE-factors as Predictors of Home Attachment

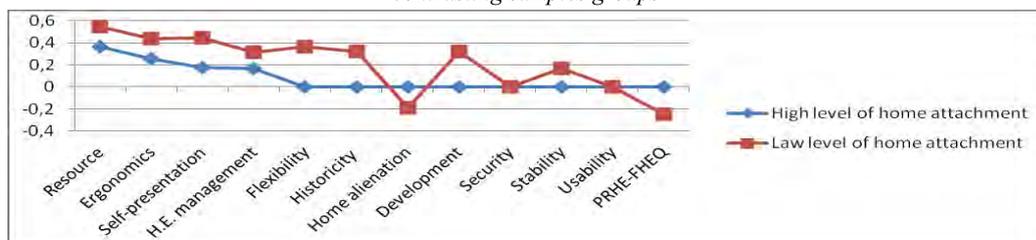
Questionnaire	Functions-predictors of home attachment	Beta (β)
PRHE (representation of the real home)	Resource	.692***
	Ergonomics	.573***
	Self-presentation	.495***
	Home environment management	.489***
	Flexibility	.392***
	Historicity	.339***
	Home alienation	-.240***
FHEQ (representation of the ideal home)	Development	.278***
	Security	.117*
	Stability	.139**
	Usability	-
PRHE/FHEQ discrepancy	Home unfriendliness	-.438***

Note: *** – $p < .001$, ** – $p < .01$ * – $p < .05$.

A gender comparison of home attachment, personal relevance and functionality of home environment's variables was conducted. Regression analyses reflect the gender specificity of home attachment's predictors: Home environment management ($\beta = .542$, $p < .001$) is more important factor in maintaining home attachment for women than for men, while for men self-presentation ($\beta = .533$, $p < .001$) makes a greater contribution to home attachment. Home Alienation is a significant predictor of home attachment in females ($\beta = -.364$, $p < .001$), while in males such an effect hasn't been detected. Among the functional characteristics of the ideal home only Security is statistically significant predictor ($\beta = -.153$, $p < .05$) in the female group. For men's home attachment significant predictors are Stability ($\beta = -.231$, $p < .01$) and Usability ($\beta = -.171$, $p < .05$). In general, women are more sensitive to the affordances of real home environment than men are, while desired functionality of ideal home has a stronger impact on men's home attachment.

We were also interested in how the attachment level is associated with the functional characteristics of home environment. For this purpose, the sample was dimidiated according to home attachment level ($Me = 3.71$) into the groups with relatively low and high level of home attachment (LLha-group and HLha-group). Correlation analysis reveals the differences of relationship between home environment functionality and home attachment in two contrasting groups (See Figure 1). In the LLha-group the current level of attachment is closely related to the all factors of PRHE ($p < .001$), especially with Resource ($r_s = .548$); lack of home attachment also positively correlated with the desired functions of ideal home environment, such as Development ($r_s = .319$, $p < .001$) and Stability ($r_s = .168$, $p < .05$).

Figure 1. Summary of Correlation analysis (Spearman's RCC): the interrelations between home attachment and functional characteristics (PRHE of real home representation and FHE-factors of ideal home representation) in two contrasting samples groups



People from the HLha-group are much less sensitive to functionality of dwelling: strong attachment interrelates with four functions of real home environment (Resource ($r_s = .364$, $p < .001$), Ergonomics ($r_s = .255$, $p < .01$), Self-presentation ($r_s = .364$) and Home environment management ($r_s = .169$), with $p < .05$), while the desired functionality does not affect the actual level of attachment.

6. Discussion

Our study has shown that home attachment depends on the functional potential of current living space and that unfriendly environment (the discordance between the affordances of actual and desired environments) adversely influences the level of home attachment. Dwelling resources and ergonomics are particularly important to maintaining home attachment. These functions are closely associated with facilitation of daily activities and with providing rest. Gender specificity is following: women are more sensitive than men to functionality of their dwelling, especially to household management capacity. This reflects the fact that the householder status is more typical for women: they are more likely to engage in housework and spend more time on home maintenance than men. Perhaps, low attached people most often try to improve their home environment and to make the certain affordances of the environment fit with desired functionality. So, they respond to any changes and are more reflective of functional characteristics of their dwellings. While strongly attached people have a less nuanced assessment of their living environment due to suitability to their needs.

References

- Coolen, H. (2011). *The Measurement and Analysis of Housing Preference and Choice*. NY: Springer.
- Nartova-Bochaver, S., Dmitrieva, N., Reznichenko, S., Kuznecova, V., & Braginec, E. (2015a). Metod ocenki druzhestvennosti zhlissha: oprosnik "Funkcional'nost' domashnej sredy". *Psihologicheskij zhurnal*, Vol. 36(4), 71–83.
- Reznichenko, S., Nartova-Bochaver S., Kuznecova, V. (2016). Metod ocenki privyazannosti domashnej srede. *Psihologia. Jurnal Vishey shkoli ekonomiki*. – In press.
- Scannell, L., Gifford, R. (2010). Defining place attachment: A tripartite organizing framework. *Journal of Environmental Psychology*, Vol. 30, 1–10.

INTRAGROUP STATUS AND PSYCHOLOGICAL SAFETY OF SCHOOL STUDENTS IN THE EDUCATIONAL ENVIRONMENT

Galina Kozhukhar & Ekaterina Gozhaya

Moscow State University of Psychology and Education, Moscow (Russia)

Abstract

Many contemporary investigators believe that studying interpersonal relations in the school environment and their characteristics are one of the key factors in creating safe and comfortable educational environment for every pupil. In this paper the main research question was: "What are the connections between the psychological safety of educational environment and the different types of students intragroup status?" The sample consisted of 171 school students of the seventh, eighth, tenth and eleventh years. The data was collected via Sociometric (Moreno) and Referentometric (Chedrina) procedures, and with the help of the "Power structure" technique (Kondratiev). Also the method "Psychological safety of the school environment" (Baeva, 2002) and the scale "Estimation of safety in the interpersonal interaction" (Kozhukhar, 2011) were used. The empirical results showed that pupils with high sociometric, referentometric status and with high informal position in class had high level of freedom and sincerity in dialogue; they were ready to manifest trust and openness in communication. Moreover, they gave higher estimation of the communicative psychological safety, in comparison with the pupils with a low status. We discovered that pupils with high status had high estimates concerning school psychological safety and the students with a high level of referentometric and sociometric (business) status gave high appreciation of the psychological comfort of communication. We did not find out any links between satisfaction with the school environment, calculated as the total score of the characteristics of the school social environment, and different kinds of status.

Keywords: *psychological safety, sociometric status, referentometric status, informal power, educational environment.*

1. Introduction

The problem of psychological safety as the subject of research is not new for contemporary psychological investigation. A great contribution to this problem within pedagogical psychology has been made by many Russian psychologists (Zimnjaja, Kolominsky, Kondratyev, Kuzmin, Leontev, Rean et al.). Some investigators studied the features of psychological safety in the educational environment (Baeva, Vihristjuk, Volkova, Zabrodin, Kovrov, Edmondson, Brand, D. Johnson, R. Johnson). Aggression and psychological violence in the interaction process were explored by Berezina, Bovina, Dubrovin, Safonova, Tsymbal, Olweus, Roland, and others. Personality qualities of the university students and school pupils, the peculiarities of their development depending on the safety level of the educational environment, were investigated by Kozhukhar, Leonov, and others.

Modern studies of the psychological safety of the educational environment, held by Russian psychologists, emphasize the importance of nonviolent interaction, therefore the safety of interpersonal relations. They also point out such factors as safety in satisfying the need in close personal relations and the referent importance of the educational environment (Baeva, 2002). Multiple studies of the teenage groups lead to the following conclusion: most teenagers are characterized by medium or low level of general psychological adaptation, which influences in turn the interpersonal relations, i.e. in communication the teenagers are critical, verbally aggressive, distrustful, hostile (Berezina, Bovina, 2013). The study of interpersonal relations in the school settings is one of the most important factors in creating comfortable and safe educational environment for all the students (Elias, Hathaway, 1999). The student status is connected with their learning progress, adaptation to the society and the relationships not only in the present, but also in the future professional life.

2. Design and objectives

This paper presents the study of the subjective psychological safety of communication, i.e. how the person views their relations, whether they are considered safe or dangerous. The main research question was: “What connections can be found between some indicators of psychological safety of educational environment and different types of intragroup status of students?”

The sample consisted of 171 school students of the seventh, eighth, tenth and eleventh school years. There were 97 students of the seventh year (56.7%), 37 - of the eighth year (21.6%) and 17 (9.9%) and 20 (11.7%) students from the tenth and eleventh years correspondingly. There were 75 females (43.9%) and 96 males (56.1%). The average age of school students was 15.00 (SD = 0.98).

3. Methods

The data was collected via Sociometric (Moreno) and Referentometric (Chedrina) procedures, and informal intragroup power structure evaluation (Kondratiev, 2007). Also the method “Psychological safety of the school environment” (Baeva, 2002) and the scale “Estimation of safety in the interpersonal interaction” (Kozhukhar, 2011) were used. To perform the data analysis SPSS. v. 23 was used.

4. Findings

According to the statistics data, the average indices of all the characteristics of safety in the interpersonal relations and the psychological safety of the educational environment are within the norm. Most variables can be described by non-normal distribution that is why Spearman's rho was used.

Table 1 presents the correlations between different types of statuses, the integral status and the overall estimation of communication safety and its two components.

Table 1. Correlation between different types of status and the estimation of communication safety

Status	Natural and free communication	Trustworthy and open communication	Overall estimation of communication safety
Sociometric status (emotional)	0.195*	0.100	0.156*
Sociometric Status (business)	0.240**	0.185*	0.230**
Referentometric status	0.200**	0.161*	0.211**
Informal power status	-0.228**	-0.190*	-0.216**
Integral status	-0.180*	-0.150	-0.167*

** $p \leq 0.01$

* $p \leq 0.05$

There were found significant correlations between different statuses of students and their estimation of communication safety. Such component as “natural and free communication” had significant correlation with all types of statuses, including the integral one. The higher the students status, the more often they manifest natural free communication.

As the status of informal power was calculated based on the ranking system, the same as the integral status (the smaller the digit, the higher the rank), “minus” in the table meant growth and decrease of indices at the same time.

Trust and openness were connected with sociometric status (business criteria), and with the referentometric status and the informal power status. The overall estimation of communication safety was also connected with all types of statuses.

Sociometric status (business) was positively connected with the educational environment ($r = 0.194$, $p \leq 0.05$), and negatively ($r = -0.156$, $p \leq 0.05$) connected with the negative and neutral index ($r = -0.164$, $p \leq 0.05$).

This status also grew depending on the behavioural component of educational safety ($r = 0.162$, $p \leq 0.05$), emotional experience of psychological comfort ($r = 0.155$, $p \leq 0.05$) and higher rates of the safety level ($r = 0.228$, $p \leq 0.01$).

The informal power status of students depended on their estimation of psychological school safety ($r = -0.186$, $p \leq 0.05$), its level ($r = -0.199$, $p \leq 0.01$) and satisfaction with safety characteristics ($r = -0.205$, $p \leq 0.01$). This status was also higher in students who paid a lot of attention to cognitive analysis of safety in communication ($r = -0.157$, $p \leq 0.05$). In addition, the informal power status had negative correlation with the neutral attitude to educational environment ($r = 0.172$, $p \leq 0.05$).

With higher referentometric status, the school children gave better estimations of the school safety ($r = 0.164$, $p \leq 0.05$) and its comfort level ($r = 0.168$, $p \leq 0.05$). The integral status had only one correlation, i.e. with the cognitive component of the educational environment ($r = -0.192$, $p \leq 0.05$).

There was no significant correlation between the sociometric status based on the emotional criteria and the estimation of psychological safety of the school environment.

With the help of Mann-Whitney criteria the two groups with high and low integral statuses were compared. The data differed within three characteristics: degree of natural and free communication ($U = 515.000$, $p = 0.037$), general estimation of communication safety ($U = 517.500$, $p = 0.040$), and the cognitive component of the environmental safety ($U = 526.000$, $p = 0.013$).

5. Discussion and conclusion

There are three main limitations of our study that are worth mentioning. There was studied the image of educational safety in students, but not the status change resulting from environment; there was no control group to compare the educational environment in the different types of schools; the study did not concern the different types of interpersonal relations that also contribute to the safety of the educational environment.

Our results prove the connection between the level of psychological safety and student relations with the reference group (Rassoha, 2005), and with the students status in the educational environment (Edmondson, 1999). In the school environment safety violations lead to negative emotions, specific interpersonal behaviour, high risk of conflicting behaviour and lower social support, etc. It was shown that within the safe environment, students get involved into trustworthy, free, open, and safe relations, which agrees with the students data (Kovrov, Antonova, 2013).

The sociometric status (emotional criterion) was not fully connected with the estimation of educational environment, in comparison with other types of status. This needs further investigation.

We suppose that creating psychologically safe environment may help each student improve their intragroup status, which in turn can strengthen the psychological well-being of both the students and the group as a whole.

References

- Baeva, I.A. (2002). Psihologicheskaja bezopasnost' v obrazovaniithe [Psychological safety in education] Monography. SPb.: the Union, 2002. (Russian Edition).
- Berezina E.B., Bovina I.B. (2013). Nasilie v shkole: social'no-psihologicheskie objasnenija i rekomendacii [Violence at school: social-psychological explanations and recommendations] // Psihologicheskaja nauka i obrazovanie 6. Pp. 37-49.
- Kovrov, V., Antonova E. (2013). Safety of educational environment: psychological and pedagogical aspects. Giornale Italiano della Ricerca Educativa. 6 (10). GIUGNO. Pp. 107-114
- Kozhukhar G.S. (2011). Bezopasnost' v obshhenii: uslovie i pokazatel' razvitija kommunikativnyh kompetencij v obrazovatel'nom processe [Safety in communication: condition and criterion for the development of communicative competence in educational process]. Jekspertiza psihologicheskaj bezopasnosti obrazovatel'noj sredy. Informacionno-metodicheskij bjulleten' Gorodskoj jekspertimental'noj ploshhadki vtorogo urovnja / Redaktory-sostaviteli I.A. Baeva, V.V. Kovrov. N.T. Oganessian. – M.: Jekon-Infom, 11, 17-23.
- Kondratyev, M., Ilyin V. (2007). Azbuka social'nogo psihologa-praktika [The ABS of a social psychologist-expert]. M: PER SE. (Russian Edition).
- Rassoha N.G. Predstavlenija o psihologicheskaj bezopasnosti obrazovatel'noj sredy shkoly i tipy mezhlichnostnyh otnoshenij ee uchastnikov [Ideas about psychological safety in school environment and the types of interpersonal relations there]. Dis. . kand. psihol. nauk. St. Petersburg. 2005. 157 p.
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams // Administrative Science Quarterly. 44 (2). Pp.350-383.
- Elias, M.J., Lantieri, L., Patti, J., Walberg, H.J., Zins, J.E. (1999). Violence Is Preventable // Education Week. 18 (36). Pp. 45-49.

WORK RELATED STRESS PERCEPTION IN PUBLIC AND PRIVATE SECTOR: A COMPARATIVE STUDY

Isabella Corradini & Assunta Marano

Themis Research Centre, Rome (Italy)

Abstract

The aim of this study is to explore the differences in work-related stress between public and private sector workers based on demographic variables such as sex, age or educational status and organizational stressors.

The study's sample comprises 132 public and 159 private sector Italian workers (N= 292) in the 25-60 age range (male mean age= 42 years old; Female mean age= 43 years old). The data were collected via PRISMA-RA (Corradini et al, 2015), an integrated set of tools for work related stress Risk Assessment using both objective and subjective viewpoints. The results analysis by a repeated-measures multivariate analyses of variance (MANOVA) show significant differences regarding individual and organizational work factors between public and private sector sample. Our tool has been able to identify these differences.

Keywords: *stress, workers, methodology, public sector, private sector.*

1. Background

Stress in work organizations is a very important topic of research, especially in these last years. According to European legislation (89/391/EEC) employer have to implement stress risk assessment in their organizations. It's not simple to define the factors to evaluate risk assessment. The European Framework Agreement on Work-Related Stress (2004), recognizing the complexity of the phenomenon, identifies some important factors for stress risk assessment. In this study we analyse the role of some specific variables for work related stress perception in public sector (government-owned and not profit-making) and private sector (not government-owned and profit-making).

Various studies (e.g. Lewig and Dollard, 2001; Macklin et al. 2006; D'Aleo et al., 2007) do not agree on stress differences between public and private sector. Differences probably depend on the specific context and specific variables, as various socio-demographic factors (Bano and Kumar Jha, 2012).

2. Methods

2.1. Participants

The present study has the objective to explore the differences in work-related stress between public and private sector workers based on demographic variables such as sex, age or educational status and organizational stressors. Data were collected via a protocol battery (Corradini & Marano, 2012), using clerical workers in Italy. A total of 292 workers with no managerial role (132 public and 159 private sector Italian workers) in the 25-60 age range (male mean age= 42 years old; Female mean age= 43 years old) participated in the study.

2.2. Protocol and procedure

The data were collected via PRISMA-RA, an integrated set of tools for work related stress Risk Assessment using both objective and subjective viewpoints. The P.R.I.S.M.A. Risk Assessment (Corradini, 2013; Corradini et al., 2015) is a self-report questionnaire for work related-stress risks assessment, composed by 90 items, scored according to HSE model.

2.3. Data analysis

Statistical analysis were performed using the SPSS software package v19.0 (Chicago, Illinois, USA). The sample was examined by a repeated-measures multivariate analyses of variance (MANOVA) x 6 (RA: Demands; Control; Support; Relationships; Role; Change) x 2 (Gender: M and F) x 2 (Sector:

Private and Public) x 2 (Educational Status: High and Low) and x 5 (Age group mean: I=30 age mean years old; II= 35 age mean years old; III= 40 age mean years old; IV=45 age mean years old; V= 50 age mean years old). Post hoc multiple comparisons were performed on significant interactions (Tukey's honestly significant differences, HSD; alpha level of .01; all other alphas were set at .05).

3. Results and discussion

Perception of work related stress was measured for public and private workers using a two level scale: PRISMA RA Risk high: Public Sector: 69.8%; PRIVATE Sector: 30.2%; and PRISMA RA Risk low at: Public Sector: 50.4% ; PRIVATE Sector: 49.6%.

In order to assess whether risk stress area are perceived differently by sector variable, a repeated-measures multivariate analyses of variance (MANOVA) was performed to compare the perception of work related stress (PRISMA RA: Demands; Control; Support; Relationships; Role; Change) x Sector (Sector: Private and Public) x Educational Status (High and Low) and x Age (Age group mean: I=30 age mean years old; II= 35 age mean years old; III= 40 age mean years old; IV=45 age mean years old; V= 50 age mean years old).

MANOVA RM confirmed that there were significant multivariate effects interaction between Gender

x Perception of work related stress x Age group (Wilks' Lambda ($F_{(20,863)} = 1,66$, $p < 0.03$; $\eta^2 = .03$).

We do not find a significant main effect of the sector factor ($F_{(5,260)} = 1,96$ $p = 0.84$; $\eta^2 = .03$).

Further analysis for Post Hoc Multiple Comparisons (Tukey's honestly significant differences, HSD) showed that while mean scores for perception of work related stress in employees with low educational status is greater than the corresponding scores in employees with high educational status, there was significant difference between the group by age level 35 years old, 40 years old and 50 years old.

Our work has shown that individual dependent aspects, like age, educational status, and gender, appears to have the largest impact on perception of work related stress both in public and private sectors. Our tool (P.R.I.S.M.A. Risk Assessment) has been able to identify these effects.

References

- Bano, B., Kumara, R.J. (2012). *Organizational Role Stress Among Public and Private Sector Employees: A Comparative Study*, The Lahore Journal of Business, pp. 23-36.
- Corradini I. (2013). *Lo stress sul lavoro: P.R.I.S.M.A., un nuovo strumento di indagine*, Stress e Vita. La scienza dello stress e la scienza della salute alla luce della Psiconeuroendocrinoimmunologia, Francesco Bottaccioli (a cura di), Tecniche Nuove
- Corradini, I., Marano, A. and Nardelli E. (2015). *A set of tool for work related stress risk assessment*, W.I.A.R.S., Lisbona, Portogallo.
- D'Aleo, N., Stebbins, P., Lowe, R., Lees, D. and Ham, D. (2007). *Managing workplace stress: Psychosocial hazard risk profiles in public and private sector Australia*. Australia Journal of Rehabilitation Counselling, 13(2), 68-87.
- Johnson, S., Cooper, C., Cartwright, S., Donald, I., Taylor, P., Millet, C. (2005). *Journal of Managerial Psychology*, Vol. 20, No.2, pp. 178-187, Esmerald Group.
- Lewig, K.A. and Dollard, M.F. (2001). *Social construction of work stress: Australian newsprint media portrayal of stress at work*, 1997-98. Work and stress, 15(2), 179-190.
- Macklin, D. S., Smith, L. A, and Dollard, M. F. Maureen (2006). *Public and private sector work stress: Workers compensation, levels of distress and job satisfaction, and the demand-control-support model*, Australian Journal of Psychology, 58(3), 130-143.

“NORMALITY” AT A SOCIAL COMPARISON IN THE UNITED STATES

Norihiro Kuroishi¹ & Yoriko Sano²

¹Japan Professional School of Education (Japan)

²Kanto Gakuin University (Japan)

Abstract

This study explored how social norms influence affective states. Cialdini et al. (1991) distinguished social norms into two types. Descriptive norm is decided by what most people do in a particular situation, which may bring about perceived typicality. On the other hand, injunctive norm is defined by moral rules, which reflects what people approve/disapprove. This study designed situations with different degrees of descriptive and injunctive norms, and measured the participants' affective reactions as to the situations. Web questionnaire were employed. Participants were recruited from the United States at Mechanical Turk. Finally, 518 participants (320 females, 195 males, and 3 others; aged 18-73) agreed to provide their data as a HIT. The questionnaire was designed experimentally, and each of them included an imaginary story containing a situation inducing a social comparison. Descriptive and injunctive norms were indicated by the performance of the protagonist and the surrounding others. Each participant was asked to suppose he/she was the protagonist of the story, and to estimate his/her affective reactions in that situation.

ANOVAs revealed the differential effects of the two types of social norms on affective states. Positive effects were influenced by the injunctive norm, whereas negative effects were determined by the descriptive norm. The higher one performed in a social comparison, the more positive affects he/she reported. On the other hand, negative effects were the lowest when his/her performance was met the same as or above the surrounding others. Comparing to the results obtained from Asian countries, universalities and some distinctive features in the United States were discussed.

Keywords: *Normality, injunctive and descriptive norms, affective reactions.*

1. Introduction

Social norms influence an individual's behaviors. According to Cialdini et al. (1991), social norms can be distinguished into two types. Descriptive norm is decided by what most people do in a particular situation, which may bring about perceived typicality. On the other hand, injunctive norm is defined by moral rules, which reflects what people approve/disapprove. Injunctive and descriptive norms usually agree with each other. People recognize thieving as a misdeed, and many people do not engage in such behaviors. In some situations, descriptive norms can conflict with injunctive norms. Although people think they should not litter in public places, littering on the ground may indicate the descriptive norm that they really do. When the two types of norms are disparate, the descriptive norms have greater effects on individuals' behaviors than the injunctive norms (Cialdini et al., 1991).

The United States is well-known as the most individualistic country in the world (Triandis, 1995). In individualistic culture, people tend to have independent view on the self, and individual goals are regarded to be valuable rather than conformity or consensus with surrounding others. Individualists emphasize diversity and creative opinions, whereas collectivists emphasize on relationship and harmony with surrounding others. Our previous research tried to reveal the relation between the relative performance and affective reactions at a social comparison situation in collectivistic culture. For example, Sano et al. (2010) examined Japanese sample, and showed the robust tendencies that Japanese people feel calmer and have less negative affects when they perform the same as the rest members of their group.

This study investigated the effects of injunctive and descriptive norms on affective reactions in individualistic country. Our hypothesis was that descriptive norms should be more influential even in the United States, as a representative of the individualistic countries.

2. Methods

Web questionnaire survey with an experimental design was applied in this study. Relative performance and knowledge of Results were manipulated. Each participant read an imaginary story

containing a social comparison, and was asked to identify him/herself as the protagonist of it (Table 1). The participants were randomly assigned to one of the 10 conditions.

Table 1. The imaginary stories about social comparison used in this study

Knowledge of Results	Contents of stories
Private	You are working for a company as a salesperson of a certain product. In all, there are five salespersons in your department. All of them are the same gender as you, and all are around the same age. One day, you took a peek at your colleagues' monthly sales statistics, and found that all of your colleagues had sold between 50 to 60 products. You had sold 103/ 73 /54/ 37/ 8 products.
Public	You are working for a company as a salesperson of a certain product. In all, there are five salespersons in your department. All of them are the same gender as you, and all are around the same age. One day, you and your colleagues took a look each others' monthly sales statistics, and found that all of your colleagues had sold between 50 to 60 products. You had sold 103/ 73 / 54/ 37/ 8 products.

Recruit. Participants were recruited from the United States at Mechanical Turk provided by Amazon.com Inc. Participants who agreed to provide their data as a Human Intelligence Task (HIT) for 0.50 dollar, completed a Web questionnaire supported by the Qualtrics system.

Measures. After reading the story, the participants were asked to estimate how much they would feel in the situation, by using the General Affects Scale (Ogawa et al. 2000). This scale consisted of 3 subscales; Positive affects ($\alpha=.94$), negative affects ($\alpha=.93$), and calmness ($\alpha=.92$).

3. Results

Table 2. Racial composition of the participants

Race	Sample of current study	Estimated from Population	Standardized Residual
White	401 (77.4%)	380.1 (73.4%)	2.25 *
Black	51 (9.8%)	65.6 (12.7%)	-1.90
Native	5 (1.0%)	4.2 (0.8%)	0.37
Asian	23 (4.4%)	27.1 (5.2%)	-0.80
Others	4 (0.8%)	25.4 (4.9%)	-4.26 ***
Multiracial	34 (6.6%)	15.6 (3.0%)	4.82 ***
Total	518 (100%)	518 (100%)	

Participants. The participants were 518 American residents from 45 states in the United States (320 females, 195 males and 3 others; aged $M=36.7$, $SD=12.61$, ranged from 18 to 74). Racial composition was shown in Table 2. Comparing to the population of the United States (from American Community Survey 2010), sampling was somewhat biased. The sample included more white and multiracial people, and less those who have other racial backgrounds. However, these differences were considered not to have a serious impact on the results, and the collected data were left intact for the analyses. To explore whether gender (female, male, or others), and age group (lower than 44, 45 through 64, or higher than 65) differences influenced on the affective states, an ANOVA was adopted. The main effect of gender ($F(2,511)<1.30$, *ns*) and of age group ($F(2,511)<2.92$, *ns*), and the interaction effect of gender x age group ($F(2,511)<0.71$, *ns*) were found to be insignificant on all affective states. Therefore, these variables were omitted from the following analyses.

Preliminary analysis. The participants could concretely visualize the scene of the presented story ($M=4.4$, $SD=0.76$; $t(517)=41.40$, $p<.001$), and also regard achieving high performance at the social comparison as the injunctive norm ($M=4.6$, $SD=0.68$; $t(517)=51.63$, $p<.001$).

Design 5 x 2 ANOVAs were adopted to determine whether the relative performance (highest, higher, middle, lower, or lowest conditions), knowledge of results (private or public) influenced on the affective reactions. The dependent variables were positive affects, negative effects, and calmness (see Figure 1).

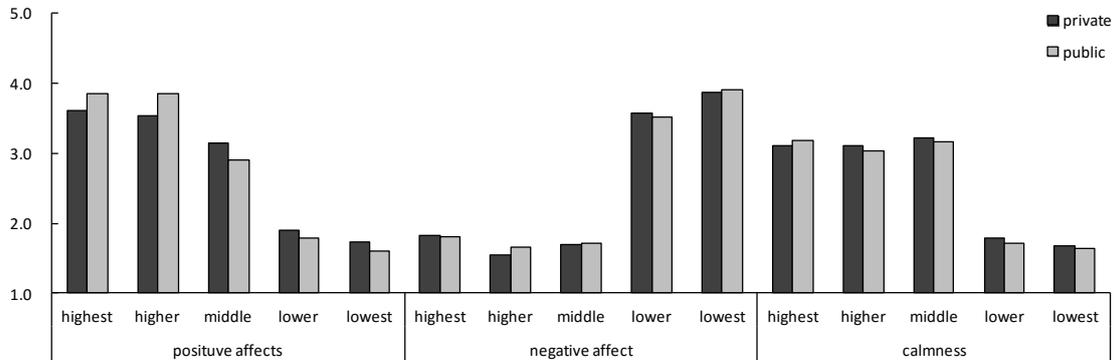
Positive effects. ANOVA yielded the significant effect for the relative performance ($F(4,508)=183.84$, $p<.001$). Multiple comparisons suggested that participants who performed higher and highest felt positive affects more than those who performed middle, and again middle performers felt more positive than the lower and lowest performers. In addition, the interaction of relative performance x knowledge of results was significant ($F(4,508)=2.92$, $p<.05$), and higher performer in public comparison felt positive affects more than those in private comparison. The main effect of knowledge of results was not significant ($F(1,508)=0.08$, *ns*).

Negative effects. Significant effect of the relative performance was obtained ($F(4,508)=261.36$, $p<.001$). Participants with lowest performance felt negative affects more than lower performer, and again

lower performer felt more negative than those in the other 3 conditions. Neither the main effect of knowledge of results nor the interaction effects were found to be significant ($F(1,508)=0.09$, *ns*; $F(4,508)=0.21$, *ns*, respectively).

Calmness. Significant effect was found in the relative performance ($F(4,508)=118.43$, $p<.001$). Participants with lower and lowest performance felt less calm than those in the other 3 conditions. Neither the main effect of knowledge of results nor the interaction effects were found significant ($F(1,508)=0.27$, *ns*; $F(4,508)=0.17$, *ns*, respectively).

Figure 1. Mean ratings of emotional reactions to relative performance by knowledge of results



4. Discussion

ANOVAs revealed the different patterns of affective reactions. The higher one performed in a social comparison, the more positive affects he/she reported. On the other hand, less negative effects were felt when his/her performance was the same as or above the surrounding others. Even in individualistic culture, people prefer to be similarly to others, which could bring about harmony with the surrounding others. These results suggested that the differential effects of the social norms. Positive effects were influenced by the injunctive norm, whereas negative effects were determined by the descriptive norm.

In our previous research, people in collectivistic culture showed similar patterns of affective reactions. (Kuroishi & Sano, 2013). However, Some differences were found at two points. First, East Asia people felt positive affects most with their higher performance, whereas Americans did most with their highest performance. Second, East Asians felt negative affects least with their middle performance, whereas Americans did less when they performed middle or above the surrounding others. The current study alone cannot identify it as an individualism-collectivism difference. Further cross-cultural examination are necessary to reveal definite explanation of cultural differences, including other individualistic countries such as the UK, Holland, and Australia.

Acknowledgement

The authors thank Hidefumi Hitokoto from Michigan University for his data collection support.

References

- Cialdini, R. B., Kallgren, C. A., & Reno, R. R. (1991). A focus theory of normative conduct. *Advances in Experimental Social Psychology*, 24, 201-234.
- Kuroishi, N. & Sano, Y. (2013.08) How do you feel when you performed normal at a social comparison? : Cross-cultural study among China, Japan, and South Korea. Poster Presentation at the 10th biennial conference of Asian Association of Social Psychology.
- Ogawa, T., Monchi, R., Kikuya, M., & Suzuki, N. (2000). Development of general affect scales. *Japanese Journal of Psychology*, 71, 241-246.
- Sano, Y., Kuroishi, N., & Erlandsson, A. (2010.09). How do you feel when you are normal? : In the case of Japanese. Poster Presentation at the 74th annual conference of the Japanese Psychological Association.
- Triandis, H. C. (1995). *Individualism and collectivism*. San Francisco, CA: Westview Press.
- U.S. Census Bureau; 2010 Census Summary File 1; Tables P5, P8, PCT4, PCT5, PCT8, and PCT11; using American FactFinder; <<http://factfinder.census.gov>>; (5 December 2015).

EXPLORING THE ASSOCIATION BETWEEN OUTCOME-INTENT BASED MORAL JUDGMENT AND PSYCHOPATHOLOGICAL TRAITS DURING DEVELOPMENTAL AGE

Elettra Pezzica¹, Raffaella Belotti¹, Roberto Mordacci² & Anna Ogliari¹

¹Developmental Psychopathology Unit, Vita-Salute San Raffaele University (Italy)

²CeSEP, Centre for Public Ethics Studies, Vita-Salute San Raffaele University (Italy)

Abstract

Background: During development, moral judgments are initially based on outcomes (accidental harm is judged more negatively than attempted harm), but then a shift occurs and intentions become crucial. Literature disagrees on the age of the shift. Our previous work found the shift to happen around 8 years and, around 12, individual differences in judging the agent of accidental harm appeared. In this experiment we investigated possible relations between outcome-intent based moral judgment and behavioral difficulties in children and adolescents, since no studies in the literature have explored this topic.

Methods: 96 subjects aged 5-18. Participants watched *ad hoc* created cartoon videos, showing accidental and attempted harm situations, and they judged agent's naughtiness and blameworthiness. Parents filled Child Behavior Checklist (CBCL).

Results and Discussion: Before the shift, we found positive significant correlations between naughtiness/blameworthiness assigned to the agent of attempted harm and many CBCL internalizing scales. After the shift no correlations were observed. Focusing on up to 12 years old subjects, we found significant higher scores in Affective Problems CBCL scale in those who judged the agent of accidental harm as not blameworthy. Our results show an association between outcome-intent based moral judgment and behavioral traits, especially internalizing traits.

Keywords: moral judgment, intention/outcome, Child Behavior Checklist, internalizing problems, developmental age.

1. Introduction

Moral judgment can be based on the outcome of the action or on the intention of the agent.

During development, a shift from outcome to intent based moral judgment occurs: before the shift, accidental harm situations (ACH, neutral intention but negative outcome) are judged more negatively than attempted harm situations (ATH, negative intention but neutral outcome). Authors in the literature disagree on the age of the shift, from preschoolers to 10 years of age (i.e. Piaget 1965, Hamlin et al., 2013; Cushman et al., 2013). Moreover, data in adulthood (i.e. Young et al., 2009) showed that even if the agent of ATH is judged worse than the agent of ACH, individual differences in judging the agent of ACH are present. By an *ad hoc* created task, our previous work (in prep.) found that the shift from outcome to intention seems to occur around 8 years of age and that individual differences in judging the agent of ACH appeared from 12. A body of research focused on the relationship between moral development and individual differences in children behavioral traits, in particular externalizing (i.e. Malti & Keller 2009).

In this experiment we investigated possible relations between psychopathological traits in children and adolescents (measured by CBCL questionnaire) and specifically outcome-intent based moral judgment (evoked by *ad hoc* created cartoon videos representing ACH and ATH situations), since no studies explored this topic yet to our knowledge.

2. Methods

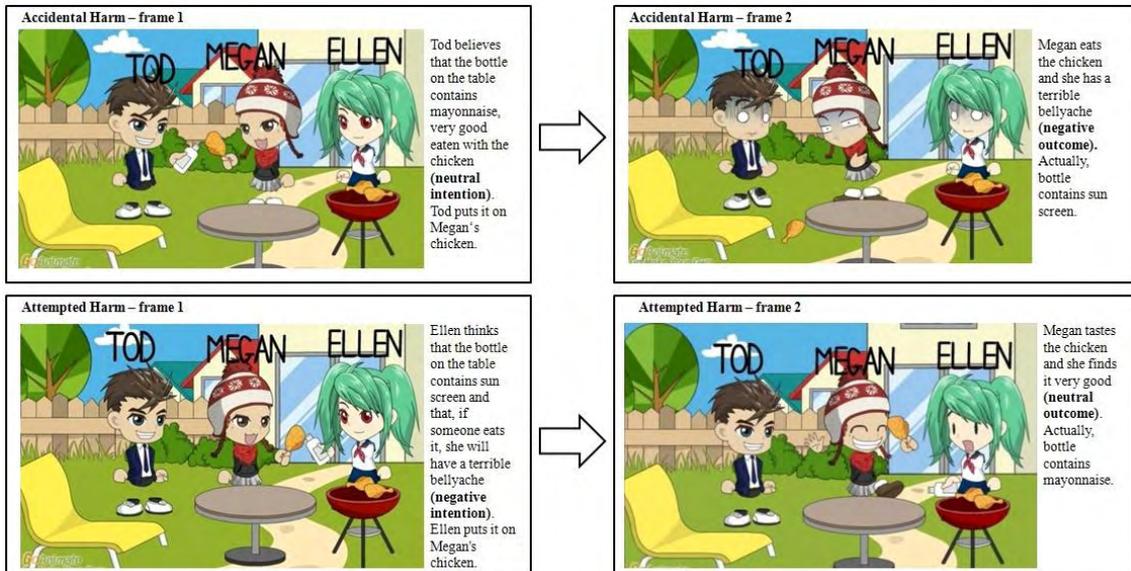
2.1. Participants

We involved 96 children and adolescents from 5 to 18 years of age, clustered in six groups (1: last year of kindergarten; 2: I - II primary school; 3: III - IV primary school; 4: V primary school - I middle school; 5: II - III middle school; 6: high school). Each group counted 16 participants.

2.2. Moral judgment assessment: cartoon and interview

We designed four different scenarios in which a protagonist was harmed in daily contexts (The Mushroom, The Sun Screen, The Stool, The Shelf), on the basis of Young et al. (2009) task. For each scenario we created cartoon videos representing two situations: accidental harm (ACH) and attempted harm (ATH). Figure 1 reports the synthesis of “The Sun Screen” cartoon.

Figure 1. “The Sun Screen” cartoon: ACH and ATH



Each participant watched on a laptop a combination of moral videos. For the administration, we used a randomization procedure for Latin Squares to control eventual variables that could influence answers (video typology, damage situation, naughty/blameworthy question, and gender). After each video, a brief interview was submitted to the participant. The participant was asked to morally judge the agent of the harm (ACH or ATH) on naughtiness and blameworthiness using a visual analogue scale (100 units long).

2.3. Psychopathological traits assessment: the CBCL

The Child Behavior Checklist 6-18 (CBCL/6-18) was filled in by one of the parents.

The CBCL is a standardized parent-report questionnaire, composed of 118 items, rating behavioral and emotional problems exhibited by the child in the past 6 months on a 3-point scale. The questionnaire includes eight empirically based syndrome scales (Anxious/Depressed, Withdrawn/Depressed, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule-Breaking Behavior, Aggressive Behavior) and six DSM-oriented scales aimed at covering common childhood mental disorders with corresponding DSM-IV criteria (Affective Problems, Anxiety Problems, Somatic Problems, Attention Deficit/Hyperactivity Problems, Oppositional Defiant Problems, Conduct Problems). The psychometric characteristics have been well studied (Achenbach and Rescorla, 2001).

2.4. Analyses

For our analyses we divided the sample in two groups of age: younger children until 8 (before the shift, N=32) and older (after the shift, N=64). In each group, we explored through correlation tests the possible associations between naughtiness/blameworthiness assigned to the agents of ACH and ATH, and CBCL scales. Then, we focused on up to 12 years old subjects and we investigated through independent samples t-test possible differences in CBCL scores in subjects who judged the agent of ACH as blameworthy or not.

3. Results

Before the shift: Table 1 reports the correlations between naughtiness/blameworthiness assigned to ACH/ATH agents and CBCL scales that showed significant results (in bold).

After the shift: No significant correlations were observed between naughtiness/blameworthiness assigned to ACH/ATH agents and CBCL scales. Focusing on up to 12 years old subjects, we found significant differences in Affective Problems CBCL scores for subjects who judged the agent of ACH

blameworthy ($M=1.25$, $SD=1.528$) and subjects who judged the agent of ACH as not blameworthy ($M=3.40$, $SD=2.624$; $t(31.376)=3.071$, $p=.004$).

Table 1. Moral judgment and CBCL scores correlations before the shift

		Accidental Harm		Attempted Harm	
		Naughtiness	Blameworthiness	Naughtiness	Blameworthiness
Clinical Scales	Anxious/Depressed	-.143	-.273	.461*	.367
	Withdrawn/Depressed	-.219	-.277	.487**	.392*
	Somatic Complaints	-.151	-.270	.404*	.233
	Aggressive Behavior	.231	.141	.405*	.306
	Internalizing Problems	-.178	-.304	.503**	.378*
	Externalizing Problems	.264	.146	.388*	.283
DSM-Oriented Scales	Affective Problems	.068	-.034	.474**	.429*
	Anxiety Problems	-.088	-.207	.438*	.398*
	Somatic Problems	-.256	-.326	.368*	.264

* $p<0.05$; ** $p<0.01$

4. Discussion

The aim of this study was to investigate the possible relation between outcome-intent based moral judgment (evoked by cartoon videos representing ACH and ATH situations) and psychopathological traits (measured by CBCL questionnaire) in children and adolescents. In the subsample before the shift from outcome to intention (the trend is judging the agent of ACH worse than the agent of ATH), we found positive significant correlations between naughtiness/blameworthiness assigned to ATH agent and many CBCL internalizing scales. Thus, internalizing traits before the shift were associated to higher scores in naughtiness/blameworthiness attributed to the agent of ATH. In our hypothesis, internalizing traits might lead subject to analyze other thoughts perceiving the negative intentions previously than peers (when there is not an effective harm). Moreover we found positive significant correlations between naughtiness/blameworthiness assigned to the agent of ATH and the CBCL externalizing scale of Aggressive Behavior. In our hypothesis, more aggressive children could be more familiar with negative intentions and so catch them better. No correlations were observed for other externalizing scales, neither for situation of ACH. In the subsample after the shift (the trend is judging the agent of ATH worse than the agent of ACH), no correlations were observed showing that behavioral traits were not associated with differences in our moral judgment task. However, focusing on up to 12 years old subjects, when individual differences in judging the accidental transgressor appeared, we found significant higher scores in Affective Problems CBCL scale in those who judged the agent of ACH as not blameworthy. Thus, subjects with higher affective traits (low self esteem, emotional liability, feel of guilt) attributed more weight to intentions when an effective harm occurred. In our hypothesis, these subjects tend to blame themselves and excuse the others. Our results show an association between outcome-intent based moral judgment and psychopathological traits, especially internalizing traits.

References

- Piaget, J. (1965). *The Moral Judgment of the child*. New York: Free Press.
- Cushman, F., Sheketoff, R., Wharton, S., & Carey, S. (2013). The development of intent-based moral judgment. *Cognition*, 127(1), 6-21.
- Hamlin, J.K. (2013). Moral judgment and action in preverbal infants and toddlers: evidence for an innate moral core. *Current Directions in Psychological Science*, 22(3), 186-19.
- Young, L., & Saxe, R. (2009). Innocent intentions: a correlation between forgiveness for accidental harm and neural activity. *Neuropsychologia*, 47(10), 2065-72.
- Achenbach, T.M., Rescorla, L.A. (2001). *Manual for the ASEBA School-Age Forms & Profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families
- Malti, T., & Keller, M. (2009). The relation of elementary school children's externalizing behavior to emotion attributions, evaluation of consequences, and moral reasoning. *European Journal of Developmental Psychology*, 6, 592-614.

THE ROLE OF SURPRISE ENHANCEMENT IN PREDICTIONS

Catarina Amado¹, Petra Hermann⁴, Petra Kovács^{3,4},
Mareike Grotheer^{1,2}, Zoltán Vidnyánszky^{3,4} & Gyula Kovács^{1,2}

¹*Institute of Psychology, Friedrich-Schiller-University of Jena, (Germany)*

²*DFG Research Unit Person Perception, Friedrich-Schiller-University of Jena (Germany)*

³*Department of Cognitive Science, Budapest University of Technology and Economics (Hungary)*

⁴*Brain Imaging Centre, Hungarian Academy of Sciences (Hungary)*

Abstract

In recent years, several functional magnetic resonance imaging (fMRI) studies showed that correct stimulus predictions reduce the neural responses when compared to surprising events (Egner et al., 2010). Further, it has been shown that such fulfilled expectations enhance the magnitude of repetition suppression (RS, i.e. a decreased neuronal response after the repetition of a given stimulus) in face selective visual cortex as well (Summerfield et al., 2008). Current MEG and neuroimaging studies suggest that the underlying mechanisms of expectation effects are independent from these of RS (Grotheer & Kovács, 2015; Todorovic & Lange, 2012). However, it is not clear as of today how perceptual expectations modulate the neural responses: is the difference between correctly predicted and surprising stimuli due to a genuine response reduction for correctly predicted stimuli (expectation suppression) or is it due to an increased response for surprising stimuli (surprise enhancement)? Therefore, here we used a modified version of the paradigm of Grotheer & Kovács (2015) to induce predictions independently from repetition probability by presenting pairs of faces (female, male or infant) that were either repeated or alternating. Orthogonally to this, predictions were manipulated by the sex of the first face within each pair so that it signaled high, low or equal probability of repetitions. The neutral condition with equal probabilities for alternating and repeated trials was used to identify the role of surprising and enhancing modulations. To confirm that subjects were paying attention to the stimuli and to guarantee that they were capable of judging the stimulus categories effectively, 18% of the trials were target trials in which subjects had to respond whether the stimulus had been a female, male or infant face. Twenty-four young healthy subjects participated in this study. Functional and anatomical high-resolution images were acquired (3T). Due to technical issues, 2 participants were excluded from the analysis. Thus, 22 subjects (8 male; 2 left-handed, mean age (\pm SD): 23.5 (2.9) years) were involved in the final analysis. Similarly, to Grotheer & Kovács (2015), we found significant RS ($p < 1e-4$) and significant expectation effect ($p = 0.01$) in the fusiform face area (FFA). Importantly, the expectation effect was driven by a larger response for surprising events in comparison to the neutral and correctly predicted conditions for alternating trials ($p < 0.05$). This finding suggests that expectation effects are dependent on an enhanced top-down modulation, in other words by surprise enhancement. Crucially, the relationship of RS magnitude and expectation effect varies between hemispheres ($p = 0.04$): being dependent in the right hemisphere and additive in the left hemisphere. Altogether, these results suggest the role of surprise enhancement in prediction effects.

Keywords: *expectation, fMRI adaptation, prediction, repetition suppression, surprise.*

1. Introduction

The extensively studied neural repetition suppression (RS) phenomenon (for review see Grill-Spector, Henson, & Martin, 2006) has been recently associated with predictive coding (PC) theories (Friston, 2005) of neural functions (Summerfield et al., 2008). RS describes decreased neuronal response after the repetition of a given stimulus and is used to study the selective properties of neuronal populations. Similar to RS, fulfilled expectations also lead to reduced neural activity when compared to incorrect predictions, i.e. surprising events, and this phenomenon has recently been termed as expectation suppression (Todorovic & Lange, 2012). The current literature shows that expectation suppression and RS have different temporal windows (Todorovic & Lange, 2012) and are additive processes (Grotheer & Kovács, 2015). None of these previous studies could clarify whether the addition of expectation suppression and RS effects is due to a decrease of the response for correctly expected stimuli or an increase of the response to the surprising, unexpected stimuli. We reasoned that if the previously observed expectation effects are due to a genuine response reduction, reflecting the reduced ϵ in the correctly

predicted trials (similarly for alternating and repeated), then these trials should lead to lower BOLD signal when compared to the unpredicted, neutral trials as well. However, if the prediction effects are due to the enhanced ε in the surprising trials (alternating and repeated) then these should lead to larger BOLD responses when compared to the unpredicted (neutral) as well as to the correctly predicted trials. Thus, a main effect of expectation conditions and a subsequent post-hoc analysis would clarify from which expectation condition the BOLD signal of unpredicted, neutral trials differs most – from the correctly predicted (suggesting expectation suppression) or from the surprising trials (suggesting surprise enhancement).

2. Methods

Functional and anatomical high-resolution images were acquired (3T MR-scanner). A T1-weighted high-resolution 3D anatomical image was acquired using a MP-RAGE sequence (TR = 2300ms, TE = 3.03ms, 192 slices, 1 mm isotropic voxel size). fMRI images (T2* weighted images) were collected using an EPI sequence (34 slices, 10° tilted relative to axial, TR = 2000ms; TE = 30ms; flip angle = 90°; matrix size = 64 64; 3 mm isotropic voxel size). A total of 3 runs were administered and no stimulus appeared in more than one trial during each run. One run was composed of 240 trials (correctly predicted, surprising and neutral conditions had 120, 40 and 80 trials within a single run, respectively) and took about 13 minutes. Stimuli were presented for 250 ms each, pairwise, separated by a randomly varied inter-stimulus interval (between 400 and 600 ms with 50 ms steps) and followed by a randomized 1 or 2s long inter-trial interval. The first stimulus could either be identical to (Rep) or different from (Alt) the second stimulus. Stimulus size was 6° in diameter. The same face category was used for each stimulus pair (i.e. both faces of the pair were always either female, male or infant) and subjects were presented with 33.33% female/male/infant trials (administered randomly). The stimulus category was used as a cue to signal high-, low- or medium- probabilities of trial type (repetition or alternation) occurrences. This way, participants could form predictions regarding the likelihood of repetitions and alternations. Prior to the scanning session, participants were informed about the relative repetition/alternation probabilities as well as about their contingencies on stimulus category and adequate task performance was assured. 18% of the trials were target trials in which subjects had to respond whether the stimulus had been a female, male or infant face. Distinct functional localizer runs served as basis for Regions of Interest (ROIs) selection. The ROIs were selected individually on the single subject level from the thresholded ($p < 0.001_{\text{uncorrected}}$) t maps of the contrast *faces vs Fourier randomized faces* to determine FFA. The FFA (N=22), average MNI coordinates (\pm SE) and cluster size (\pm SE) for left and right hemisphere were the following: -40.4 (0.8) - 59.6 (1.3) - 17.7 (0.9) and 54(5); 41.6 (0.9) -57.8 (1.3) -16.8 (0.7) and 54(3).

A time series of the average voxel value within the different ROIs was determined and extracted from our event-related sessions. The convolution of the canonical Hemodynamic Response Function (HRF) of SPM12 with each of the 6 experimental conditions was used to define predictors for a General Linear Model (GLM) analysis of the data. Target trials were not modelled separately, due to sufficient time between trial and choice screen presentations. Preliminary analyses revealed no main effect of experimental run ($F(2,40)=0.4865$, $p=0.62$) nor significant interactions between run and trial type ($F(2,40)=1.56$, $p=0.22$) or conditions ($F(4,80)=1.7$, $p=0.15$), therefore the results of the three runs were averaged. We performed repeated measures ANOVAs for the FFA with hemisphere (2), expectation condition (3) and trial type (2) as within-subject factors.

3. Results

3.1. Behavioral

Mean accuracy for sex judgement was 91% (\pm SD: 8%) across all trial types. The participant's accuracies did not differ between trial types ($F(1,21)=0.97$, $p=0.34$). However, participants had a significantly lower accuracy in trials when their predictions were incorrect (main effect of expectation condition: $F(2,42)=3.8$) as compared to trials with correct predictions (Fisher LSD post hoc test: $p=0.01$) and a similar trend was seen when compared against neutral trials (Fisher LSD post hoc test: $p=0.08$). On average participants required 1146ms (\pm SD: 117ms) to determine the sex of the presented faces. Reaction times did not differ significantly between trial types ($F(1,21)=0.105$, $p=0.75$) or expectation conditions ($F(2,42)=0.82$, $p=0.45$).

3.2. fMRI

3.2.1. FFA. The ANOVA results of this section will be presented in the following order: 1. Main effect of RS; 2. Main effect of expectation condition; 3. Main effect of hemisphere; 4. Interactions.

We observed a significant repetition suppression (main effect of trial type: $F(1,21)=26.84$, $p=0.00004$). We also found a main effect of expectation condition ($F(2,42)=5.09$, $p=0.01$), which was due to a larger BOLD response for incorrect predictions when compared to neutral, unpredicted events (Fisher LSD post hoc test: $p=0.003$). Interestingly, a similar tendency was observed when comparing correctly predicted and neutral conditions (Fisher LSD post hoc test: $p=0.07$), indicating somewhat smaller overall responses for the unpredicted, equal probability trials as compared to trials with correct predictions. Unlike in our prior study (Grotheer & Kovács, 2015) we found no difference between correct and incorrect predictions (Fisher LSD post hoc test: $p=0.2$).

We also observed a main effect of hemisphere ($F(1,21)=20.25$, $p=0.0002$) in the form of larger BOLD responses in the right, when compared to the left FFA. This hemisphere effect interacted with trial type: $F(1,21)=5.09$, $p=0.04$, due to a larger RS effect in the right (Fisher LSD post hoc test: $p<1e-7$) in comparison with the left hemisphere (Fisher LSD post hoc test: $p=4e-5$). Importantly the three-way interaction of trial type expectation condition hemisphere was also significant ($F(2,42)=3.38$, $p=0.04$), meaning that the magnitude of RS showed a dependency on expectation condition and hemisphere. This interaction is mainly due to the higher RS for incorrect predictions over the other conditions for the right FFA. Nonetheless, the repetition effect was significant for all expectation conditions and for both the left and right hemispheres (Fisher LSD post hoc tests: $p<0.001$ for all comparisons). Additionally, alternating trials were significantly different for the three expectation conditions for both hemispheres, having the most elevated responses during the surprising events and lower BOLD responses in the neutral and in the correctly predicted conditions (Fisher LSD post hoc tests: $p<0.05$ for all comparisons).

3.2.2. Whole-brain analysis. To test whether repetition and expectation effects are encoded by other neurons outside the FFA, we also performed a second-level whole-brain analysis testing for repetition and expectation effects as well as for the interaction of these factors, using a fixed threshold of $p<0.05$ FWE with a cluster size >20 voxels. Testing the main effect of repetition (Alt>Rep) revealed one active cluster in the right fusiform gyrus (MNI [x,y,z]: 36, -52, -14; cluster size: 351). While not identical with it, this coordinate closely resembles the average coordinate of our rFFA. The opposite contrast (Rep>Alt) led to no significant activations anywhere in the brain. The same threshold yielded two clusters of activations for the Surprising>Expected (Sur>Exp) contrast, revealing higher activations during surprising when compared to correctly predicted trials over the inferior frontal gyrus (MNI [x,y,z]: 48, 24, 10 (BA 45) and 32, 24, -6 cluster sizes: 31 and 30). No significant activations were found for the opposite contrast (Exp>Sur).

4. Conclusion

Our major finding is that surprising events led to significantly larger activity as compared to unpredicted, neutral events. This suggests that the previously described difference between correctly expected and surprising stimuli is in fact generated by surprise enhancement rather than by expectation suppression. Furthermore, the modulation of RS magnitude by this expectation effect varies between hemispheres: being dependent in the right hemisphere and additive in the left hemisphere.

References

- Egner, T., Monti, J. M., & Summerfield, C. (2010). Expectation and Surprise Determine Neural Population Responses in the Ventral Visual Stream. *The Journal of Neuroscience*, *30*(49), 16601–16608, from <http://doi.org/10.1523/JNEUROSCI.2770-10.2010>
- Friston, K. (2005). A theory of cortical responses. *Philosophical Transactions of the Royal Society of London B: Biological Sciences*, *360*(1456), 815–836, from <http://doi.org/10.1098/rstb.2005.1622>
- Grill-Spector, K., Henson, R., & Martin, A. (2006). Repetition and the brain: neural models of stimulus-specific effects. *Trends in Cognitive Sciences*, *10*(1), 14–23, from <http://doi.org/10.1016/j.tics.2005.11.006>
- Grotheer, M., & Kovács, G. (2015). The relationship between stimulus repetitions and fulfilled expectations. *Neuropsychologia*, *67*, 175–182, from <http://doi.org/10.1016/j.neuropsychologia.2014.12.017>
- Summerfield, C., Trittschuh, E. H., Monti, J. M., Mesulam, M.-M., & Egner, T. (2008). Neural repetition suppression reflects fulfilled perceptual expectations. *Nature Neuroscience*, *11*(9), 1004–1006, from <http://doi.org/10.1038/nn.2163>
- Todorovic, A., & Lange, F. P. de. (2012). Repetition Suppression and Expectation Suppression Are Dissociable in Time in Early Auditory Evoked Fields. *The Journal of Neuroscience*, *32*(39), 13389–13395, from <http://doi.org/10.1523/JNEUROSCI.2227-12.2012>

DEATH-RELATED STROOP CUES INCREASE MATERIALISTIC CHOICES IN DECISION MAKING

Antonio A. Álvarez & Lara Rodríguez-González

*Departamento de Psicología Social, Básica e Metodología. Universidade de
Santiago de Compostela (Spain)*

Abstract

Different from other species, human beings demonstrate abstract symbolic thinking and self-reflection that inevitably make them aware of their inexorable death. From the perspective of Terror Management Theory, such awareness has been documented as influencing human behavior. For example, strong reminders of mortality (e.g., questions about death) make people less utilitarian in subsequent decision making when the dilemmas imply moral conflicts. This study was designed to analyze if the same findings would be obtained when employing more subtle reminders of mortality. The study was comprised of 22 undergraduate women from the University of Santiago de Compostela (Spain) who participated in an emotional Stroop task. For half of the participants, this task included death-related words (mortality salience or MS condition) as well as neutral words that matched in frequency and length. The other half of the participants were presented with dental-pain-related words (Control condition) and matching neutral words. Immediately after finishing the Stroop task, the participants were asked to carry out a decision making task with 16 dilemmas that either implied a moral conflict or not. Contrary to expectations, MS participants made more utilitarian judgments than the control participants in moral-conflict dilemmas, but only in situations where money was explicitly involved. Dividing the dilemmas between money-related (where money was explicitly involved in the choice) and non-money-related, new analysis indicated that MS participants were more utilitarian than control participants with money-related dilemmas, but not with non-money-related dilemmas. These results suggest, consistent with previous studies, that MS induction may make people more materialistic.

Keywords: *motivation and emotion, terror management theory, emotional stroop, making decision.*

1. Introduction

Unlike other species, humans self-reflect and think about their future. As a consequence, they become aware, and often scared about the inexorability of death (e.g., Pyszczynski, Greenberg, and Solomon, 1999). From the *Terror Management Theory* (TMT) perspective, Pyszczynski et al. (1999) proposed that people shield the death-related worries using proximal and distal defenses. The first defenses act against conscious thoughts of death by suppressing them. The distal defenses act against the unconscious thoughts by maintaining two mental constructs: faith in a cultural worldview (a symbolic conception of reality that imbues life with meaning, stability, and transcendence) and self-esteem.

Like other cognitive functions, decision making has been proposed to follow a dual model of processing, with an automatic processing and resource-limited processing. In the case of moral judgment, this implies a division between automatic, emotional responses, often associated to deontologism (which signifies that moral actions are binding even when they result in bad consequences), or rational, resource-demanding responses, such as utilitarian judgments (harmful actions are acceptable when maximizing good consequences) (Greene, Morelli, Lowenberg, Nystrom, & Cohen, 2008). Given that reminders of our mortal condition (*mortality salience* or MS induction) may demand a person's cognitive resources to block conscious thoughts of death by means of proximal defenses, Trémolière, De Neys, and Bonnefon (2012) investigated whether MS could reduce utilitarian responses in the resolution of dilemmas. The participants responded to questions either about their death (MS condition) or extreme pain (control), and then they resolved dilemmas involving a moral conflict or not. The frequency of utilitarian responses was lower in the MS condition than in the control condition, but only for moral conflict dilemmas.

2. Objectives

The standard MS induction developed in TMT research requires people to write about their own death and the emotions that the related thoughts cause for them. As a direct way of presenting concern-related contents, the emotional Stroop task [the naming of the color font of affective (vs. neutral) words] might be a more subtle, less aggressive alternative method for thought induction. The aim of the present experiment is to replicate the Trémolière et al. findings (MS reduces the frequency of utilitarian choice in moral dilemmas), by using the emotional Stroop paradigm as a method to induce MS.

3. Methods

The participants were 22 undergraduate women from the University of Santiago de Compostela, Spain, ranging in age from 19 to 30 years ($M = 21.68$; $SD = 2.10$). They generously took part in the experiment only in exchange for a small gift (some candy), and were naïve as to the purpose of the experiment.

Stroop tasks were conducted with blue and red Spanish words. In the MS condition, 15 death-related (in English, e.g., CORPSE) and 15 neutral words (e.g., REPORT) matched in frequency and length, were used. In the control condition, there were 15 dental-pain-related (e.g., CARIES) and 15 matching neutral words (e.g., FUNNEL). Immediately after finishing the Stroop task, the participants completed a decision making task with 16 dilemmas, half of which involved a moral conflict and half did not. The dilemmas (see a summary in Table 1), presented in Spanish in random order, were based on those of Greene, Sommerville, Nystrom, Darley, and Cohen (2001).

Table 1. Comparisons (p : significance level) in utilitarian choice rates between Conditions [MS and Control (Ct.)] in dilemmas that could be (Y) or not (N) morally conflictive (C) and/or explicitly money-related (M)

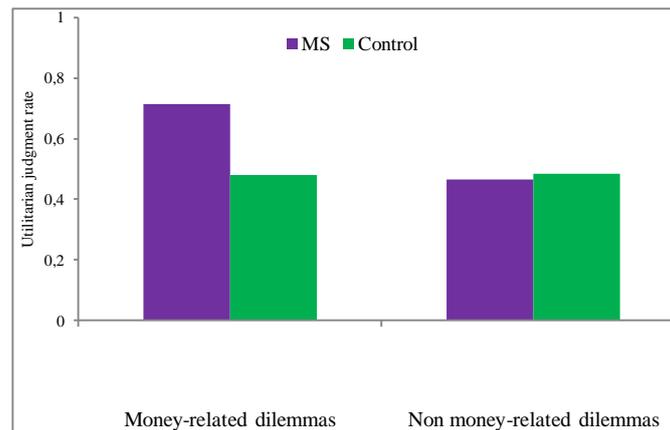
NAME	DILEMMA	C	M	Condition		p
				MS	Ct.	
Broken VCR	To repair your VCR (€100), or to buy a slightly better new one (€300).	N	Y	.727	.545	.40
Computer	To wait some weeks for a lower price (€850) of a non essential new computer, or to buy a new one immediately (€1000).	N	Y	1	1	
Plant Transport	To bring plants home in the car trunk in two trips, preserving expensive upholstery, or to bring all the plants in one trip.	N	Y	.909	.727	.29
Survey	To interrupt your dinner for a half an hour to answer questions for a survey in exchange for €200, or to continue enjoying your dinner.	N	Y	.909	.727	.29
Choosing Classes	To take two classes in the same term to graduate or to do one first and the other one in the following term.	N	N	.545	.364	.42
Errands	To do most of your errands in the morning or do less driving, leaving most of the errands for the afternoon.	N	N	.273	.636	.10
Jogging	To do your paperwork before jogging or to jog first to avoid the rain.	N	N	.182	.455	.19
Scenic Route	To take a car route with beautiful scenery or take a boring but 15 min. faster one.	N	N	.818	.909	.56
Lost wallet	To keep the cash you found in the lost wallet of a wealthy person or to send the wallet back intact to its owner.	Y	Y	.364	.000	.03*
Donation	To save money or to make a €50 donation to a reputable aid organization.	Y	Y	.909	.364	.01**
Taxes	To pretend that some of your personal expenses are business expenses to lower your small-business taxes, or to be completely honest about it.	Y	Y	.182	.000	.15
Resume	For your friend to put false information on his resume to get a job or to not falsify his resume.	Y	N	.091	.091	
Guarded speedboat	To lie in order to borrow a speedboat and warn people about an approaching violent storm or not to lie.	Y	N	.909	.909	
Illegal lunch	To illegally meet with the judge (an old friend) of the case you are working on as a lawyer, or to follow judicial regulations.	Y	N	.091	.091	
Crying baby	To silence your baby, preventing him/her from crying when you are in hiding with others from hostile enemies, or not to risk your baby's health.	Y	N	.636	.364	.22
Preventing the spread	To cause a man to have a serious non-lethal allergy attack to prevent him from deliberately spreading HIV, or not to provoke the man's allergy attack.	Y	N	.636	.545	.68

4. Results

Analyses of variance (ANOVAs) and post-hoc comparisons with the Bonferroni's test were performed. In the Stroop tasks, ANOVAS 2 (condition: MS, control) x 2 (word category: neutral, emotional) x 2 (word color: blue, red) were made for latency and accuracy. Only an effect of the condition x word color interaction in accuracy was found ($F(1,20) = 5.82$; $p < .03$; $\eta^2_p = .23$): the participants who made the death-related Stroop task were more accurate ($p < .03$) with the words in red.

No effect was found in latency in the decision making task. An ANOVA 2 (condition) x 2 (moral conflict) with the utilitarian choice rates found that more utilitarian decisions were made when the dilemmas did not involve a moral conflict ($F(1,20)= 32.90$; $p<.001$; $\eta^2_p= .62$). In addition, a nearly significant effect of the two-way interaction ($F(1,20)= 3.31$; $p=.08$; $\eta^2_p= .14$) was registered: when the dilemmas involved a moral conflict, the MS participants were more utilitarian ($p<.02$). Nevertheless, only two moral-conflict dilemmas significantly discriminated between conditions and in both, money was explicitly involved (see Table 1). In order to investigate whether the effect of MS was defined by an increase of greed, the dilemmas were divided in seven money-related situations (those in which money was explicitly mentioned), and nine non-money-related situations (see Table 1). The MS participants were more utilitarian than the control participants (see Figure 1) with the money-related dilemmas ($F(1,20)= 17.80$; $p<.001$; $\eta^2_p= .47$), but not with the non-money-related dilemmas ($p>.76$).

Figure 1. Utilitarian judgment rate for money-related and non-money-related dilemmas presented in the Mortality Salience (MS) and Control conditions



5. Discussion

Consistent with the Trémolière et al. (2012) findings, the results of our research indicate that reminders of mortality (MS) may influence the decision making function. However (this may have been the result of using another MS induction procedure), unlike Trémolière et al., the MS participants were more utilitarian than the control participants, although only when money was involved in the dilemmas.

6. Conclusions

As far as we know, this is the first study using an emotional Stroop task as an effective procedure of MS induction. The MS participants behaved in a more materialistic way (i.e., by showing an increased interest in money) than control participants, a result already obtained in TMT-based research. Kasser and Sheldon (2000), for example, found that MS participants showed more greed in their financial expectations for the future as well as in a forest-management game, than the control participants. The TMT has proposed that amassing wealth may be a strategy to overcoming death-related insecurities. In any case, this study presents some limitations that would be desirable to control in future replications. It would be interesting, for example, to include men in the sample and thus exclude gender-related factors, or to increase the sample size in order to enhance the statistical strength of the data.

References

- Greene, J. D., Morelli, S. A., Lowenberg, K., Nystrom, L. E., & Cohen, J. D. (2008). Cognitive load selectively interferes with utilitarian moral judgment. *Cognition, 107*, 1144-1154.
- Greene, J. D., Sommerville, R. B., Nystrom, L. E., Darley, J. M., & Cohen, J. D. (2001). An fMRI investigation of emotional engagement in moral judgment. *Science, 293*, 2105-2108.
- Kasser, T. & Sheldon, K. M. (2000). Of wealth and death: Materialism, mortality salience, and consumption behavior. *Psychological Science, 11*(4), 348-351.
- Pyszczynski, T., Greenberg, J., & Solomon, S. (1999). A dual-process model of defense against conscious and unconscious death-related thoughts: An extension of Terror Management Theory. *Psychological Review, 106*(4), 835-845.
- Trémolière, B., De Neys, W., & Bonnefon, J. (2012). Mortality salience and morality: Thinking about death makes people less utilitarian. *Cognition, 124*, 379-384.

DESCRIBING DATA USING PICTURES: THE USE OF VISUAL INSCRIPTIONS IN SCIENCE

Lisa A. Best¹, Claire Goggin², Diane N. Buhay³, Linda T. Caissie⁴,
Montgomery Boone¹ & Derek J. Gaudet¹

¹*Department of Psychology, University of New Brunswick (Canada)*

²*Department of Criminology and Criminal Justice, Saint Thomas University (Canada)*

³*Department of Information Services and Systems, University of New Brunswick (Canada)*

⁴*Department of Gerontology, Saint Thomas University (Canada)*

Abstract

Although factors such as paradigm development, methodological approach (Kuhn, 1970), and codification (Zuckerman & Merton, 1973) are used to demarcate hard and soft science, differences may be traceable to the differential use of visual representations, with researchers in harder disciplines relying more heavily on visual displays (Arsenault, Smith, & Beauchamp, 2006; Cleveland, 1984; Goggin & Best, 2013; Smith, Best, Stubbs, Archibald, & Roberson-Nay, 2002). Our goal was to produce a comprehensive description of how graphs, tables, and non-graph illustrations (NGI) are used in disciplines relative to psychology. Overall, differences in graph use mirrored the Comptean hierarchy, with biology and psychology articles including more graphs and relatively fewer tables than those in criminology and gerontology. Further, a clear demarcation was difficult because of sub disciplinary differences that led to significant overlap between the disciplines. We trust that these results will provide a baseline as the social sciences moves forward in codification.

Keywords: *disciplinary differences, graphs and tables, data analysis, non-inferential analyses.*

1. Introduction

A scientific inscription is a specific type of visualisation that provides a visual display in a scientific text (Latour, 1990). Scientists use inscriptions, such as tables, graphs, and diagrams, to provide a visual representation of data. Graphs, in particular, can provide a novel way of looking at information, and often give a complete understanding of a particular set of data. In many ways, graphs provide a universal language that transcends differences between scientific disciplines.

Over 200 years ago, Auguste Comte proposed a hierarchy of the sciences, placing the natural sciences at the vertex and the social sciences at the base (Simonton, 2015; Smith, Best, Stubbs, Johnston, & Archibald, 2000). In this hierarchy, different branches of science are classified as “hard” or “soft,” with the natural sciences, such as physics, deemed “hard” and the social sciences, such as sociology, labelled “soft” (Smith et al., 2000). The hierarchy of science retains relevance, as academics and laypeople alike intuitively agree with the assumption that the natural and social sciences differ significantly in this regard (Cole, 1983).

Parsimony being fundamental to the pursuit of scientific knowledge, it is appropriate to seek a simple demarcation between hard and soft disciplines. Emerging empirical evidence indicates that differences may be traceable to their use of visual representation (Arsenault, Smith, & Beauchamp, 2006; Cleveland, 1984; Goggin & Best, 2013; Smith et al., 2000; Smith et al., 2002). Although often taken for granted, visual displays are crucial for producing, circulating, communicating and understanding information. Indeed, graph use may be the element that distinguishes science from non-science (Latour, 1990). If the scientific enterprise is likened to a theatrical production, graphs play a subtle yet leading role that helps cement the entire performance together.

The overall purpose of this study was to examine the use of inscriptions in high impact scientific journals. Specifically, we wanted to examine how researchers in different scientific disciplines used graphs, tables, and NGIs.

2. Methods

We sampled 1,322 empirical articles from psychology (N = 196; see Smith et al., 2002), biology (N = 127), gerontology (N = 360; see Caissie, Goggin & Best, 2013), criminology and criminal justice

(N = 397; see Goggin & Best, 2013), and library and information science (N = 242) journals published between 1980 and 2010. Articles were randomly selected from reputable journals. For each article, bibliographic factors, such as number of authors, author affiliation, etc., were recorded. We measured the proportion of page spaced dedicated to graphs (FGA; see Cleveland, 1984), tables (FTA; see Smith et al., 2002), and NGIs (FIA; see Smith et al, 2002). For our purposes, a graph is a figure that has scales and conveys quantitative information (Cleveland, 1984). A table is an arrangement of information consisting of rows and columns set part from the body of the text (Arsenault et al., 2006). An NGI is an illustration that does not convey quantitative information (i.e., photographs, drawings). Details of sampled journals and articles are available upon request.

3. Results

Taken together, Figures 1, 2, and 3 provide a summary of how visual and non-visual inscriptions are used in science and they highlight specific disciplinary differences. An ANOVA indicated statistically significant decreases in graph use (Biology>Psychology, Library Science>Gerontology>Criminology). In spite of clear disciplinary differences, there is also variability within the disciplines. With the exception of articles in criminology and criminal justice, the range indicates that graph use varies according to sub discipline. In spite of the differences between the disciplines, there is much overlap between the disciplines, indicating that, at least in terms of graph use, there is not a clear disciplinary demarcation, perhaps suggesting similar methodological and data analytic practices that produce overlaps between specific sub disciplines. The overlap between psychology with biology, criminology, and gerontology is interesting and speaks to the broad research focus of psychologists.

Figure 1. Average FGA for each discipline. The individual journal averages are presented as dots and the solid line represents the discipline average

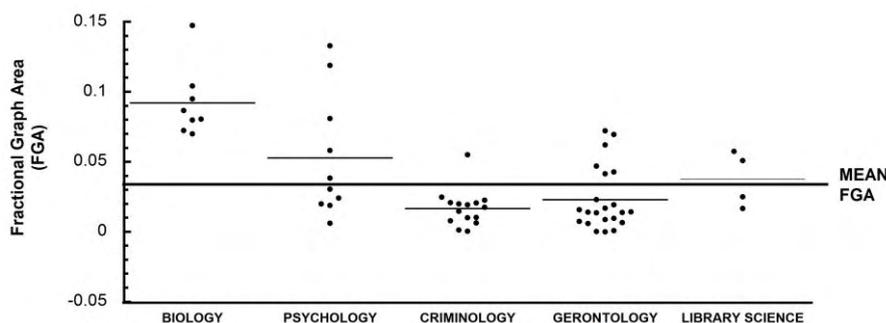


Figure 2 illustrates table use as a function of scientific discipline. It is clear that researchers in gerontology, psychology, and library science use more tables than researchers in biology and criminology. A univariate ANOVA indicated statistically significant disciplinary differences such that library science articles dedicated the most page space to tables followed by gerontology, psychology, and biology articles. Criminology articles dedicated the least page space to tabular displays. The inverse relation between graph and table use was statistically significant ($r = -.21, p < .005$), supporting previous research (i.e., Best et al., 2001; Smith et al., 2002) on inscription use in science.

Figure 2. Average FTA for each discipline. The individual journal averages are presented as dots and the solid line represents the discipline average

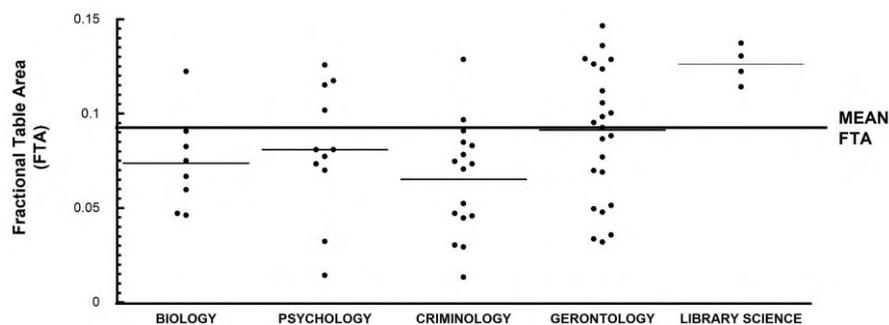
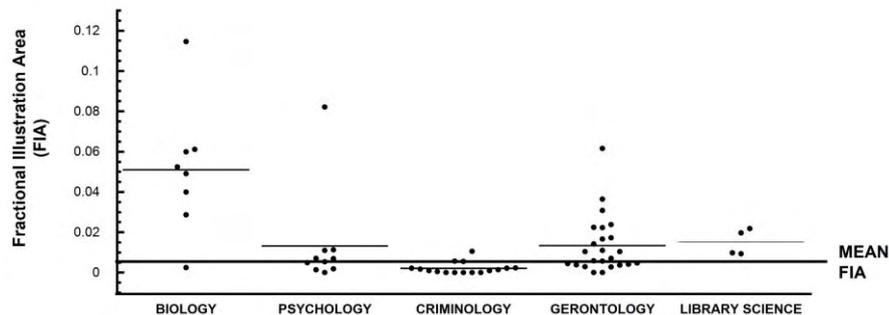


Figure 3 shows that, overall, researchers did not dedicate as much page space to NGIs and, with few exceptions, the page space dedicated to these illustrations was negligible. It is interesting to note that the exceptions represented journals that typically include specific biological images. For example, the outlier in psychology was *Behavioral Neuroscience*, a journal that would typically include brain images.

Further, there was a statistically significant correlation between graph and non-graph illustration use ($r = .60$, $p < .005$), suggesting that researchers in some disciplines use pictures to illustrate important points. Some of these images present data and others present auxiliary information.

Figure 3. Average FGI for each discipline. The individual journal averages are presented as dots and the solid line represents the discipline average



4. Discussion and conclusions

In both basic and applied settings, the primary responsibility of all scientists must be to ensure the meaningful contribution of research results. Visual inscriptions enhance communication between researchers (Latour, 1990) and allow the transfer of results to applied settings (Ahmed & Boisvert, 2003). As noted by Goggin and Best (2013), graphing can be viewed as the “science of seeing science” (p. 532). For example, visual inscriptions can be used in clinical settings to aid communication, foster the evaluation of treatment responses, and illustrate the efficacy of various treatment protocols (Ahmed & Boisvert, 2003). The incorporation of visualisations into the process of knowledge transfer allows stakeholders to fully appreciate the implications of specific research findings.

The empirical record is clear that graphical displays enhance our ability to discern data patterns and the current results illustrate that most researchers incorporate inscriptions, to a greater or lesser extent. The disciplinary differences in inscription use speaks to specific differences in theory development and codification (Smith et al., 2000). Appropriately constructed illustrations augment the persuasiveness of research findings and, over the long term, help increase a discipline’s codification. Through such efforts, the goals of knowledge cumulation and transfer will be met – translating empirical results into practical applications – yielding benefits in both applied and research contexts.

References

- Arsenault, D. J., Smith, L. D., & Beauchamp, E. A. (2006). Visual inscriptions in the scientific hierarchy: Mapping the 'treasures of science'. *Science Communication*, 27, 376-428.
- Best, L. A., Smith, L. D., & Stubbs, D. A. (2001). Graph use in psychology and other sciences. *Behavioural Processes*, 54, 155-165.
- Caissie, L., Goggin, C., & Best, L. A. (2013). *Scientific inscription practices in Gerontology, Criminology, and Psychology*. Paper presented at the 42nd Annual Scientific and Educational Meeting of the Canadian Association on Gerontology.
- Cleveland, William S. (1984). Graphs in scientific publications. *The American Statistician*, 38, 261-269.
- Goggin, C., & Best, L. A. (2013). The use of scientific inscriptions in criminology and criminal justice journals: An analysis of publication trends between 1985 and 2009. *Journal of Criminal Justice Education*, 24, 517-535.
- Kuhn, T. S. (1970). *The structure of scientific revolutions*. Chicago: University of Chicago Press.
- Latour, B. (1990). Drawing things together. In M. Lynch & S. Woolgar (Eds.), *Representation in scientific practice* (pp. 19-68). Cambridge, MA: MIT Press.
- Simonton, D. K. (2015). Psychology as a science within Comte's hypothesized hierarchy: Empirical investigations and conceptual implications. *Review of General Psychology*, 19, 334-344.
- Smith, L. D., Best, L. A., Stubbs, D. A., Archibald, A. B., & Roberson-Nay, R. (2002). Constructing knowledge: The role of graphs and tables in hard and soft psychology. *American Psychologist*, 57, 749-761.
- Smith, L. D., Best, L. A., Stubbs, D. A., Johnston, J., & Archibald, A. B. (2000). Scientific graphs and the hierarchy of the sciences. *Social Studies of Science*, 30, 73-94.
- Zuckerman, H. A. & Merton, R. K. (1973). Institutionalization patterns of evaluation in science. In N. Storer (Ed.), *The sociology of science* (pp. 460-496). Chicago: University of Chicago Press.

MULTITASKING IN THE MILITARY: A GLANCE AT COGNITIVE CONSEQUENCES AND POTENTIAL SOLUTION

Lobna Chérif¹, Alexandre Marois², Katherine Labonté², & François Vachon²

¹Royal Military College of Canada, Kingston (Canada)

²Université Laval, Québec (Canada)

Abstract

Multitasking—the performance of several independent tasks at the same time—is a behavior that is becoming increasingly prevalent in workplaces. It is established that multitasking can affect performance and lead to errors, especially for complex and dynamic tasks. Most military occupations function in multitasking contexts and many include complex and dynamic tasks. Since errors in military occupations could result in serious consequences for national security, risks originating from multitasking contexts must be taken into account by soldiers and their commanders. This review examines high-consequence military occupations that require strong multitasking skills. It points out cognitive challenges arising from multitasking contexts and proposes potential solutions adapted to those problems. Aviation, command and control, and ground combat occupations are discussed to assess the tasks that have to be performed concurrently or in alternation, and to shed light on the attention and memory processes involved in those contexts. The challenges that many military occupations face to operate in complex, uncertain and dynamic environments are not expected to diminish. Consequently, the solutions proposed by this review accentuate the need to evaluate multitasking capacities and identify methods to enhance those capacities, notably by designing context-adapted technological tools, assessing the effectiveness of training to operate in a multitasking environment, and developing personnel management procedures (e.g., recruiting, selection and appointment) to guide human resource management decisions.

Keywords: *military personnel, performance, multitasking, workload, personnel selection.*

QUALITY OF LIFE AND SELF-ATTITUDE CONTRIBUTE TO RESILIENCE IN PATIENTS DISFIGURED AFTER CANCER TREATMENT

Anna Faustova

*Department of General Psychology, Ryazan State Medical University / Institute of Psychology
at the Russian Academy of Sciences (Russia)*

Abstract

An unexpected alteration of one's physical appearance is now considered as a special life event. It vastly affects such scopes of personality functioning as body image, emotions, mind and behavior. The impact of altered physical appearance in cancer patients may be underestimated due to the key motivation to survive. However, after all steps of cancer treatment a survivor has to accept his or her "new" physical appearance. Individual differences in the process of coping with a visible disfigurement could be explained based on the concept of resilience.

The aim of this research project was to study factors predicting psychological resilience in cancer patients disfigured after surgical treatment.

Participants were recruited at the Ryazan Region Oncology Clinic (Russia). The sample consisted of 50 patients with cancer (11 patients with head and neck cancer; 39 patients with breast cancer; age ranged from 33 to 72, with a mean of 55.4 years).

Obtained in this study factors predicting psychosocial resilience in disfigured cancer patients are the following: (1) positive self-attitude; (2) quality of life; (3) optimism; (4) social support; (5) problem solving.

Psychological diagnostics of the factors predicting psychosocial resilience is an important step in the whole process of adjustment to visible disfigurements since it allows to understand one's potential for rehabilitation.

Keywords: *quality of life, self-attitude, visible difference, resilience.*

1. Introduction

Physical appearance is a first individualizing feature. We know who other people are by their appearance. That is how they recognize us. Self-perception of physical appearance has a crucial impact on both self-identity and interpersonal communication. First impression forms based on the subjective assessment of various physical components. Sometimes first impression becomes the last one due to the person's desire to limit communication with someone who has visible differences.

Acquired visible disfigurement is a stress-factor influencing personalities of those affected during their lifespans. Visible differences may cause an identity crisis, body image disturbances, mood disorders, or social phobia (Moss, 2005). Social isolation, avoidance, lack of self-confidence, or behavioral hyper-compensation are also frequently noticed (Kent, 2000).

Cancer is a special case of changing of one's physical appearance. Cancer itself may cause visible disfigurements when tumors are located on various parts of a head, a face, or a neck. Many techniques of cancer detection and cancer treatment lead to alterations of physical appearance. While some visible differences acquired due to cancer are temporary (such as hair loss), other defects are permanent (such as scars). Coping with visible defects is a long difficult process that influences all the personality domains. Individual differences (progresses and failures) in the process of adjustment to visible disfigurements could be explained based on the concept of resilience.

2. Previous theory data

The term "resilience" is used in a variety of psychological disciplines (such as Forensic Psychology, Health Psychology, and Personality Psychology) and has different synonyms (such as personality resilience, resistance, or stability).

There are four basic ways to define psychological resilience:

1. Psychological resilience as an initial characteristic of one's personality (Kulikov, 2004; Nikiforov, 2006).

2. Psychological resilience as an ability to resist against stress conditions (Neill, 2006; Ungar, 2008).

3. Psychological resilience as a combination of intrapersonal protective factors (Perrez & Baumann, 2005).

4. Psychological resilience as a positive result of overcoming a life crisis (Zautra et al., 2010).

According to C. Cooper (2000), psychological resilience in visibly disfigured people is an ability to build or to recover self-confidence in order to resist psychosocial "tension".

Specialists from Charity "Changing faces" suggest that patients with visible differences need three types of resilience: (1) behavioral resilience is an ability to communicate with other people successfully; (2) cognitive resilience is a capacity to control own minds and to disprove negative beliefs; (3) emotional resilience is an ability to treat oneself in a favorable way (Partridge, 1990).

The following groups of factors can contribute into psychological resilience in people with visible differences: (1) characteristics of a disfigurement (size, location, and visibility); (2) social support and feedback from significant others; (3) features of one's personality (Rumsey & Harcourt, 2004).

In terms of this research, it is correct to describe psychological resilience as a combination of factors (including personality features, emotional characteristics, and cognitive behavioral patterns) that get together for successful adjustment to acquired visible defects (Faustova & Mertsalov, 2013).

3. Aim

The aim of this research project was to reveal and to describe factors predicting psychosocial resilience in cancer patients disfigured after surgical treatment.

4. Sample

Participants were recruited at the Ryazan Region Oncology Clinic (Russia). They took a part in the research project voluntarily and strictly after signing the informed concern.

The sample consisted of 50 patients with cancer (41 – female, 9 – male, age ranged from 32 to 72, with a mean of 55.4 years):

- 11 patients with head and neck cancer, stages of malignancy from T₁N₁M₀ to T₄N₃M₀;
- 39 patients with breast cancer, stages of malignancy from T₁N₀M₀ to T₃N₁M₀.

5. Measures

Medical information. Patients' medical notes were used to clarify a diagnosis, a history of treatment, and anticipated life expectancy.

Demographic data. Information about age, marital status, employment, hobbies, and sources of social support was collected via semi-standardized interviews with participants.

Standardized measures:

- The UCLA Loneliness Scale (Russell, D., Ferguson, M.), Russian adaptation. This is a 20-item scale measuring a subjective feeling of loneliness.

- The Multidimensional Scale of Perceived Social Support (Zimet, G.D., Dahlem, N.W., Zimet, S.G., Farley, G.K.), Russian Adaptation. The 12-item scale measures perceived social support from family, friends, and significant others.

- The Ways of Coping Questionnaire (Folkman, S., Lazarus, R.), Russian adaptation. The 50-item scale measures eight coping-styles such as confrontation, distancing, self-control, seeking of social support, accepting responsibility, escape-avoidance, planful problem-solving, and positive re-appraisal.

- The Self-Attitude Questionnaire (Panteleev, S.). This is a 110-item scale measuring nine scopes of self-attitude such as openness, self-confidence, self-leadership, reflected self, self-worth, self-affection, proneness to conflict, and self-incrimination.

- The Quality of Life Scale (Elliott, R.), Russian adaptation. This 36-item scale measures quality of life across nine domains such as employment, personal achievements, physical health, social interaction, social support, optimism, tension, self-control, and negative mood.

Special computer software (such as SPSS) was used to analyze the empirical data.

6. Results and discussion

The structure of psychological resilience in cancer patients disfigured after surgical treatment is based on the results obtained using a technique of factor analysis (varimax normalized rotation,

extraction: principal components). Positive self-attitude and quality of life appeared to be leading factors predicting psychological resilience.

Factor № 1 “Positive self-attitude” combines self-confidence, unconditional self-acceptance, and self-leadership. Positive self-attitude could help to balance a negative impact of self-perception of a disfigurement on person’s integral self-esteem.

Factor № 2 “Quality of life” includes one’s subjective contentment with different life domains such as employment, personal achievements, health, social support, and interpersonal interaction. Quality of life is predominantly an emotional experience, so it forms a primary basis for psychological resilience and therefore for successful coping with a disfigurement.

Other factors discovered in the study also play a significant role predicting psychological resilience in visibly disfigured cancer patients.

Factor № 3 “Social support” involves highly informative and positive feedback from family, friends, and significant others. It allows people with acquired visible differences to recover self-respect as well as self-confidence.

Factor № 4 “Optimism” is an ability to form positive attitudes in everyday life, which is necessary for enhancing psychological resilience.

Factor № 5 “Problem solving” is a combination of two coping-styles such as “planful problem-solving” and “positive re-appraisal”. These ways of coping are important for planning one’s future life after disfiguring cancer treatment.

The results of cluster analysis of the empirical data revealed that such characteristics as sex, age, a diagnosis, a type of surgical treatment, and anticipated life expectancy have no influence on the distribution of disfigured cancer patients into two nominal clusters “resilient” and “vulnerable”.

7. Conclusion

According to the obtained results, positive self-attitude, high quality of life, optimism, social support, and successful problem solving contribute into psychological resilience in cancer patients disfigured after surgical treatment. Psychological diagnostics of factors predicting psychological resilience is a relevant start point in the process of psychological support and rehabilitation of people with acquired visible disfigurements.

This research project may be further developed in several ways. The first one includes study and evident-based description of detailed personality profiles of both “resilient” and “vulnerable” patients. The other one involves study and formation of standardized and semi-standardized measures to assess psychological resilience in people with visible differences.

References

- Cooper, C. (2000). Face on: discovering resilience to disfigurement. *The New Therapist, Vol. 7, No. 3*, 31-33.
- Faustova, A. & Mertsalov, S. (2013). The study of psychosocial resilience in patients after crippling surgery. *Personality in changing world: health, adaptation, development, 3*, 94-111.
- Kent, G. (2000). Understanding the experiences of people with disfigurements: an integration of four models of social and psychological functioning. *Psychology, Health, and Medicine, Vol. 5, 2*, 117-129.
- Kulikov, L.V. (2004). *Psychohygiene of Personality. Psychological resilience and psychological prevention issues*. Saint Petersburg: Piter.
- Moss, T.P. (2005). The relationships between objective and subjective ratings of disfigurement severity, and psychological adjustment. *Body Image, 2*, 151-159.
- Neill, J. (2006). *What is psychological resilience?* Retrieved October 30, 2015, from: <http://www.wilderdom.com/psychology/resilience/PsychologicalResilience.html>
- Nikiforov, G.S. (2006). *Health Psychology*. Saint Petersburg: Piter.
- Partridge, J. (1990). *Changing faces*. London: Penguin.
- Perrez, M. & Baumann, U. (2005). *Lehrbuch Klinische Psychologie – Psychotherapie*. Bern: Verlag Hans Huber.
- Rumsey, N. & Harcourt, D. (2004). Body image and disfigurement: issues and interventions. *Body Image, 1*, 83-97.
- Ungar, M. (2008). Resilience across cultures. *British Journal of Social Work, 38 (2)*, 218-235.
- Zautra, A.J., Hall, J.S. & Murray, K.E. (2010). Resilience: A new definition of health for people and communities. In J.W. Reich, A.J. Zautra & J.S. Hall (Eds.), *Handbook of adult resilience* (pp. 3–34). New York: Guilford Press.

PSYCHOLOGIST PERFORMANCE IN THE POLICIES OF HIV/AIDS: A LITERATURE REVIEW

Aérica Meneses & Marta Fuentes-Rojas
Applied Sciences College, Unicamp (Brazil)

Abstract

Currently, HIV/AIDS is, in Brazil, one of the biggest social problems and public health. It appears that since the emergence of the epidemic psychology has been active in assisting in the prevention and the production of scientific knowledge to support programs. This study aims to discuss the role of the psychologist in the context of HIV/AIDS. Thus, it was carried out a bibliographic review in the following electronic databases: LILACS, Capes, BIREME, SciELO and BVS-Psi. It was used the categorical analysis, identifying the following categories: the insertion of psychologists in the context of prevention and care; theoretical and methodological framework of the actions of the psychologist and psychology contributions. It was conclude this study highlighting the importance of the psychologist in this context and the need for coordination with other professionals, working interdisciplinary.

Keywords: psychologist performance; public policies; HIV/Aids.

1. Introduction

Completed in 2015 more than three decades of coping with HIV/AIDS with major changes, requiring new coping responses to the epidemic, requiring an active attitude of the offered services and health professionals, including psychologists. HIV - human immunodeficiency virus is the virus that causes a dysfunction in the immune system, causing AIDS (Acquired Immunodeficiency Deficiency Syndrome). It is estimated that in Brazil in 2014 there were about 734,000 people living with HIV (Brazil, 2014). Thus, HIV/AIDS is one of the biggest social problems and current public health. In Brazil, the first government response to the epidemic occurred in 1983 with the creation of the AIDS Program of the State Health Secretariat of São Paulo. In 1985, the National AIDS Program was launched and from that period follow several advances in HIV/AIDS policies. Brazil was the first country to distribute free Antiretroviral since 1996 and in 2002 started the PMTCT program, the distribution of inputs and diagnostics in the health system. With World Bank funding, between 1994-2014, it was possible to widen and improve the service, strengthening actions and develop new preventive measures (Pereira; Nichiata, 2011; Perucchi et al, 2011.). The care of people with HIV/AIDS is the most problematic aspect of the HIV/AIDS epidemic, since dealing with the AIDS problem requires care from other dimensions (Silva et. al., 2002). Thus, the professional, including psychologists, need to go beyond the care of the disease itself. So discuss the psychologist becomes important, allowing to identify vulnerabilities and psychology of potential in the right assurance and promotion of health and citizenship to people with HIV/AIDS.

2. Objective

Discuss the role of the psychologist in the context of HIV/AIDS.

3. Method

We conducted a literature review that is one survey of materials already published (Gil, 1999). Databases were searched: LILACS, Capes, BIREME, SciELO and BVS-Psi. The descriptors used were: HIV/AIDS intervention activities; psychologist, psychology.

After the literature was made a refinement of the articles, excluding research and studies that did not provide information to characterize them within the research parameters.

The data analysis was performed through content analysis (Bardin, 1997), from the categorical analysis technique. At first a thorough reading was performed and then the material was organized in categories of data.

4. Results and discussion

In the search Database it were found 88 articles related to the central theme of this study. After reading the title and summary, was reduced this number to 11, considering that only these articles met the pre-established criteria. The analysis of the selected articles was made through a close reading and the results suffered a categorization process, and identified the following categories: the insertion of psychologists in the context of prevention and care; theoretical and methodological framework of the actions of the psychologist and psychology contributions. The following presents the seized categories.

The insertion of psychologists in the context of prevention and care

Psychology has always been present in policies on HIV/AIDS, working in care, in preventing and production of scientific knowledge to support programs in this context (Ratsara and Issa, 2007).

In the articles analyzed were identified several practices of psychologists in the care and prevention. Dotta et al (2000) reported the psychologist with groups of teenagers in AIDS prevention program. Similar practices were developed by Christovam et. al. (2012), Silva, Oliveira and Franco (1998), Lima, and Firmino Brito (2011) and Haack et. al. (2010). In these studies the themes sexuality, AIDS and drugs are worked with teenagers from the awareness and reflection. Also in the field of prevention, Zambenedetti (2012) reports the experience with waiting room groups, conducted with men, while awaiting medical care in a clinic.

In assistance to people with HIV/AIDS, Silva and Ferraz (2010) reported psychosocial interventions, as a group, women with HIV/AIDS, and individual care, Remor (1997) reports a case and the use of bibliotherapy and cognitive therapy. Petersem et al. (2008) also address the use of cognitive-behavioral therapy with people with HIV/AIDS. As a practical alternative we are working Zambenedetti et. al. (2014) that discusses the psychology contribution to the community health worker training. Psychology is also present in the hospital, they present Sassi and Gadelha (2013). Thus, it was established that the activities undertaken in this context, are not unique and are practices of several other Psychologist insertion sites (Rasera, Issa, 2007). However we found that psychologists inserted in this context can play an important role in developing these activities in addition to building ethical and political references guided mainly in the heterogeneity that is HIV/AIDS (Perucchi et. al., 2011).

Theoretical and methodological framework of the psychologist's actions

For the development of activities in the context of HIV/AIDS it can check a plurality of forms of intervention and theoretical and methodological references. The Community Psychology and Ecology of Human Development was used by Dotta et. al. (2000) to develop groups of teenagers. Silva and Ferraz (2010) used the focus group as a critical instrument of subjectivity production. The institutional analysis was the resource used by Zambenedetti et. al. (2014) in the training of community health workers. Petersen et. al. (2008) and Remor (1997) used a cognitive-behavioral approach to patients with HIV/AIDS. Already Historical Social Psychology was used by Christovam et. al. (2012) in groups of adolescents. Silva Oliveira and Franco (1998) relied on health psychology and community psychology as a means of communication between the health system and the community. Finally, psychoanalysis was used by Sassi and Gadelha (2013) as a method to understand the psychic condition of the patients with HIV/AIDS.

Thus, we find a wide variety of theoretical and methodological approaches and found that this diversity is caused by the demands of this context (CFP 2008). As Parreira says (1990), theories make cutouts of the problems and proposed ways of dealing with them. Thus, this diversity is useful to know the use and results in the context of HIV/AIDS.

The psychology contributions to the context of HIV/AIDS

Silva and Ferraz (2010) emphasize that the therapeutic space enables the emergence of other demands (social, legal, medical, etc.), silenced, many times, and that in due course can be verbalized. So as a warning Haack et. al. (2010), for this process to occur it is necessary that the psychologist act according to community needs, committed to the local situation and that the meetings are conducted from the relationship established between the group and psychologist and not from transmission -way information. And in that sense, it is important that the psychologist develop actions with the multidisciplinary and interdisciplinary team (CFP 2008), is aiming that "this action be given in an interdisciplinary perspective in various areas of work, from direct care to population management people" (Lima, Brito E Firmino, 2011). The interdisciplinary activities appear as a chance to transcend the specific professional clippings and develop actions on the needs of users (Zambenedetti, 2012). Now, AIDS is a complex subject, involving many aspects and perceptions. Thus, interdisciplinary practices favor of knowledge and experience sharing (Silva; Oliveira; Franco, 1998).

So when we look at the interventions in the context of HIV/AIDS, we find that there are several contributions from psychology on prevention and assistance and that there are still many activities to be performed with this population.

5. Conclusions

When this study was conducted we had a vague understanding of the role of the psychologist in HIV policies/AIDS. Therefore, its implementation allowed to know a little about the specifics of the psychologist's role in the care and prevention of HIV/AIDS. We also believe that one of the challenges of psychology is the articulation with other health professionals, working in an interdisciplinary manner and in accordance with the principles of SUS. The disclosure of the psychologist's performance in this context we see that this is a poor country that needs new publications. Thus, this study suggests the development of empirical research that address the psychologist in the context HIV/AIDS. "Life overflows the disease" (Ferreira; Silva, 2012). Thus, for a wide operation it is necessary that psychology goes beyond the field of the disease itself and develop practices that consider this subject in its entirety.

References

- Brasil, (2013) Protocolo clínico e diretrizes terapêuticas para manejo da infecção pelo HIV em adultos. Brasília: Ministério da Saúde.
- Brasil. (2014) Boletim Epidemiológico - AIDS e DST. Brasília: Ministério da Saúde.
- CFP. Conselho Federal de Psicologia (2008) Referências técnicas para a atuação do(a) psicólogo(a) nos Programas de DST e AIDS. Brasília: Conselho Federal de Psicologia.
- Christovam, A.R.; Thomazelli, T.; Frabetti, K.C.; Moretto, L.A.; Silva, N.R. (2012) Educação para a Sexualidade: Intervenção em um Grupo de Adolescentes Assistidos pelo Cras, a partir do Conhecimento de suas Representações Sociais em Relação às Dst/Aids. *Ed. em Revista*, 13(1), 97-114.
- Dotta, R.M.; Alves, P.B.; Koller, S.H.; Brito, R.C. (2000) Sexualidade, Aids e drogas: um relato de intervenção com adolescentes. *Rev. Bras. Cresc. Des. Hum*, 10(2), 39-46.
- Ferreira, D.C.; Silva, G.A. (2012) Caminhos do cuidado - itinerários de pessoas que convivem com HIV. *Ciência & saúde coletiva*, 17(11), 3087-98.
- Gil, A. C. (1999) Métodos e técnicas de pesquisa social. 5. ed. São Paulo: Atlas.
- Haack, K.R.; Silva, R.S.; Prati, L.E.; Boeckel, M.G. (2010) Intervenção Comunitária com Grupo de Adolescentes: relato de Experiência do Projeto EBA. *Rev. Interamericana de Psi.*, 44(1), 65-73.
- Lima, M.; Brito, M.; Firmino, A. (2011) Formação em Psicologia para a atenção básica à saúde e a integração universidade-serviço-comunidade. *Psicol. cienc. Prof*, 31(4), 856-867.
- Parreira, W.A. (1990) Algumas considerações sobre as diferenças entre as abordagens psicoterápicas. *Revista Plural*, 1.
- Pereira A.J., Nichiata L.Y.I. (2011) A sociedade civil contra a Aids: demandas coletivas e políticas públicas. *Ciência & Saúde Coletiva*, 16(7), 3249-3257.
- Perucchi, J.; Rodrigues, F. D.; Jardim, L. N.; Calais, L. B. (2011) Psicologia e políticas públicas em HIV/Aids: algumas reflexões. *Psicologia & Sociedade*, Florianópolis, 23, 72-80.
- Perucchi, J.; Rodrigues, F. D.; Jardim, L. N.; Calais, L. B. (2011) Psicologia e políticas públicas em HIV/Aids: algumas reflexões. *Psicologia & Sociedade*, Florianópolis, 23, 72-80.
- Petersen, C.S.; Koller, S.H.; Vasconcellos, D.; Teixeira, M.A.P. (2008) Efeitos da terapia cognitivo-comportamental em pessoas vivendo com HIV/aids. *Rev. bras.ter. cogn.* 4(2), 90-106.
- Rasera, E.F.; Issa, C.L.G. (2007) A Atuação do Psicólogo em ONG/AIDS. *Psicologia ciência e profissão*, 27(3), 566-575.
- Remor, E.A. (1997) Contribuições do modelo psicoterapêutico cognitivo na avaliação e tratamento psicológico de uma portadora de HIV. *Psicol. Reflex. Crit.*, 10(2), 249-261.
- Sassi, A.; Gadêlha, S. (2013) O Psicólogo no hospital e o paciente soropositivo: breve recorte do estágio profissional em um Hospital Geral no Oeste da Bahia. *Psicologia Revista*, 22(2), 167-176.
- Silva, A.C.B; Ferraz, C. (2010) O grupo como produtor de singularidades: o processo subjetivo como forjador de singularidades frente às pessoas que vivem com as DSTs. *Rev. Mal-Estar Subj.* 10(4).
- Silva, L.A.V.; Oliveira, R.F.; Franco, A.L.S. (1998) Inserção do psicólogo em programas de atenção primária à adolescência: uma experiência em Salvador-Bahia. *Psicol. Reflex. Crit.*, 11(3), 605-20.
- Silva, N.E.K., Oliveira, L.A.; Figueiredo, W.S.; Landroni, M.A.S.; Waldman C.C.S.; Ayres, J.R.C.M. (2002) Limites do trabalho multiprofissional: estudo de caso dos centros de referência para DST/Aids. *Rev. Saúde Pública*, 36(4), 108-116.
- Zambenedetti, G. (2012) Sala de espera como estratégia de educação em saúde no campo da atenção às doenças sexualmente transmissíveis. *Saude e sociedade*, 21(4), 1075-1086.
- Zambenedetti, G.; Piccinini, C.A.; Sales, A.L.L.F.; Paulon, S.M., Silva, R.A.N. (2014) Psicologia e Análise Institucional: Contribuições para os Processos Formativos dos Agentes Comunitários de Saúde. *Psicol. ciência e profissão*, 34(3), 690-703.

FEELING MEH: *PSYCHOLOGIST IN A POCKET* APP FOR DEPRESSION SCREENING

**Roann Munoz Ramos¹, Paula Glenda Ferrer-Cheng², J6 Ágila Bitsch³
& Stephan Michael Jonas¹**

¹*Department of Medical Informatics, RWTH Aachen University Hospital (Germany)*

²*The Graduate School, University of Santo Tomas (Philippines)*

³*Communication and Distributed Systems, RWTH Aachen University (Germany)*

Abstract

Among the most prevalent clinical disorders worldwide, depression is also a major cause of illness and disability. This makes early detection of depression critical in its prevention. However, barriers, such as social stigma and insufficient awareness regarding the condition prevent help-seeking behaviors.

Conventional mental health assessment procedures primarily involve direct interactions between clinicians and patients. One emerging tool in the delivery of healthcare and information is the use of mobile technology. Known as mobile health (mHealth), this approach offers unique advantages, particularly in mental health screening, in terms of capturing behaviors real-time, thus preventing recall bias and enhancing objectivity in data gathering. More importantly, assessments are private and entail no undue attention.

The Psychologist in a Pocket (PiaP) is an application we developed that screens for depressive symptoms via text analysis. All text inputted electronically—such as short message services, emails, social network posts—is analyzed based on keywords related to depression based on DSM and ICD criteria. Data evaluation and collection happen in the background, on-device, without requiring any user involvement. Currently, the application is in an early prototype phase entering initial clinical validation.

Keywords: *depression, Psychologist in a Pocket, mHealth, text analysis.*

1. Introduction

In the 2015 estimate of the World Health Organization (WHO), there are approximately 350 million people of all ages worldwide suffering from depression, making it a common global mental health disorder. As a complex disorder, there are a myriad of factors to the development of depression, such as genetics, neurochemical imbalance, personality and temperament, and environmental. Among its symptoms include depressed mood, loss of interest, significant weight changes, alterations in sleeping behaviors and, in more serious cases, suicidality (American Psychiatric Association, 2013). The condition takes a toll in all aspects of life – personal, academic, social and financial, among others. Around 80% report functional impairment while 27% face serious difficulties at home and in the workplace (Centers for Disease Control and Prevention, 2013). As a result, depression has become a primary cause of disability and, being such, has been identified as a key determinant in the global burden of disease (WHO, 2015).

Due to unfortunate circumstances, such as social stigma, cultural barriers, misdiagnosis and lack of competent mental health practitioners, a significant number of depression-sufferers do not avail themselves of scientifically proven therapeutic strategies and interventions.

Technological innovations and advancements have paved the way for pioneering methodologies and approaches in the area of health care. The proliferation of the use of mobile technologies, such as mobile phones, has opened non-conventional access to health services and information. Mobile health (mHealth), an area of electronic health (eHealth), is a growing trend in the practice of medicine (e.g., Fiordelli, Diviani & Schulz, 2013; de Jongh et al, 2012). The ubiquity of mobile devices, both in developed and developing countries, caters to easier health access and delivery even in remote areas. It allows for greater patient-engagement and better patient-clinician communication, especially in chronic health conditions.

In the area of mental health, mobile technology can be used to screen for symptoms, monitor health conditions and provide treatment approaches (e.g., Luxton et al, 2011). This can be used to

augment established and formal clinical assessment procedures, such as face-to-face interviews, psychological test batteries and observations.

Despite the relatively high prevalence and serious consequences of depression, the condition does not always exhibit obvious symptoms in the realms of cognitive, behavioral and emotional functioning. For this reason, it is beneficial to develop an acute screening mechanism that will allow for a timely and more “sensitive” detection.

2. Psychologist in a pocket application

Psychologist in a Pocket (PiaP) (Bitsch et al, 2015) is a mobile application available for Android smartphones to screen for symptoms of depression as revealed in electronic data, such as in Emails, SMS and social media posts. We emphasize, however, that PiaP does not aim to serve as a replacement and/or substitute for mental health professionals, such as clinical psychologists and psychiatrists. The application does not provide a clinical diagnosis, and, in its current form, does not yet offer any form of psychotherapy. At best, PiaP can reinforce the more time-honored and conventional clinical screening and assessment practices.

2.1. Background

Using text analysis, PiaP is primarily based on the hypothesis that language provides valuable insights into the state of one’s mental health (e.g., Goh & O’Kearney, 2014; Demb, 1980). In depression, for example, cognitive theory puts emphasis on the role of underlying negative belief systems and how such thoughts influence the way we view the self, the world and the future (Beck, 2011). An example of a statement is “I am worthless.” Higher incidences of first person pronoun usage (Weintraub, 1981) and tendencies towards self-rumination (Greenberg & Pyszczynski, 1986) are likewise found to be more common among individuals suffering from depression. Social media, which has been fast-becoming a regular mode for communication and self-expression, can likewise furnish relevant and considerable evidence of depression and its symptoms. Certain behavioral patterns in online communication (e.g., heightened self focus, negative affect) may signify the onset of depression (De Choudhury et al, 2013). Studies also support that social network postings, status updates and blogs may reflect depression (e.g., Coppersmith, Dredze & Harman, 2014; Moreno et al, 2011; Ramirez-Esparza, Chung, Kacewicz and Pennebaker, 2008).

2.2. How does PiaP work? An overview

PiaP employs ecological momentary analysis in the detection of text inputs. Among the key advantages of this approach are: a) data access in various settings is real-time or at the moment of occurrence; b) analysis is done passively, thus there is no need for user involvement; c) evaluation is objective; and, d) ensures privacy.

Data analysis necessitates three major steps. The preprocessing stage is characterized by language extraction (in English or in Filipino) and word or sentence normalization (e.g., spelling). This is followed by the classification of the keyword to the relevant symptom category. Symptom categories are based on the Diagnostic and Statistical Manual for Mental Disorders (5th ed.) and the International Statistical Classification of Diseases and Related Health Problems (10th ed.). In addition to this stage is the tallying of first-person pronouns used. Lastly, depression warning is triggered when several symptoms are present over a 2-week period.

2.3. Important technical details

To meet concerns about data security and privacy, PiaP does not need Internet connectivity to analyze electronic data. Specifically, text analysis is performed locally, i.e., on the device itself. The only time wherein an Internet connection is needed is during the installation of the application. As a consequence, data is never uploaded to a cloud service. Text capture is realized as an accessibility service, whereas the operating system automatically excludes passwords. Plug-ins, such as for sleep, movement or activity detection and third-party contacts, are optional.

3. Conclusion and Research Directions

There is sufficient scientific evidence regarding the role of mental health (and illness) and its impact on one’s quality of life and day-to-day functioning. Depression is a specific example of how a mental disorder can debilitate millions of people worldwide. Although there has been, over the years, an

increased public campaign, varied assessment procedures and available treatment options, there still exists the challenge of prompt and proper identification of individuals suffering from depression.

Technological advancements, along with the growing influence of the Internet and the proliferation of mobile devices, should be tapped in the practice of mental healthcare. Mobile applications, such as PiaP, can help steer the discourse and development towards this direction by providing more contemporary and convenient approaches towards depression screening.

Currently, PiaP is undergoing a series of validation studies and clinical trials among university students. It is also in the process of including a third language (German) in its depression lexicon. Among its future research directions are determining vocal identifiers and clues among individuals with depression, widening the scope of depression screening in terms of physical activity indicators and incorporating cognitive-behavioral therapy (CBT), which has been well established to be very effective in treating depression (e.g., Wiles et al, 2016).

References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- Beck, J. S. (2011). *Cognitive behavior therapy: Basics and beyond* (2nd Ed.). New York: Guilford Press.
- Bitsch, JA, Ramos, R, Ix, T, Ferrer-Cheng, PG, & Wehrle, K. (2015). Psychologist in a Pocket: Towards depression screening on mobile phones. In B Blobel, M Linden & MU Ahmed, MU (Eds.). *pHealth 2015: Proceedings of the 12th International Conference for Wearable Micro and Nano Technologies for Personalized Health*. Amsterdam: IOS Press.
- Centers for Disease Control and Prevention. (2013). *Workplace health promotion*. Retrieved January 2016 from <http://www.cdc.gov/workplacehealthpromotion/implementation/topics/depression.html>.
- Coppersmith, G, Dredze, M, & Harman, C. (2014). Quantifying mental health signals in Twitter. *Proceedings of Association for Computational Linguistics Workshop of Computational Linguistics and Clinical Psychology*, 51-60.
- De Choudhury, M, Gamon, M, Counts, S & Horvitz, E. (2013). Predicting depression via social media. *9th International AAAI Conference on Web and Social Media Proceedings*, 1-10.
- de Jongh T, Gurol-Urganci I, Vodopivec-Jamsek V, Car J, & Atun R. (2012). Mobile phone messaging for facilitating self-management of long-term illnesses. *Cochrane Database of Systematic Reviews*, 12. 1-52.
- Demb, H. (1980). A language disturbance as a possible indicator of serious mental illness in young school-age children. *International Journal of Pediatric Otorhinolaryngology*, 2(4), 329-335.
- Fiordelli, M, Diviani, N, & Schulz, PJ. (2013). Mapping mHealth research: A decade of evolution. *Journal of Medical Internet Research*, 15(5), e95.
- Goh, S. & O’Kearney, R. (2015). Early language impairments and developmental pathways of emotional problems across childhood. *International Journal of Language & Communication Disorders*, 50(3), 358-373.
- Greenberg, J., & Pyszczynski, T. (1986). Persistent high self-focus after failure and low self-focus after success: The depressive self-focusing style. *Journal of Personality and Social Psychology*, 50 (5), 1039-1044.
- Luxton, DD, McCann, RA, Bush, NE, Mishkind, MC, & Reger, GM. (2011). mHealth for mental health: Integrating smartphone technology in behavioral healthcare. *Professional Psychology: Research and Practice*, 42(6), 505-512.
- Moreno, MA, Jelenchick, LA, Egan, KG, Cox, E, Young, H, Gannon, KE & Becker, T. (2011). Feeling bad on Facebook: Depression disclosures by college students on a social networking site. *Depression and Anxiety*, 28, 447-455.
- Ramirez-Esparza, N, Chung, CK, Kacewicz, E and Pennebaker, JW. (2008). The psychology of word use in depression forums in English and in Spanish: Testing two text-analytic approaches. *Proceedings of the 2008 International Conference on Weblogs and Social Media*, 102-108.
- Weintraub, W. (1981). *Verbal behavior: Adaptation and psychopathology*. New York: Springer.
- Wiles NJ, Thomas L, Turner N, Garfield, K, Kounali, D, Campbell, J, Kessler, D, Kuyken, W, Lewis, G, Morrison, J, Williams, C, Peters, TJ, & Hollinghurst, S. (2016). Long-term effectiveness and cost-effectiveness of cognitive behavioural therapy as an adjunct to pharmacotherapy for treatment-resistant depression in primary care: Follow-up of the CoBalT randomised controlled trial. *The Lancet*, [http://dx.doi.org/10.1016/S2215-0366\(15\)00495-2](http://dx.doi.org/10.1016/S2215-0366(15)00495-2).
- World Health Organization. (2015). Retrieved January 2016 from <http://www.who.int/int/mediacentre/factsheets/fs369/en/>.

PSYCHOLOGICAL ASPECTS OF HIV- POSITIVE PREGNANCY: A LITERATURE REVIEW

Aérica Meneses¹, Mariana Santos², Laíse Santos² & Marta Fuentes-Rojas¹

¹Faculdade de Ciências Aplicadas, Unicamp (Brazil)

²CAISM, Unicamp (Brazil)

Abstract

HIV/Aids is a difficult-to-control disease that has increased significantly among women. One of the consequences of these rates is the number of HIV-positive pregnant women. HIV-positive pregnancies need precautions and special care to avoid viral transmission from mother to baby. This study aims at discussing the psychological aspects of HIV-positive women's pregnancies. Therefore, a literature review on MEDLINE, EMBASE, LILACS, PSYINFO, BIREME, BVS-Psi e SciELO has been carried out. Thirteen articles, which fit selection criteria, have been chosen. These articles have been studied from content analysis. The following categories have been identified: implications and limitations of being HIV-positive; pregnancy in HIV/Aids context; HIV, pregnancy and social relations. In this sense, the way which HIV-positive women's pregnancies are permeated by worries, fears and feeling of guilt was observed. In addition, these women live moments of anguish facing the diagnosis besides prejudice and stigma.

Keywords: *pregnancy; HIV; Aids; psychological aspects.*

1. Introduction

The puerperal-pregnancy cycle is a period of intense changes in a woman's life, featured by emotional, physiological and social alterations (Tedesco, 1997; Bortolotto, 2007). According to Maldonado (2002), this is a period of transition, which results in new adaptations, interpersonal reorganizations, intrapsychic readjustments and learning. When associated with any maternal or fetal pathology or mother's or baby's health risk, the pregnancy presents a major emotional and social overload (Tedesco, 1997). That is what happens in HIV-positive women's pregnancies.

The HIV, Human Immunodeficiency Virus, is the virus that attacks the immune system of the body, eventually causing the Acquired Immune Deficiency Syndrome – AIDS. One of the forms of transmission is the vertical (from mother to baby), that can happen during pregnancy, parturition and/or breast-feeding (UNICEF, 1998). The first cases of Aids in Brazil were identified in 1982 (Santos et al., 2002) and the epidemiological profile has suffered great changes. If, at first, the infection concentrated in stigmatized small groups, gradually, an HIV pauperization, feminization and dissemination has occurred.

The epidemic has been growing significantly among women. One of the consequences of these rates is the number of HIV-positive pregnant women. In Brazil, about 90% of women infected by HIV virus are in reproductive age (Noad et al., 2010). Furthermore, HIV-positive women have the right "to freely and responsibly decide about their reproduction" (Brasil, 2010A). According to data from the Ministry of Health, between the years of 2000 until June of 2010 in Brazil, 54.218 cases of HIV-positive pregnant women have been detected (Brasil, 2010B).

2. Objective

To discuss about psychological aspects of pregnancy in HIV/Aids context.

3. Method

In order to accomplish the present study, a literature review has been carried out. The following electronic databases have been researched: MEDLINE, LILACS, EMBASE, BIREME, BVS-Psi, SciELO and PsycINFO. The descriptors used were "HIV", "pregnancy"/"gravidez", "emotion"/"emoção" and "psychology"/"psicologia". The criteria of inclusion were publications from the last fifteen years in the following languages: Portuguese, English and Spanish. The data collected have been analyzed through the content analysis technique and categorical (Bardin, 1997), in an attempt to describe and understand the main evidences about the subject approached.

4. Results and discussion

In a research carried out on the electronic databases, 191 articles have been identified. After a thorough reading of the title and abstract, 13 have been selected, from which four were published in the United States of America and four in Brazil, and the others in the following: countries: Zambia, South Africa, Thailand, Portugal and Vietnam. From the articles selected, three categories have been identified: implications and limitations of being HIV-positive; pregnancy in HIV/Aids context; HIV, pregnancy and social relations. The categories are presented as it follows:

1) *implications and limitations of being HIV-positive*: All of the studies selected referred to the limitations of living with HIV/Aids. Jones (2008), discussing about the impact of HIV diagnosis in a person's life, highlights that it is bigger when compared to the impact of other grave diseases. This happens, according to Ross, Sawatphanit and Zeller (2009) because the HIV/AIDS is still seen as a capital punishment. Socially, there is the idea that the HIV/AIDS carrier is that one who presents inappropriate behavior or attitudes, like inadequate sexual behavior (Galvão; Cunha; Machado, 2010). Facing this reality, Carvalho and Piccinini (2006) state how evident it is that there is a need for the pregnant woman to show that the HIV infection is not a result of unacceptable behaviors by society.

According to Coelho and Motta (2005), due to HIV be related to sexuality, the pregnant woman with HIV/Aids feels guilty many times. Some women consider HIV as a punishment for something they did wrong, which causes a strong suffering (Carvalho; Piccinini, 2006).

For an HIV-positive pregnant woman, HIV can be a "reminder" of her condition, constantly confirming the fear of receiving a sick child, or having complications along pregnancy. (Galvão; Cunha; Machado, 2010). HIV-positive women face various difficulties in revealing the diagnosis, which causes limitations, including for adherence to preventive chemoprophylaxis for vertical transmission (Araújo et al., 2008). For many women, after sometime, the idea of the presence of HIV virus is permissible, but, as mothers, this is, for some, intolerable and unacceptable (Carvalho; Piccinini, 2006). Thus, this woman becomes even more vulnerable, due to the range of aspects that influences this moment.

2) *pregnancy in HIV/AIDS context*: Pregnancy in HIV/AIDS context is featured by contradictory feelings, worries and specific care, which overload the pregnant woman many times. For Galvão, Cunha and Machado (2010) this is a period of questions because the pregnant woman lives with the uncertainties of a possible viral transmission to the baby. Corroborating with the authors, Lourenço and Afonso (2005) call the attention to the appearance of fantasies of a dangerous mother for this baby who will not even be able to breastfeed him or her. Thus, the HIV-positive pregnant woman lives with two issues: the care with the Vertical Transmission and the social consequences of infection (Sandelowski E Barroso, 2003). For these mothers, if accepting the idea of their own diagnoses is already something hard, accepting the idea of transmitting the virus to the baby is even more painful (Carvalho; Piccinini, 2006). In a research carried out in Vietnam, women who discovered the diagnosis in the pregnancy affirmed that they would not choose to have children if they knew the diagnosis before the pregnancy (Oosterhoff et. al., 2008).

Studies carried out in Thailand, Zambia, Brazil and the United States (Kapetanovic et al., 2009; Ross; Sawatphanit; Zeller, 2009; Kwalombota, 2002) demonstrate that the rates of HIV-positive pregnant women with depression are alarming. Guilt, lack of social and family support and fear of Vertical Transmission appear as the possible aspects that result in a major vulnerability for HIV-positive pregnant women to develop depressive symptoms, which are not either treated or identified many times (Kapetanovic et al., 2009; Blaney et. al., 2004). However, the pregnancy also appears as a positive process in these women's lives, helping them to look after themselves at the same time they look after their babies (Carvalho, Piccinini, 2006).

3) *HIV, Pregnancy and social support*: Social support is indispensable when facing adverse situations, such as pregnancy in HIV/Aids context, for example. However, what can be verified is that, many times, this period is featured by solitude and solitary facing of this situation by HIV-positive pregnant women. Ross, Sawatphanit and Zeller (2009) highlight that individuals with HIV feel stigmatized and discriminated due to the infection. HIV-positive pregnant women are the most affected. Corroborating with the authors, Carvalho and Piccinini (2006) add that prejudice and discrimination make infection facing difficult. For Oosterhoff et al. (2008), the consequences of HIV discovery end up being more social, being Aids a synonym for exclusion. For pregnant women, all of this generates more anxiety (Galvão, Cunha E Machado, 2010). Many women resist sharing HIV result and face the suffering and pregnancy alone (Araújo et al. 2008). To tell or not to tell about the seropositivity is another dilemma faced by these women. Visser, et al (2008) carried out a study with 293 women in South Africa to know more about the reasons that led them not to reveal the diagnosis. From the interviewees, 41% said that they did not revealed anybody fearing people's reaction and being discriminated and abandoned. With the discovery of seropositivity, many families abandon the pregnant woman at this moment (Coelho; Motta, 2005). The stigma has been pointed out as the reason for psychological suffering among individuals with

HIV (Ross; Sawatphanit; Zeller, 2009). Blaney et. al. (2004) state that seropositive pregnant women suffer more discrimination in healthcare services, demonstrating the lack of preparation by professionals.

Family and spouse support help these women develop repertoires for facing difficulties and adverse situations. HIV acceptance and adherence to treatment can be improved with family support (Araújo et al., 2008). Ross, Sawatphanit and Zeller (2009) affirm that when a seropositive pregnant woman feels loved and cared, she can feel safe, decreasing depressive symptoms. The same happens when this support comes from the spouse (Blaney et. al., 2004).

5. Conclusion

Seropositive women's pregnancy is featured by worries, fears and feeling of guilt. Many of them, without social support, experience prejudice, discrimination and moments of anguish and uncertainty, which is a factor that cause higher depression rates among them. On the other side, being pregnant can motivate treatment adherence. Few studies deal with the emotional aspect of pregnancy within this context. Besides, professionals lack preparation to manage such aspects.

It is from these data that the need of a qualified team to fully look after these women and the presence of psychologists to work with them are verified.

References

- Araújo, M. A. L.; Silveira, C. B.; Silveira, C. B.; Melo, S. P. (2008) Vivências de gestantes e puérperas com o diagnóstico do HIV. *Rev Bras Enferm*, 61(5), 589-98.
- Bardin, L. (1977) *Análise de conteúdo*. 4a ed., Lisboa: Edições 70.
- Blaney, N. T.; Fernandez, M. I.; Ethier, K. A.; Wilson, T. E. (2004) Psychosocial and Behavioral Correlates of Depression Among HIV-Infected Pregnant Women. *AIDS patient care and STDs*, 18(7).
- Bortoletti, F.F. Psicodinâmica do Ciclo Gravídico Puerperal. Em Bortoletti, F.F.; Moron, A.F.; *Psicologia na prática obstétrica – abordagem interdisciplinar*. Barueri: Editora Manole.
- Brasil (2010A). Recomendações para Profilaxia da Transmissão Vertical do HIV e Terapia Antirretroviral em Gestantes: manual de bolso. Brasília: Ministério da Saúde.
- Brasil. (2010B) Boletim Epidemiológico - AIDS e DST. Brasília: Ministério da Saúde.
- Carvalho, F. T. Piccinini, C. A. (2006) Maternidade em situação de infecção pelo HIV: um estudo sobre os sentimentos de gestantes. *Interação em Psicologia*, 10(2), 345-355.
- Coelho, D. F.; Motta, M. G. C. (2005) A compreensão do mundo vivido pelas gestantes portadoras do vírus da Imunodeficiência humana (HIV). *Rev Gaúcha Enferm*, 26(1), 31-41.
- Galvão, M. T. G.; Cunha, G. H.; Machado, M. M. T. (2010) Dilemas e conflitos de ser mãe na vigência do HIV/Aids. *Rev. Bras. Enfermagem*, 63(3), 371-6.
- Jones, T.B. (2008) Psychosocial Dimensions of HIV Infection in Pregnancy. *Clinical Obstetrics and Gynecology*, 51(2), 456-466.
- Kapetanovic, S.; Christensen, S.; Karim, R. Lin, F. Mack, W. J. Operskalski, E. Correlates of Perinatal Depression in HIV-Infected Women. *AIDS patient care and STDs*, 23(2).
- Kwalombota, M. (2002) The effect of pregnancy in HIV-infected women. *AIDS Care*, 14(3), 431-3.
- Lourenço, S. R. P. N.; Afonso, H. G. M. (2009) VIH no feminino: vivência psicológica. *Rev Bras Enferm*, 62(1), 119-124.
- Maldonado, M.T. (2002) *Psicologia da gravidez: parto e puerpério*. 16ed. São Paulo: Saraiva.
- Naud, P.; Chaves, E.; Matos, J.; Hammes, L. S. (2010) *Gestação e HIV*. Em Freitas, F. Costa, S. H. Ramos, J. G. L. Magalhães, J. A. Rotinas em Obstetrícia, Porto Alegre: Artmed.
- Oosterhoff, P.; Hardon, A.P.; Nguyen, T.A.; Pham, N.Y.; Wright, P. (2008) Dealing with a positive result: routine HIV testing of pregnant women in Vietnam. *AIDS Care*, 20(6), 654-659.
- Ross R.; Sawatphanit W.; Zeller R. (2009) Depressive Symptoms Among HIV-Positive Pregnant Women in Thailand. *Journal of Nursing Scholarship*, 41(4), 344-50.
- Sandelowski, M.; Barroso, J. (2003) Motherhood in the Context of Maternal HIV Infection. *Research in Nursing & Health*, 26, 470-82.
- Santos, N. J. S.; Tayra, A.; Silva, S. R. (2002) A aids no Estado de São Paulo. As mudanças no perfil da epidemia e perspectivas da vigilância epidemiológica. *Rev. Brasileira Epidemiologia*, 5(2), 286-310.
- Tedesco, J. J. (1997) Aspectos emocionais da Gravidez de Alto Risco. Em Zugaib, M.; Tedesco, J. J.; Quayle, J. *Obstetrícia Psicossomática*. São Paulo: Editora Atheneu.
- UNICEF. (1998) HIV/AIDS: Prevenção, tratamento, cuidado. A Prescrição, Número especial.
- Visser, M. J.; Neufeld, S.; Villiers, A.; Makin, J.D.; Forsyth, B.W.C. (2008) To tell or not to tell: South African women's disclosure of HIV status during pregnancy. *AIDS Care*, 20(9), 1138-45.

A JAPANESE VERSION OF THE MEASURE OF FOOD CHOICE VALUES: VALIDITY AND RELIABILITY ASSESSMENT

Yasuyuki Fukukawa¹, Wataru Onoguchi² & Mieko Nakamura³

¹*School of Humanities and Social Sciences, Waseda University (Japan)*

²*Graduate School of Letters, Arts and Sciences, Waseda University (Japan)*

³*Dept of Community Health and Prev Med, Hamamatsu University School of Medicine (Japan)*

Abstract

In this study we developed a Japanese version of the measure of food choice values (mFCV). A series of studies was conducted by using data collected from various Japanese populations (i.e., undergraduate students, employees, and older adults). An exploratory factor analysis revealed that the 25 items of mFCV loaded on eight subscales, mostly same with the original version. Internal consistency and test-retest reliability of each subscale were overall favorable. Analyses also provided evidence bearing on the validity of the scale. Comparison of mFCV and another existing food choice questionnaire demonstrated correlations between comparable subscales. In addition, certain mFCV subscales are positively or negatively associated with dietary intake, in a proper direction.

Keywords: *food preference, food choice value, adaptation, infectious disease, evolution.*

1. Introduction

Avoiding transmission of infectious diseases through the intake of food was crucial for our ancestors to survive. As a consequence of their caution, we human beings have evolved a preference to eat “clean” food (Schaller & Murray, 2010). However, empirical studies on food preference from this evolutionary perspective have been limited, because there was no appropriate measure to address the issue. The measure of food choice values, developed recently by Lyster and Reeve (2015) is an epoch-making scale, because it includes not only conventional sub-constructs of food preference scale such as “convenience”, “sensory appeal”, and “weight control”, but also a sub-construct named “safety”, to evaluate the degree to which food has been prepared or processed properly and will not cause illness. The purpose of this study was to develop a Japanese version of the scale.

2. Methods

2.1. Participants and dataset

There were 368 Japanese participants across four surveys. In each survey, participants completed a different questionnaire including the measure of FCV, other relevant measures and demographic information. Participants of the first survey (sample 1) were undergraduate students at Waseda University, in Japan (n = 139; 73 male, 66 female; mean age = 20.7). Participants of the second survey (sample 2) were also undergraduate students at Waseda University (n = 134; 69 male, 65 female; mean age = 20.7). One hundred and eight participants of sample 1 and sample 2 were overlapping, because the second survey was conducted one week after the first survey at the same class. Participants of the third survey (sample 3) were employees at an outboard motor company, in Japan (n = 192; 186 male, 6 female). The participants’ age brackets ranged from twenties to over fifties (Actual age could not be assessed in the third survey). Participants of the fourth survey (sample 4) were elderly students of an extension course at Waseda University (n = 11; 3 male, 8 female; mean age = 63.1).

2.2. Instruments

Other than demographic measures (age, sex, etc.), participants completed the following measures.

1) *The measure of FCV (mFCV)*. With the permission of the author of the original scale, 25 items of this scale were translated into Japanese by us. The Japanese items were then back-translated by a different individual (a Japanese and English bilingual psychologist). Lastly, a native English speaker

(Canadian) compared the original and back-translated English items to ensure the original meanings were retained. The response format was a Likert scale ranging from 1 (not at all) to 5 (very).

2) *Food Choice Questionnaire (FCQ)*. This is the Japanese scale developed by Agari and Tomita (1999), based on the English scale (Stephens, Pollard, & Wardle, 1995). The scale comprises four subscales of Nutrition and health, Convenience, Weight control, and Sensory appeal. Alpha coefficient of each subscale in this study was .84, .87, .77, and .78, respectively.

3) *Food Frequency Questionnaire (FFQ)*. We collected data on dietary intake of vegetables and fast food by a method of choosing the answer from 1 (never) to 9 (two or more times per day).

3. Results

3.1. Factor analysis

An exploratory factor analysis was conducted to evaluate the factor structure underlying the set of 25 items in mFCV. Data of participants in sample 1, sample 3, sample 4, and those in sample 2 who were not included in sample 1 were used in the analysis.

Results indicated that, same as the original scale, 8 factors should be retained. An eight-factor solution (with promax rotation) accounted for 61.6 % of the variance among the 25 items. Table 1 lists each of the items, along with the loadings on 8 factors. Factor 1 comprised four items that assess degree to which food contains natural ingredients, vitamins and nutrients, and has minimal negative impact on the environment (Organic). Factor 2 comprised three items that assess degree to which food can be easily and quickly prepared and eaten (Convenience). Factor 3 (Comfort) comprised three items that assess degree to which food is expected to result in the experience of positive emotions or to alleviate negative emotions (Weight control/health). Factor 4 comprised three items that assess degree to which food is thought to help one maintain current weight or lose weight. Factor 5 comprised three items that assess degree to which food has been prepared or processed properly and will not cause illness (Safety). Factor 6 comprised four items that assess degree to which food is easy to access physically and financially (Accessibility). Factor 7 comprised two items that assess degree to which food is considered traditional to one's background or heritage (Tradition). Factor 8 comprised three items that assess degree to which food is pleasing to the senses – smell, taste, and appearance (Sensory appeal).

The main difference of Japanese version to the original was that item 21 (“How similar it is to the food I ate when I was a child”) was included in Accessibility (It was included in Tradition in the English scale). This item seemed to assess degree to which food is easy to access “emotionally” in the Japanese version. Another characteristic of Japanese scale was the lower value (.30) of factor loading of item 17 (“Degree to which it looks good”) on Sensory appeal. To retain the identification of English and Japanese versions, however, we did not exclude the item from the scale.

Internal consistency for each of the subscales was estimated by using Cronbach's alpha; Organic (.85), Convenience (.90), Comfort (.85), Health/weight concern (.87), Safety (.87), Accessibility (.75), Tradition (.80), and Sensory appeal (.53). Thus, internal consistency was deemed sufficient for each of the subscales, except Sensory appeal. The insufficient alpha coefficient of Sensory appeal should reflect the lower loading of item 17 on the factor. In fact, the value was improved to .62, when this item was excluded from the factor.

3.2. Test–retest reliability

To examine the temporal stability of the measure, a test–retest method was used to generate a coefficient of stability. Data of students who participated in both the first and second surveys were used in the analysis. The coefficients of stability (r_s) ranged from .46 to .76 for each of the subscales: Organic (.68), Convenience (.59), Comfort (.48), Health/weight concern (.76), Safety (.76), Accessibility (.46), Tradition (.66), and Sensory appeal (.67). The results suggest that, while some FCVs are relatively stable over time (e.g., Health/weight concern and Safety), others (e.g., Comfort and Accessibility) may be more susceptible to transient sources of error variance. However, these results, in general, are consistent with those reported in the original scale.

3.3. Construct validity

Correlations of sub factors in mFCV with those in FCQ were estimated, using data of sample 2. Medium to large (.40 and over) statistically significant ($p < .001$) correlation coefficient (r_s) were indicated as follows; Organic in mFCV and Nutrition and health in FCQ (.52), Convenience in mFCV and Convenience in FCQ (.47), Health/weight concern in mFCV and Weight control in FCQ (.79), Safety in mFCV and Nutrition and health in FCQ (.47), Accessibility in mFCV and Convenience in FCQ (.54), and Sensory appeal in mFCV and Sensory appeal in FCQ (.57).

3.4. Criterion-related validity

Correlations of FFQ measures with mFCV sub factors were estimated using data of sample 2, 3, and 4. Results revealed that vegetable consumption was negatively correlated with Convenience ($r = -.15$), Comfort ($-.13$), Accessibility ($-.14$), Tradition ($-.15$), and Sensory appeal ($-.16$), whereas fast food consumption was positively correlated with Convenience (.25), Comfort (.26), Accessibility (.25), Tradition (.17), and Sensory appeal (.21), in a significant level ($p < .05$). A negative relationship ($-.12$) between fast food consumption and Safety was also significant.

Table 1. Factor loadings of 25 items on the measure of food choice values

Items	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Factor7	Factor8
14. Degree to which it contains natural ingredients	0.86	-0.02	-0.08	0.00	-0.05	-0.05	0.00	0.11
18. The amount of vitamins and minerals in it	0.74	0.04	0.04	0.09	-0.04	-0.05	-0.02	-0.02
11. Whether it is grown or produced in an environmentally friendly way	0.73	-0.10	-0.02	-0.01	0.03	0.07	0.07	0.01
24. How many artificial additives it contains	0.65	-0.05	0.02	0.10	0.20	-0.01	-0.06	-0.04
20. How long it takes to prepare	-0.06	1.04	0.02	-0.02	0.02	-0.05	-0.02	-0.06
19. Whether it can be cooked very simply	0.00	0.83	-0.06	0.01	0.01	0.04	0.00	0.06
13. How easy or difficult it is to prepare	-0.03	0.69	0.01	0.08	0.00	0.04	0.05	0.07
6. Whether I think it will help me cope with stress	-0.07	0.03	0.93	-0.01	0.06	-0.09	0.03	-0.04
7. Degree to which it will help me cope with life events	-0.08	-0.07	0.89	0.02	-0.03	0.03	-0.03	0.13
22. How much it will help me relax	0.27	0.05	0.61	-0.05	-0.03	0.03	-0.01	-0.09
8. How likely it is to help me control my weight	0.19	0.03	-0.07	0.83	-0.05	0.06	-0.15	0.01
12. The amount of calories in it	-0.08	-0.07	0.05	0.83	0.06	0.01	0.10	0.01
16. Degree to which it will help me lose weight	0.00	0.04	0.02	0.78	-0.04	-0.05	0.11	-0.08
10. Degree to which I can be sure it is not associated with food-borne illness	-0.09	-0.05	0.04	0.02	0.86	0.13	0.04	0.00
23. Whether I am certain it does not contain harmful bacteria or viruses	0.01	0.04	0.03	-0.02	0.84	0.04	0.01	-0.01
15. Degree to which it has been prepared with extreme care and safety	0.35	0.07	-0.09	-0.07	0.61	-0.10	-0.01	0.06
25. Whether it can be bought in shops close to where I live or work	-0.04	0.08	-0.01	0.00	0.12	0.90	-0.09	-0.13
4. Whether it is easily available in shops and supermarkets	-0.03	-0.14	-0.07	0.05	-0.02	0.78	0.06	0.16
21. How similar it is to the food I ate when I was a child	0.23	0.16	0.01	-0.13	-0.14	0.39	0.17	-0.08
5. Degree to which it is a good value for money	-0.08	0.06	0.11	0.05	-0.02	0.33	-0.06	0.26
9. Degree to which it reflects my cultural or ethnic traditions	0.00	-0.02	-0.01	0.05	0.06	0.02	0.86	-0.06
2. Whether it is considered a traditional food	0.00	0.01	0.00	-0.05	-0.02	-0.09	0.82	0.11
3. How it smells	0.10	-0.05	0.03	-0.04	0.00	-0.03	0.08	0.70
1. How it tastes	-0.01	0.05	0.01	-0.01	0.03	-0.05	-0.09	0.64
17. Degree to which it looks good	0.08	0.01	0.02	0.06	0.04	-0.09	0.02	0.30

4. Discussion

Across a series of studies, a 25-item measure of eight empirically defined FCV was developed. This factor model of mFCV, in general, demonstrated favorable internal consistency and test-retest reliability. Assessments of validity of the scale were also good. Comparison of mFCV and FCQ demonstrated medium to large correlations between comparable subscales. Furthermore, certain FCVs are associated with dietary intake; Convenience, Comfort, Accessibility, Tradition, and Sensory appeal were positively associated with fast food consumption and negatively associated with vegetable consumption. As a limitation of the study, item 21 and item 17 might be reconsidered in future research, from the point of view of factor structure or factor loading of the scale. Anyway, the development of this new measure may be useful for researchers who are willing to examine the relationships between FCV and adaptation of human beings, especially from an evolutionary perspective.

Acknowledgments

We would like to thank Ichige Okamoto and Mariko Nakayama for their help in the study. This work was supported by JSPS KAKENHI Grant Number 15K04042.

References

- Agari, I., & Tomita, T. (1999). Atarashii syokumotsu sentaku douki tyousa-hyou no sakusei to shinraisei, datousei no kentou [Development of food choice questionnaire new version]. *Japanese Journal of Health Psychology*, 12, 17-27.
- Lyerly, J. E., & Reeve, C. L. (2015). Development and validation of a measure of food choice values. *Appetite*, 89, 47-55.
- Schaller, M., & Murray, D. R. (2010). Infectious diseases and the evolution of cross-cultural differences. In M. Schaller, A. Norenzayan, S. J. Heine, T. Yamagishi, & T. Kameda (Eds.), *Evolution, culture, and the human mind* (pp. 243-256). New York: Psychology Press.
- Stephoe, A., Pollard, T. M., & Wardle, J. (1995). Development of a measure of the motives underlying the selection of food: the food choice questionnaire. *Appetite*, 25, 267-84.

EMOTION REGULATION FUNCTIONS OF NON-SUICIDAL SELF-INJURY

Amy Kranzler, MS¹, Sara Geisser, Psy.M.², Emma MacDonald, MA³,
Kara B. Fehling¹, & Edward A. Selby¹

¹Department of Psychology, Rutgers, the State University of New Jersey (USA)

²Graduate School of Applied and Professional Psychology, Rutgers, the State University of New Jersey (USA)

³Department of Psychology, Ryerson University (Canada)

Abstract

Non-suicidal self-injury (NSSI) is the deliberate destruction of body tissue without lethal intent (Chapman et al., 2006). Prevalence is as high as 36% among adolescents and 43.6% among young adults (Hasking et al., 2008; Zetterqvist et al., 2013). Functions of these behaviors are poorly understood, rendering it difficult to prevent and treat NSSI (Nock et al., 2009). NSSI is most commonly engaged in for emotion regulation functions (Nock & Prinstein, 2004) and deficits in emotion regulation may be associated with increased NSSI behaviors (Turner et al., 2012). The current study used Ecological Momentary Assessment (EMA) to examine the emotion regulation functions of NSSI. EMA methods offer novel ways of measuring behaviors, reduce the problem of recall biases, and improve ecological validity (Hufford, 2007). 47 self-injuring adolescents and young adults, aged 15-21, used a smartphone app to track their NSSI urges/ behaviors and affective experiences immediately before and after engaging in NSSI over two weeks. Participants completed the *Difficulties in Emotion Regulation Scale* (DERS; Gratz & Roemer, 2004) at baseline. Difficulty accessing emotion regulation strategies predicted more frequent NSSI urges over the monitoring period ($B=.03$, $SE=.01$, $Wald=8.0$, $p<.01$), while impulsivity predicted less frequent NSSI urges ($B=-.03$, $SE=.01$, $Wald=6.83$, $p<.01$). No DERS subscales predicted frequency of NSSI behaviors. Immediately following NSSI behaviors, participants reported significant decreases in high-arousal negative emotions and increases in low-arousal positive emotions, demonstrating the emotion regulation function of NSSI. Results support teaching adaptive emotion regulation strategies in NSSI interventions. Further research and treatment implications will be discussed.

Keywords: *Non-suicidal self-injury, emotion regulation, ecological momentary assessment, adolescents, young adults.*

1. Background

Nonsuicidal self-injury (NSSI), defined as the direct, deliberate destruction of body tissue without lethal intent (Chapman, Gratz, & Brown, 2006; Nock et al., 2006), is among the leading causes of death and injury worldwide (Nock, Borges, et al., 2008; World Health Organization [WHO], 2008). Research suggests that the prevalence of NSSI among youth and young adults is as high as 20%-30% (Gratz, 2001; Laye-Gindhu & Schonert-Reichl, 2005), which is alarming given the numerous consequences associated with NSSI, including risk of infection and scarring, rejection and stigmatization by peers, and increased risk of suicide (Turner et al., 2012). Yet despite the prevalence and deleterious effects of NSSI, the function of NSSI behaviors continue to be poorly understood, and as a result, it remains difficult for clinicians to predict and prevent NSSI (Nock, Prinstein & Sterba, 2009).

Previous research suggests that people engage in NSSI for four primary functions, 1) automatic (intrapersonal) negative reinforcement (ANR; e.g., to decrease/distract from negative thoughts/feelings); 2) automatic positive reinforcement (APR; e.g., to generate feeling/sensation); 3) interpersonal-negative reinforcement (INR; e.g. to escape from some undesirable social situation); or 4) interpersonal-positive reinforcement (IPR; e.g., to communicate with/seek help from others) (Nock & Prinstein, 2004, 2005). Research on this four-factor model indicates that the most commonly endorsed function is ANR, followed by APR (e.g., Nock Prinstein & Sterba, 2009), suggesting that NSSI is most often used for emotion regulation purposes. More recently, research has begun to examine the unique clinical correlates associated with different functions of NSSI. Results from these studies suggest that the functions of these behaviors are associated with important distinctions in the clinical presentation of NSSI, such as severity of self-injury and unique clinical correlates (Turner et al., 2012). For example, recent suicide attempts and hopelessness are uniquely associated with NSSI for ANR, while symptoms of depression and posttraumatic stress NSSI are uniquely associated with for APR (Nock & Prinstein, 2005). Furthermore,

specific emotion regulation deficits are associated with distinct functions of NSSI behavior. For example, intense affectivity, expression suppression, and limited access to emotion regulation strategies predict NSSI for ANR and poor emotional clarity predicts NSSI for APR (Turner et al., 2012). However, the majority of this research has used self-report methods, which are limited by recall biases and are unable to assess the motivations and functions of NSSI in real time (i.e., immediately before and after NSSI behaviors are engaged in). Furthermore, existing research has not examined the real-time affective experiences of youth and young adults before, during, and after engaging in NSSI, limiting our ability to understand the influence of specific emotional states on the motivations for and functions of NSSI.

1.1. Purpose of the research

The purpose of the current study is to examine the real-time emotional experiences of youth and young adults who engage in NSSI behaviors using Ecological Momentary Assessment (EMA) methods. Using EMA methods, the current study examines the emotion regulation function of NSSI. EMA methods offer novel ways of measuring behaviors and psychological processes as they occur outside the laboratory (Shiffman, Stone, & Hufford, 2008), and the computerized method of data collection makes them particularly suitable for the measurement of sensitive topics such as NSSI (Tourangeau & Yan, 2007). Furthermore, although EMA methods still rely on self-report, this approach reduces the problem of recall biases and improves ecological validity by capturing experiences in real-time and in natural settings (Hufford, 2007). Previous studies have successfully used EMA methodology to study the phenomenology of NSSI among adolescents and young adults (e.g. Nock, Prinstein, & Sterba, 2009), indicating the feasibility and acceptability of this approach. Using these EMA methods, the current study a) assessed the ANR and APR functions of NSSI behaviors among youth and young adults, b) assessed the impact of distinct deficits in emotion regulation on the frequency and functions of NSSI, and c) assessed the emotional, cognitive, and behavioral contexts of NSSI behaviors

2. Methods

2.1. Participants

Participants were 47 self-injuring adolescents and young adults, aged 15-21. Participants were recruited from local treatment centers and the surrounding community in New Jersey through advertisements and flyers. In addition, participants were recruited from an adolescent depression and suicide treatment program at an urban hospital in New York through the referral of their clinicians. Inclusion criteria required that participants be aged 15-21 and have engaged in NSSI twice over the past two weeks.

2.2. Telephone screen

Flyers and online advertisements instructed interested participants to contact the research project personnel by email. Project personnel then scheduled a time to speak by phone with interested participants to describe the study, conduct pre-screening procedures, and schedule a baseline visit. For participants under the age of 18, project personnel asked them to have a parent or guardian available for the pre-screen phone call. Pre-screening questions consisted of a brief set of questions regarding NSSI and exclusion criteria. NSSI was defined to potential participants as “behaviors intentionally meant to cause damage or pain to your own body that you engaged in without intent to die.” Participants meeting eligibility criteria at this time were scheduled for an in-person baseline assessment.

2.3. Baseline visit

At the baseline visit, the study participants (and their parents/guardians for those under the age of 18) were provided with informed consent forms. Participants then completed an initial interview/diagnostic assessment conducted by a graduate student clinician and supervised by a licensed psychologist. Participants provided standard demographic information, completed a brief psychiatric interview. Once determined eligible for study participation, participants completed a battery of self-report measures assessing emotion regulation (including the Difficulties in Emotion Regulation Scale (DERS)), clinical symptoms, NSSI motivations, rumination, childhood abuse, etc. After completing self-report measures, participants were trained in how to use the monitoring app.

2.4. EMA assessment

Participants engaged in monitoring for 2 days of practice, followed by two weeks of monitoring for actual data collection. During that time, they completed five signal-contingent entries daily and initiated event-contingent entries after experiencing an NSSI thought or behavior. As part of these entries, participants completed questions about the nature, frequency, and duration of thoughts and behaviors,

other dysregulated behaviors, emotions during each episode, areas of difficulties regulation emotions, and questions about the context of each episode of NSSI/thoughts of NSSI.

2.5. Endpoint visit

Participants completed a portion of the self-report measures completed at baseline. Upon completion of the self-report measures, participants were debriefed about the purpose of the study and their experience. Participants were reimbursed for their participation.

3. Results

For this paper, results from the DERS were analyzed to determine whether there was a relationship between multiple aspects emotion dysregulation and frequency of NSSI urges. Difficulty accessing emotion regulation strategies predicted more frequent NSSI urges over the monitoring period ($B=.03$, $SE=.01$, $Wald=8.0$, $p<.01$), while impulsivity predicted less frequent NSSI urges ($B=-.03$, $SE=.01$, $Wald=6.83$, $p<.01$). No DERS subscales predicted frequency of NSSI behaviors. Immediately following NSSI behaviors, participants reported significant decreases in high-arousal negative emotions and increases in low-arousal positive emotions, demonstrating the emotion regulation function of NSSI.

4. Discussion

This study used novel EMA methodology to examine the emotion regulation functions of NSSI and the way specific deficits in emotion regulation predict NSSI urges and behaviors. In addition, this study examined the way negative and positive emotions change after NSSI and found significant decreases in high-arousal negative emotions and increases in low-arousal positive emotions immediately following NSSI behaviors. Results support teaching adaptive emotion regulation strategies in NSSI interventions. In particular, results suggest that interventions focusing specifically on identifying and targeting high-arousal negative emotion and low-arousal positive emotion may be especially relevant and beneficial for the prevention and treatment of NSSI.

In regards to the effects of various facets of emotion dysregulation on NSSI frequency, more difficulty implementing emotion regulation strategies predicted more frequent NSSI urges. These findings suggest that improved emotion regulation strategies may decrease the frequency of NSSI urges, with individuals who have access to other emotion regulation strategies spending less time craving NSSI. In contrast, impulsivity was associated with less frequent NSSI urges. This may reflect the fact that individuals with greater impulsivity engage in NSSI behaviors more quickly, spending less time thinking about NSSI before actually engaging in the behavior. However, findings from this analysis did not find a relationship between any of the various difficulties in emotion regulation and frequency of NSSI behaviors. More research to explore predictors and mediators of NSSI behavior is warranted. Results from this study contribute to a growing literature demonstrating the emotion regulation functions of NSSI and support interventions designed to improve emotion regulation skills in order to prevent and treat NSSI behaviors.

References

- Chapman, A. L., Gratz, K. L., & Brown, M. Z. (2006). Solving the puzzle of deliberate self-harm: The experiential avoidance model. *Behaviour Research and Therapy*, *44*(3), 371-394.
- Hasking, P., Momeni, R., Swannell, S., & Chia, S. (2008). The nature and extent of non-suicidal self-injury in a non clinical sample of young adults. *Archives of Suicide Research*, *12*(3), 208-218.
- Zetterqvist, M., Lundh, L. G., Dahlström, Ö., & Svedin, C. G. (2013). Prevalence and function of non-suicidal self injury (NSSI) in a community sample of adolescents, using suggested DSM-5 criteria for a potential NSSI disorder. *Journal of Abnormal Child Psychology*, *41*(5), 759-773.
- Nock, M. K. (2009). Why do people hurt themselves? New insights into the nature and functions of self-injury. *Current Directions in Psychological Science*, *18*(2), 78-83.
- Nock, M. K., & Prinstein, M. J. (2004). A functional approach to the assessment of self-mutilative behavior. *Journal of Consulting and Clinical Psychology*, *72*, 885-890.
- Turner, B.J., Chapman, A. L., Layden, B. K. (2012). Intrapersonal and interpersonal functions of nonsuicidal self injury: associations with emotional and social functioning. *Suicide and Life-Threatening Behavior*, *42*, 36-55.
- Hufford, M.R. (2007). Special methodological challenges and opportunities in ecological momentary assessment. In A.A. Stone, S. Shiffman, A.A. Atienza, & L. Nebeling (Eds.), *The science of real time data capture: Self-reports in health research* (pp. 54-75). New York: Oxford University Press.

SOCIAL SUPPORT AND MENTAL HEALTH AMONG TRANS AND GENDERQUEER ADULTS IN THE UNITED STATES

**Samantha Pflum¹, Rylan Testa², Kimberly Balsam¹,
Cara Spitalewitz³ & Brooke Ziegelbaum⁴**

¹*Pacific Graduate School of Psychology, Palo Alto University (USA)*

²*Department of Psychology, Rhodes College (USA)*

³*Department of Psychology, Long Island University-Brooklyn (USA)*

⁴*Department of Psychology, La Salle University (USA)*

Abstract

Within the transgender and genderqueer communities, social support can be instrumental in mitigating the challenges associated with gender dysphoria, gender transition, and non-binary gender identification (Frost & Meyer, 2012; Hendricks & Testa, 2012). The present study seeks to improve understanding of the relationships between general social support, trans community connectedness, depressive symptoms, and anxiety symptoms. As part of the Internet-based Trans Health Survey (Balsam, Beadnell, Simoni, & Cope, 2008), conducted nationwide in the United States from February to May 2013, standardized measures of depression, generalized anxiety, and social support were administered to 865 trans and genderqueer adults. For trans feminine, trans masculine, and genderqueer participants assigned female at birth, multiple regression analyses indicated that general social support was significantly negatively associated with symptoms of depression and anxiety. Trans community connectedness was significantly negatively associated with mental health outcomes for trans feminine participants only. Genderqueer and gender binary participants reported similar mean levels of connectedness to the trans community. Hypotheses regarding differences in social support needs across gender identities will be discussed, and targets for future research on minority stress and social support will be identified.

Keywords: *depression, anxiety, social support, transgender, genderqueer.*

1. Introduction

Although research on transgender and gender nonconforming (TGNC) populations is in its infancy, extant findings have elucidated certain themes. First, TGNC people are frequently subjected to the effects of societal transphobia, including gender discrimination, rejection, and violence. Second, these external stressors are associated with a higher prevalence of psychiatric symptoms (Grant et al., 2011; Hendricks & Testa, 2012). Although strengths-based research examining protective and resilience-bolstering factors is limited, preliminary evidence suggests that social support may be particularly important (Budge, Adelson, & Howard, 2013). In this paper, we examine the effects of both general social support (GSS) and TGNC-specific community support (TCC) on the mental health of TGNC and genderqueer adults.

1.1. General social support (GSS)

The support of others can be instrumental in mitigating the challenges associated with being TGNC. Social support catalyzes the use of healthy coping mechanisms, reduces psychological distress related to transphobia and discrimination, and predicts positive mental health (Budge et al., 2013) and physical health (Grant et al., 2011) outcomes among TGNC people. Studies of cisgender adults suggest gender differences in social support utilization that result from socialization experiences beginning in childhood rather than inherent differences in coping styles between men and women. These gender differences are particularly relevant for TGNC individuals, whose identities are a unique mix of intrinsic and socially-constructed ideals of masculinity and femininity.

1.2. Trans community connectedness (TCC)

Connectedness to a community of similar others is a key element of understanding personal identity and mental health (Frost & Meyer, 2012). Frequently taking the form of TGNC-specific support groups and social networks, connectedness to this community can serve as a counterpoint to external

gender-based stressors by providing group-level coping resources. Decreases in risk behaviors, including unprotected sexual intercourse and suicidality, have been linked to involvement in the trans community (Frost & Meyer, 2012; Hendricks & Testa, 2012). Despite increasing visibility of this important resource, research on the psychosocial correlates of trans community connectedness is limited.

1.3. Depression and anxiety

Compared with the general U.S. population, TGNC individuals report significantly higher levels of anxiety (26-38% vs. 28.8% in the general population) and depression (48-62% vs. 16.6%) (Clements-Nolle et al., 2001). For the TGNC community, stigma-related stress may lead to isolation, internalized transphobia, and diminished social support. Significant anxiety has been reported at the time of first recognition of one's trans identity, throughout the transition process, and at times in which one's gender identity can provoke discrimination or victimization (Testa et al., 2014).

2. Method

2.1. Hypotheses

- Hypothesis 1: Trans and genderqueer participants who report greater scores on measures of GCC and TSS will endorse fewer symptoms of depression and anxiety.
- Hypothesis 2: As compared to those who self-identified as men, women, trans men, and trans women, genderqueer participants will endorse lower mean scores on a measure of TCC.
- Hypothesis 3: Genderqueer participants who report greater scores on measures of GCC and TCC will endorse fewer symptoms of depression and anxiety.

2.2. Procedure and participants

Data were collected from an anonymous, online 115-question survey of stress, resilience, and mental and physical health among TGNC and genderqueer adults (ages 18+). Eligible participants indicated that their sex assigned at birth differed from their gender identity. Participants were recruited through online mediums. Inclusion in the present study's analyses was limited to individuals who answered all questions about gender identity, sex assigned at birth, general social support, trans community connectedness, depression, and generalized anxiety. Characteristics of the final sample ($N = 865$) were examined separately based on gender spectrum. As such, the trans masculine spectrum was composed of participants who identified as man, trans man, genderqueer assigned male at birth, and intersex identifying as male (TMS, $n = 483$); participants who identified as woman, trans woman, genderqueer assigned female at birth, and intersex identifying as women were aggregated into the trans feminine spectrum (TFS, $n = 427$). In order to develop a greater understanding of the experiences of participants endorsing non-binary gender identities, the social support and mental health outcomes of genderqueer participants ($n = 192$) were also examined independently.

2.3. Measures

GSS was measured with the Berlin Social Support Scales (BSSS) Perceived Social Support Subscale (Schulz & Schwarzer, 2003). TCC was assessed through the community connectedness subscale of the Gender Gender Minority Stress and Resilience Measure (Testa et al., 2014), a five-item subscale that reflects affiliation and belongingness with the TGNC community. Depressive symptoms were measured with the Center for Epidemiologic Studies Depression Scale-10 (CES-D-10), a 10-item self-report measure that specifically addresses the affective component of depression. Lastly, generalized anxiety symptoms were assessed with the Generalized Anxiety Disorder 7-item scale (GAD-7; Spitzer, Kroenke, Williams, & Lowe, 2006).

3. Results

Hypothesis 1: For trans feminine spectrum (TFS) participants, multiple regression analyses indicated that GSS and TCC were significantly negatively associated with symptoms of depression ($F(3, 380) = 51.77, p < .001$) and anxiety ($F(3, 380) = 31.03, p < .001$). Among participants on the trans masculine spectrum (TMS), multiple regression revealed a significant negative association between GSS and symptoms of depression ($F(3, 389) = 31.57, p < .001$) and anxiety ($F(3, 389) = 15.95, p < .001$). However, the proposed individual relationships between TCC, depression ($t = 1.74, p = .083$), and anxiety ($t = 1.90, p = .059$) were not significant for TMS participants.

Hypothesis 2: An independent samples T-test was conducted to compare TCC scores for genderqueer and gender binary participants. There was no significant difference in scores for genderqueer ($M = 12.05, SD = 4.68$) and gender-binary ($M = 11.63, SD = 11.64; t(403) = 1.138, p = .256$) participants. The magnitude of the differences in the means (mean difference = .41, 95% CI = -.30 to 1.12) was very small ($d = .11$).

Hypothesis 3: Multiple regression analyses indicated that GSS and TCC were significantly negatively associated with symptoms of depression ($F(2, 203) = 22.76, p < .001$) and anxiety ($F(2, 205) = 6.46, p = .002$) for the genderqueer sample. In terms of individual relationships between the independent variables and depressive symptoms for the full sample of genderqueer participants ($n = 192$), the relationships between GSS ($t = -5.66, p < .001$) and depression and GSS ($t = -3.15, p = .002$) and anxiety were significant. The relationships between TCC ($t = .795, p = .795$) and depression and TCC ($t = -.618, p = .537$) and anxiety were not significant.

4. Discussion

Results indicated that to varying degrees, GSS and TCC serve as protective factors against symptoms of depression and anxiety. For trans feminine, trans masculine, and genderqueer participants assigned female at birth, GSS was significantly negatively associated with symptoms of depression and anxiety. TCC was significantly negatively associated with depressive and anxiety symptoms for trans feminine participants only. Genderqueer and gender binary participants reported similar mean scores on a measure of TCC.

A number of possible explanations exist for differences in TCC across groups. As part of the socially constructed female gender affirmation process, TFS individuals may seek out and value TGNC-specific social support more readily than TMS individuals, and may derive greater mental health benefits from their involvement. For genderqueer participants who had been assigned female at birth, there was a significant negative relationship between general social support and symptoms of depression and anxiety. For trans male spectrum participants and genderqueer individuals assigned female at birth relationships with supportive and open-minded peers – regardless of their trans/cisgender status – may serve to protect against symptoms of depression and anxiety. For genderqueer participants assigned male at birth, non-significant relationships between study variables may be linked to the small number of genderqueer participants assigned male at birth ($n = 34$), and may hint at non-social protective factors (e.g., personal coping skills) that were not assessed in this study. Given the present findings, the TGNC community may benefit from continued exploration of GSS and TSS as buffers against minority stress. Examining whether specific social support factors are linked to lower mental health symptoms can facilitate the identification of targeted interpersonal resources for specific subgroups of the TGNC population.

References

- Balsam, K. F., Beadnell, B., Simoni, J. M., & Cope, L. (2008, August). Measuring marginalization: Minority stress among diverse LGBT adults. Poster presented at the 116th Annual Convention of the American Psychological Association, Boston, MA.
- Budge, S. L., Adelson, J.L., & Howard, K.A.S. (2013). Anxiety and depression in transgender individuals: The roles of transition status, loss, social support, and coping. *Journal of Consulting and Clinical Psychology, 81*, 545-557. <http://dx.doi.org/10.1037/a00317744>.
- Clements-Nolle, C., Marx, R., Guzman, R., & Katz, M. (2001). HIV prevalence, risk behaviors, health care use, and mental health status of transgender persons: Implications for public health intervention. *American Journal of Public Health, 91*, 915-921.
- Frost, D. M., & Meyer, I. H. (2012). Measuring community connectedness among diverse sexual minority populations. *Journal of Sex Research, 49*(1), 36-49. doi: 10.1080/00224499.2011.565427
- Grant, J. M., Mottet, L. A., Tanis, J., Herman, J. L., Harrison, J., & Keisling, M. (2011). *Injustice at every turn: A report of the national transgender discrimination survey*. Washington: National Center for Transgender Equality and National Gay and Lesbian Task Force.
- Hendricks, M. L., & Testa, R. J. (2012). A conceptual framework for clinical work with transgender and gender nonconforming clients: An adaptation of the minority stress model. *Professional Psychology: Research and Practice, 43*(5), 460-467.
- Schulz, U., & Schwarzer, R. (2003). Social support in coping with illness: The Berlin Social Support Scales (BSSS). *Diagnostica, 49*, 73-82. Retrieved from <http://userpage.fu-berlin.de/~health/bsssdocument.pdf>
- Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine, 166*, 1092-1097.
- Testa, R. J., Habarth, J., Peta, J., Balsam, K., & Bockting, W. (2014). Development of the gender minority stress and resilience measure. *Psychology of Sexual Orientation and Gender Diversity*, advance online publication. <http://dx.doi.org/10.1037/sgd0000081>

DESCRIPTIVE NORMATIVE BELIEFS, SELF-REGULATION AND CUMULATION OF RISK BEHAVIOR AMONG SLOVAK UNIVERSITY STUDENTS

Monika Brutovská¹ & Olga Orosová²

¹*Department of Psychology, PJ Safarik University in Kosice (Slovak Republic)*

²*Department of Educational Psychology and Psychology of Health, PJ Safarik University in Kosice (Slovak Republic)*

Abstract

While a cumulative effect of risk behaviour (RB) is characteristic for university students, most of the research mainly focuses on individual RB and the factors related to it. Objective: To explore the association between descriptive normative beliefs (DNB), self-regulation (SRG) and the cumulative effect of RB among Slovak university students longitudinally over 3 measurement periods (T1-T3). The research sample consisted of 594 (74.1% females)/ 238 (81.4% females)/ 99 (84.0% females) university students at T1, T2 and T3, respectively. An online questionnaire measuring gender, age, accommodation, alcohol use (binge drinking), smoking (smoker/non-smoker), DNB about alcohol use, smoking and SRG was used. The cumulative index of RB was calculated and distinguished 2 groups: with or without RB. Binary logistic regressions were used for the data analyses. The models explained from 13.7% to 20.3% / 23.7% to 32.3% / 26.7% to 38.5% of the variance in the cumulative index of RB at T1, T2 and T3, respectively. The models have shown that: being male at T1 (OR=.12 (.04-.34)); having higher DNB about alcohol use at T1 (OR=1.94 (1.30-2.89)) and T2 (OR=2.62 (1.28-5.35)); lower SRG at T2 (OR=.93(.89-.97)) and T3 (OR=.94 (.87-1.00)) were associated with a reported cumulative index of RB. However, the DNB about smoking were not significant at any point of measurement. The research findings have extended previous research in the context of the cumulative effect of RB and emphasize the importance of DNB about alcohol use at the beginning and SRG at the end of the study.

Keywords: *descriptive normative beliefs, self-regulation, cumulation of risk behavior, Slovak university students.*

1. Introduction

Alcohol use (e.g. Menagi, Harrell, & June, 2008) and smoking (e.g. Wetter et al., 2004) are the most frequent risk behaviors among university students. Previous research has shown that individuals who report engaging in one health risk behavior are more likely to report engaging in other risk behaviors (Dams-O'Connor, 2007). Alcohol use and smoking are the ones that most frequently appear together (e.g. Witkiewitz et al., 2012). A cumulative effect of risk behavior is characteristic for university students and most of the research studies have mainly focused on individual risk behavior and factors related to it. The current study focuses on the most common risk behavior among university students and its cumulation in relation to important factors of risk behavior: descriptive normative beliefs (DNB; Berkowitz, 2004) and self-regulation (de Ridder & de Wit, 2006). DNB represent an individual's perception of the prevalence of the risk behaviour of others (Dams-O'Connor, 2007). Self-regulation is defined as important personal processes by which individuals influence, modify, or control their own thoughts, feelings, impulses and behaviour (Baumeister & Heatherton, 1996).

2. Objective

To explore the association between DNB, self-regulation and the cumulative effect of risk behavior among Slovak university students longitudinally over 3 measurement points (T1-T3).

3. Methods

3.1. Sample

The data collection was conducted online and consisted of 594 (74.1% females; $M_{age}=20.75$) at T1; 238 (81.4% females; $M_{age}=21.72$) at T2; and 99 (84.0% females; $M_{age}=23.14$) at T3 students studying in Slovakia. The students attended 3 different universities in the Eastern part of Slovakia.

3.2. Measures

An online questionnaire measuring:

(1) socio-demographic variables (gender, age, accommodation during university term time)
 (2) alcohol use (binge drinking) was measured by item: “How often do you have six or more drinks on one occasion?”. This item was used to divide respondents into two groups. Those respondents who never binged and those who did binge drink (from occasionally to regularly);

(3) smoking was measured by item: “During the past 30 days (one month), how many days have you smoked cigarettes”. The item was dichotomized into categories of non-smoker (0 days) and smoker (who had smoked during the last month);

(4) items regarding DNB were measured by items formulated consistently with the items used for measuring alcohol use and smoking (e.g. “How often do you think a typical student at your university has six or more drinks on one occasion?”). Individual items were used in the data analyses.

(5) Self-regulation was measured by The Short Self-Regulation Questionnaire (Neal & Carey, 2005), which assesses self-regulation capacity. Thirty one items are summed to create a total score. A higher score represents a higher level of self-regulation.

3.3. Statistical analyses

The dependent variable, the cumulative index of risk behavior, was calculated and distinguished 2 groups: (1) respondents with both risk behaviors (those, who had engaged in binge drinking and had smoked during the last month) and (2) respondents without risk behavior (those, who had not engaged in binge drinking and had not smoked during the last month). Binary logistic regressions were used for data analyses and three regression models made separately at each point of measurement (T1, T2, and T3). The cumulative index of risk behavior (dichotomized variable) served as the dependent variable at T1, T2 and T3. The independent variables included gender (male or female), age, accommodation (with or without parents), descriptive normative beliefs about a typical student’s alcohol use and descriptive normative beliefs about a typical student’s smoking and self-regulation (each independent variable was taken from the corresponding point of measurement).

4. Results

The regression models explaining the cumulative effect of risk behavior at T1, T2 and T3 were significant (T1: $\chi^2 = 42.30$; $df = 6$; $p < .001$ / T2: $\chi^2 = 28.72$; $df = 6$; $p < .001$; T3: $\chi^2 = 13.35$; $df = 6$; $p = .038$) and explained from 13.7% to 20.3% / 23.7% to 32.3% / 26.7% to 38.5% variance in the cumulative index of risk behavior at T1, T2 and T3, respectively. The models have shown that: being male at T1; having higher descriptive normative beliefs about alcohol use at T1 and T2; lower self-regulation at T2 and T3 were associated with the reported cumulative index of risk behavior. However, the descriptive normative beliefs about smoking were not significant at any point of measurement.

Table 1. The models explaining the cumulative effect of risk behaviour at T1, T2, and T3

	at T1				at T2				at T3				
	B (S.E.)	Odds Ratio	95.0% C. I. for Odds Ratio		B (S.E.)	Odds Ratio	95.0% C. I. for Odds Ratio		B (S.E.)	Odds Ratio	95.0% C. I. for Odds Ratio		
			Lower	Upper			Lower	Upper			Lower	Upper	
cumulative effect of risk behavior	age	.01 (.10)	1.01	.84	1.22	-.06 (.18)	.94	.66	1.33	-.04 (.54)	.96	.33	2.78
	gender	-2.16 (.55)	.12	.04	.34	-1.08 (.74)	.34	.08	1.46	-1.12 (.90)	.34	.76	2.67
	accommodation	.23 (.84)	1.25	.24	6.48	1.32 (1.08)	3.75	.45	31.32	-1.99 (1.90)	1.12	.87	6.21
	DNB about alcohol use	.66 (.20)	1.94	1.30	2.89	.96 (.37)	2.62	1.28	5.35	.30 (.43)	1.35	.58	3.15
	DNB about smoking	-.07 (.11)	.93	.75	1.17	.21 (.16)	1.23	.89	1.69	.17 (.29)	1.18	.67	2.08
	self-regulation	.02 (.01)	1.02	.99	1.04	-.07 (.02)	.93	.89	.97	-.07 (.04)	.93	.87	.99

5. Discussion

The research findings of this study are consistent with other studies which have confirmed that there is an association between higher descriptive normative beliefs and the occurrence of different risk behaviors (e.g. Menagi, Harrell, June, 2008; Currie et al., 2004) as well as an association between lower self-regulation and the occurrence of risk behavior (e.g. Pearson, Kite, & Henson, 2012; Mun et al., 2008). Moreover, this study has extended these findings by addressing the cumulative effect of risk behaviour which has been explored at different points of measurement. It has further studied the change in the significance in individual independent variables at respective measurement points. While higher descriptive normative beliefs were found to be associated with a reported cumulative index of risk behavior at T1, lower self-regulation was associated with the reported cumulative index of risk behavior at T3. Moreover, descriptive normative beliefs about alcohol use were associated with the cumulative index of risk behavior at T1 and T2, but descriptive normative beliefs about smoking were not associated with a cumulative index of risk behavior at any point of measurement.

6. Conclusions

The research findings have extended previous research in the context of the cumulative effect of RB and emphasize the importance of DNB about alcohol use at the beginning and SRG at the end of the study.

Acknowledgements

This work was supported by Research and Development support Agency under the contract No. APVV-0253-11, VEGA 1/0713/15.

References

- Baumeister, R. F., & Heatherton, T. F. (1996). Self-Regulation Failure: An Overview. *Psychological Inquiry*, 7(1), 1-15.
- Berkowitz, A. (2004). *The Social Norms Approach: Theory, Research, and Annotated Bibliography*. Retrieved from http://www.alanberkowitz.com/articles/social_norms.pdf
- Currie, C., Roberts, C., Morgan, A., Smith, R., Settertoubulte, W., Samdal, O., & Rasmussen, V. B. (2004). *Young people's health in context. Health Behaviour in School-aged Children (HBSC) study: international report from the 2001/2002 survey*. WHO Policy Series: Health Policy for Children and adolescents, 4. Retrieved from <<http://www.euro.who.int/informationsources>>.
- Dams-O' Connor, K. (2007). *The relationship between social norms perceptions, control orientation, and college student health risk behaviors*. (A Dissertation thesis, The University at Albany, State University of New York). Retrieved from <http://gradworks.umi.com/32/86/3286302.html>
- de Ridder, D. & de Wit, J. (2006). *Self-Regulation in Health Behavior*. Chichester: John Wiley and Sons.
- Menagi, F., Harrell, Z., & June, L. (2008). Religiousness and College Student Alcohol Use: Examining the Role of Social Support. *Journal of Religion Health*, 47, 217–226.
- Mun, E.Y., von Eye, A., Bates, M. E., & Vaschillo, E. G. (2008). Finding Groups Using Model-Based Cluster Analysis: Heterogeneous Emotional Self-Regulatory Processes and Heavy Alcohol Use Risk. *Developmental Psychology*, 44(2), 481–495.
- Neal, D. J., & Carey, K. J. (2005). A Follow-Up Psychometric Analysis of the Self-Regulation Questionnaire. *Psychology of Addictive Behaviors*, 19(4), 414 – 422.
- Pearson, M. R., Kite, B. A., & Henson, J. M. (2012). Predictive Effects of Good Self-Control and Poor Regulation on Alcohol-Related Outcomes: Do Protective Behavioral Strategies Mediate? *Psychology of Addictive Behaviors*, 27(1), 81-89.
- Wetter, D. W., Kenford, S. L., Welsch, S. K., Smith, S. S., Fouladi, R. T., Fiore, M. C., Baker, T. B. (2004). Prevalence and Predictors of Transitions in Smoking Behavior Among College Students. *Health Psychology*, 23(2), 168-177.
- Witkiewitz, K., Desai, S. A., Steckler, G., Jackson, K. M., Bowen, S., Leigh, B. C., Larimer, M. E. (2012). Concurrent Drinking and Smoking Among College Students: An Event-Level Analysis. *Psychology of Addictive Behaviors*, 26(3), 649–654.

CHILDHOOD SEXUAL ABUSE SEVERITY AMONG SEXUAL MINORITY MEN: RELATIONSHIPS WITH MENTAL HEALTH AND SUBSTANCE USE DIAGNOSES

Michael S. Boroughs, Ph.D.^{1,2} & Conall O’Cleirigh, Ph.D.^{1,2,3}

¹Massachusetts General Hospital (USA)

²Department of Psychiatry, Harvard Medical School (USA)

³The Fenway Institute of Fenway Health (USA)

Abstract

Sexual minority (SM) men are the group at greatest risk for HIV in North America and have rates of childhood sexual abuse (CSA) estimated as high as 46%. CSA is associated with sexual risk behavior. The purpose of this study was to identify the relationships CSA severity has with mental health and substance use outcomes among SM men. SM men with CSA histories ($n = 162$) completed psychological assessments and five CSA severity indicators were created, CSA: (a) by caregiver, (b) with intercourse, (c) with injury, (d) with intense fear, and (e) first CSA in adolescence. Each severity indicator was related to a substance use or mental health outcome. The findings suggest that these severity markers predict patterns of vulnerabilities suggesting need for increased CSA assessment for SM men in clinical settings.

Keywords: *Men who have sex with men (MSM), Childhood sexual abuse (CSA), PTSD, HIV.*

1. Introduction

Childhood sexual abuse (CSA) is a risk factor for a range of negative health sequelae in adults. For instance, CSA has been associated with mental health problems such as depression, posttraumatic stress disorder (PTSD), and substance use disorders (e.g., Browne & Finkelhor, 1986; Maniglio, 2010; Neumann, Houskamp, Pollock, & Briere, 1996). Though much of the literature has focused on women, estimates of CSA among gay and bisexual men reach as high as 47% (Arreola, Neilands, Pollack, Paul, & Catania, 2008; Lenderking et al., 1997; Mimiaga et al., 2009; O’Cleirigh, Safren, & Mayer, 2012). As a group, gay and bisexual adults report more more childhood sexual, physical, and emotional abuse than their same gender heterosexual counterparts (Balsam, Rothblum, & Beauchaine, 2005).

Researchers have emphasized the importance of CSA markers such as duration, age of first experience, use of threat or harm, and abuse with intercourse to better understand post traumatic adjustment, including coping style and risk for mental health and substance abuse problems (e.g., Cloitre & Rosenberg, 2006; Merrill, Guimond, Thomsen, & Milner, 2003). There is currently no gold standard for the measurement of CSA severity, although researchers agree that the context matters when attempting to characterize post-abuse adjustment (Casey & Nurius, 2005; Loeb, Gaines, Wyatt, Zhang, & Liu, 2011; Kaysen, Rosen, Bowman, & Resick, 2010; Zink, Klesges, Stevens, & Decker, 2009). Given these findings, we believe the severity of CSA significantly influences risk for impaired mental health and substance use outcomes. These outcomes, i.e., depression (Mustanski, Newcomb, et al, 2011, O’Cleirigh, Newcomb, et al., 2013; Koblin et al, 2006), PTSD (El-Bassel, Gilbert, Vinocur, Chang, & Wu E, 2011; Ibanez, Purcell, Stall, Parsons, & Gomez, 2005; Reisner, Mimiaga, Safren, & Mayer, 2009), and substance use (e.g., Skeer, Mimiaga, et al., 2012) are of particular interest because each have been identified as pathways to HIV risk among SM men. Thus, the current study examined the relationships between empirically derived indicators of CSA severity with mental health and substance use outcomes.

2. Method

Assessment of Childhood Sexual Abuse (CSA). CSA was assessed through a clinician administered interview adapted from previous work in HIV treatment and prevention and used previously to assess sexual abuse in a variety of medical populations (Leserman, Li, Drossman, & Hu, 1998; Leserman, Ironson & O’Cleirigh, 2006; Leserman et al., 1997). Standardized questions assessed sexual

abuse history and comprised 20 closed-ended items predominantly requiring yes/no answers. This measure of unwanted sexual contact was adapted from earlier research (e.g., Kilpatrick et al., 1992). Five severity markers were developed, CSA: (a) *by caregiver*, (b) *with intercourse*, (c) *with injury*, (d) *with intense fear*, and (e) *first incident in adolescence*.

Post-Traumatic Stress Symptom Assessment. Structured Clinical Interview for DSM-IV Axis I Disorders. (SCID-IV; First, Spitzer, Gibbon, & Williams, 1997). Only the section on posttraumatic stress disorder was used to provide an independent assessment of PTSD diagnosis and symptoms.

Depression and Substance Use Assessment. The Mini-International Neuropsychiatric Interview (M.I.N.I.; Sheehan et al., 1998). The MINI is a structured diagnostic interview with good reliability and validity comparable to the SCID-IV (Sheehan, et al., 1998). This assessment was completed to provide information on the presence of psychopathology, i.e., a diagnosis of an Axis I disorder such as mood or substance use disorder.

3. Results

Participants reporting *CSA by caregiver* were at 2.6 odds of current alcohol use disorder (OR: 2.64: CI 1.24 – 5.63), 2 times higher odds of substance use disorder (OR 2.1: CI 1.02 – 2.36), and 2.7 times higher odds of reporting a sexually transmitted infection (OR 2.7: CI 1.04 – 7.1) the latter of which is an indicator of HIV risk. *CSA with intercourse* was associated with increased likelihood of PTSD (OR 3.17: CI 1.56 – 6.43), recent sexual risk behavior (OR 2.7: CI 1.16 – 6.36), and a greater number of sexual partners ($p = .02$). Both *CSA with injury* (OR 4.05: CI 1.9 – 8.7) and *CSA with intense fear* (OR 5.16: CI 2.5 – 10.7) were related to increased odds for PTSD. *First CSA in adolescence* was at a 0.41 odds of major depression (OR 0.41: CI 0.18 – 0.93).

4. Discussion

In addition to minority stressors that may maintain syndemic health problems, SM men are at risk for developmental traumas such as CSA, which is a known risk factor for non-adherence to brief interventions that aid in sexual risk reduction (Meyer, 2003). Though SM men have increased odds of a variety of mental health and substance use problems associated with a CSA history, it is not clear that a developmental trauma is the cause of these problems later in life. Prospective studies are needed to better understand the etiology of mental health and substance use diagnoses as they relate to CSA. As researchers investigate predictors of negative health outcomes related to childhood traumas, treatment development will improve as interventions are tailored to meet the unique needs of at-risk populations such as SM men.

References

- Arreola, S., Neilands, T., Pollack, L., Paul, J., & Catania, J. (2008). Childhood sexual experiences and adult health sequelae among gay and bisexual men: Defining childhood sexual abuse. *Journal of Sex Research, 45*, 246-252. doi:10.1080/00224490802204431
- Balsam, K. F., Rothblum, E. D., & Beauchaine, T. P. (2005). Victimization over the life span: A comparison of lesbian, gay, bisexual, and heterosexual siblings. *Journal of Consulting and Clinical Psychology, 73*, 477-487. doi:10.1037/0022-006X.73.3.477
- Browne, A., & Finkelhor, D. (1986). Impact of child sexual abuse: A review of the research. *Psychological Bulletin, 99*(1), 66-77.
- Casey, E. A., & Nurius, P. S. (2005). Trauma exposure and sexual revictimization risk: Comparisons across single, multiple incident, and multiple perpetrator victimizations. *Violence Against Women, 11*, 505-530.
- Cloitre, M., & Rosenberg, A. (2006). Sexual revictimization. *Cognitive-Behavioral Therapies for Trauma, 321-361*.
- El-Bassel N, Gilbert L, Vinocur D, Chang M, Wu E. Posttraumatic stress disorder and HIV risk among poor, inner-city women receiving care in an emergency department. *Am J Public Health. 2011 Jan; 101*(1):120-7.
- First, M.B., Spitzer, R.L., Gibbon, M. & Williams, J.B.W. (1997). *Structured Clinical Interview for DSM-IV Axis I Disorders*. American Psychiatric Publishing, Inc.: Arlington, VA.
- Ibanez GE, Purcell DW, Stall R, Parsons JT, Gomez CA. Sexual risk, substance use, and psychological distress in HIV-positive gay and bisexual men who also inject drugs. *AIDS. 2005 Apr; 19*:S49-S55.

- Kaysen, D., Rosen, G., Bowman, M., & Resick, P. (2010). Duration of exposure and the dose-response model of PTSD. *Journal of Interpersonal Violence, 25*, 63-74.
- Kilpatrick, A.C. (1992). *Long-Range Effects of Child and Adolescent Sexual Experiences*. Lawrence Erlbaum Associates, Inc.: Hillsdale, NJ
- Koblin BA, Husnik MJ, Colfax G, Huang Y, Madison M, Mayer K, et al. Risk factors for HIV infection among men who have sex with men. *AIDS* 2006; 20:731-739
- Lenderking, W. R., Wold, C., Mayer, K. H., Goldstein, R., Losina, E., & Seage 3rd, G. R. (1997). Childhood sexual abuse among homosexual men. Prevalence and association with unsafe sex. *Journal of General Internal Medicine, 12*, 250-253.
- Leserman, J., Ironson, G., & O’Cleirigh, C. (2006). *Preliminary results of a randomized controlled trial of an emotional disclosure intervention in patients with HIV*. Presented to the Annual Meeting of the International Society of Behavioral Medicine, Bangkok, Thailand.
- Leserman, J., Li, Z., Drossman, D. A., & Hu, Y. J. B. (1998). Selected symptoms associated with sexual and physical abuse history among female patients with gastrointestinal disorders: the impact on subsequent health care visits. *Psychological Medicine, 28*, 417-425.
- Leserman, J., Li, Z., Drossman, D. A., Toomey, T. C., Nachman, G., & Glogau, L. (1997). Impact of sexual and physical abuse dimensions on health status: Development of an abuse severity measure. *Psychosomatic Medicine, 59*, 152-160.
- Loeb, T. B., Gaines, T., Wyatt, G. E., Zhang, M., & Liu, H. (2011). Associations between child sexual abuse and negative sexual experiences and revictimization among women: Does measuring severity matter? *Child Abuse and Neglect, 35*(11), 946-955.
- Maniglio, R. (2010). Child sexual abuse in the etiology of depression: A systematic review of reviews. *Depression and Anxiety, 27*, 631-642.
- Merrill, L. L., Guimond, J. M., Thomsen, C. J., & Milner, J. S. (2003). Child sexual abuse and number of sexual partners in young women: The role of abuse severity, coping style, and sexual functioning. *Journal of Consulting and Clinical Psychology, 71*(6), 987.
- Meyer IH. Prejudice, Social Stress, and Mental Health in Lesbian, Gay, and Bisexual Populations: Conceptual Issues and Research Evidence. *Psychol Bull.* 2003;129(5):674-697. doi:10.1037/0033-2909.129.5.674.
- Mimiaga, M. J., Noonan, E., Donnell, D., Safren, S. A., Koenen, K. C., Gortmaker, S., Mayer, K. H. (2009). Childhood sexual abuse in highly associated with HIV risk-taking behavior and infection among MSM in the EXPLORE study. *JAIDS, 51*, 340-348. doi:10.1097/QAI.0b013e3181a24b38
- Mustanski BS, Newcomb ME, Du Bois SN, Garcia SC, Grov C. HIV in young men who have sex with men: a review of epidemiology, risk and protective factors, and interventions. *J Sex Res* 2011; 48:218-253.
- Neumann, D. A., Houskamp, B. M., Pollock, V. E., & Briere, J. (1996). The long-term sequelae of childhood sexual abuse in women: A meta-analytic review. *Child Maltreatment, 1*, 6-16.
- O’Cleirigh, C., Newcomb, M.E., Mayer, K.H., Skeer, M., & Safren, S.A. (2013). Moderate Levels of Depression Predict Sexual Risk in HIV-Infected MSM: A Longitudinal Analysis of Data from Six Sites involved in a “Prevention for Positives” Study. *AIDS and Behavior*.
- O’Cleirigh, Safren, S. A., & Mayer, K. H. (2012). The pervasive effects of childhood sexual abuse: Challenges for improving HIV prevention and treatment interventions. *Journal of Acquired Immune Deficiency Syndromes, 59*(4), 331-334.
- Reisner SL, Mimiaga MJ, Safren SA, Mayer KH. Stressful or traumatic life events, post-traumatic stress disorder (PTSD) symptoms, and HIV sexual risk taking among men who have sex with men. *AIDS Care.* 2009 Dec; 21(12):1481-9.
- Sheehan, D. V., Lecrubier, Y., Sheehan, K. H., Amorim, P., Janavs, J., Weiller, E., .Dunbar, G. C. (1998). The Mini-International Neuropsychiatric Interview (M.I.N.I.): The development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *Journal of Clinical Psychiatry, 59*, 22-23.
- Skeer, M., Mimiaga, MJ., Mayer, KH, O’Cleirigh, C., Covahey, C., Safren, S.A. (2012) Patterns of substance use among a large urban cohort of HIV-infected men who have sex with men. *AIDS and Behavior, 16*, 676-89
- Zink, T., Klesges, L., Stevens, S., & Decker, P. (2009). The development of a sexual abuse severity score characteristics of childhood sexual abuse associated with trauma symptomatology, somatization, and alcohol abuse. *Journal of Interpersonal Violence, 24*(3), 537-546.

VISUALIZATION OF DISASTER RECOVERY PROCESS - “RECOVERY CURVE” OF THE 2011 TOHOKU EARTHQUAKE AND TSUNAMI

Takumi Miyamoto

Education and Research Center for Disaster Reduction, University of Hyogo (Japan)

Abstract

The present study attempts to visualize the survivors' long-term processes of recovery and revitalization in the affected area of the 2011 East Japan Earthquake. Survivors were interviewed and asked to draw their life courses from the day of the earthquake as curves on the graph with their characteristic dips peaks and plateaus. Obtained curves indicated a variety of revitalization processes depend on the individuals and socio-cultural contexts and provided us with clues to support survivors.

Keywords: *disaster recovery, recovery curve, interview, tsunami, survivor.*

1. Introduction

Many disasters have tortured the lives of humankind since ancient times, and people have always struggled with them. How can we restore ourselves and our communities from disaster? What processes do we have, and what is needed to implement them? In Japan, there have been many questions about “What is revitalization?” than before, especially since the 1995 Kobe earthquake, the 2004 Niigata Chuetsu earthquake, and the 2011 East Japan earthquake and tsunami. Although social sciences' perspective have played an important role in disaster research (e.g., Rodríguez, Quarantelli & Dynes, 2006; Tierney, 2007), however, little attention has been focussed on long-term recovery, or the revitalization process in the disaster researches (e.g., Mileti, 1999), besides contributions by Erikson (1976). In psychological studies, Raphael (1986) proposed a famous recovery model in her book, “When Disaster Strikes.” Her model suggests that survivors experienced “Warning,” “Impact,” “Honeymoon,” “Disillusionment” and “Enhancement” by drawing a graph (Figure 1). This model aggregates various survivors' experiences into a collective trend, and has contributed richly to the field of research as well as practices from the macro-perspective. When we focus on responses of individual survivors, however, it is not appropriate to apply this model directly to each survivor. Taking Raphael's model into account, we turn to the micro level to examine individual survivors' responses. She visualized the recovery process using a curve to represent it. If we can visualize each individual recovery processes as Raphael did, we can share among us and compare each process better than simple description. Therefore, the purpose of this study is to develop a tool to visualize recovery processes and describe the processes in socio-cultural context and collectively.

2. Methods

I have interviewed one male survivor, Mr. Kuniaki Baba, from the 2011 East Japan earthquake and tsunami every year. He is a person whom I met in my long term fieldwork one year after the earthquake. He was born and lives in Kakuwa peninsula, Kesenuma city, Miyagi prefecture. When the earthquake occurred, he lived with his son. He had already lost his wife and parents before the disaster. Although his house was not totally washed away by the tsunami, its first floor was filled with lots of debris. One month after the tsunami, disaster volunteers began to visit the affected area to help survivors, for example, debris removal. However, such volunteers could not find the place where they could stay in order to continue disaster relief. Therefore, they asked Mr. Baba to provide the 2nd floor of his house for their accommodations. Mr. Baba decided to accept their request and a total of over two thousand people stayed his house and involved in various volunteer projects. The author have discussed relationship between survivors and visitors like disaster volunteers and emphasized that such an interaction enable survivors to realize their assets which they could not be aware of its worth because such assets were too normal for them (Miyamoto & Atsumi, 2009). It is crucial for long term recovery that people realized and

utilized their assets and disaster volunteers was able to behave like catalyst for survivors discovering of their richness. It seemed that Mr. Baba had and would have a lot of opportunity to mix with disaster volunteers, I decided to interview him repeatedly year after year.

In the interview, I applied a “revitalization curve interview” method (Miyamoto & Atsumi, 2011). In the “revitalization curve interview”, a survivor as interviewee is showed a sheet of paper. An x-y axis graph is printed on A3 size paper. At the intersection, the date of the earthquake is written. Note that the horizontal line tacitly indicates time, but an interviewer does not put any dates or years beforehand, while the vertical line indicates something related to the degree of revitalization, but an interviewer does not put any values or concepts on this line, either. An interviewer explains those lines to survivors, “Vertical line means positive and negative of your psychological state and horizontal line means the period from the earthquake to now” and ask them “Would you draw your psychological state from disaster with its characteristic dips, peaks and plateaus in it?” There is no strict rule. The interviewee is free to interpret the sheets. For instance, if a survivor asks an interviewer a question “Where is a start point of my curve?” he/she could answer like, “Where is appropriate? Let’s consider together. There is no rule. We can define it.” Therefore, “revitalization curves” and narratives on them are the collective construction by survivors and researchers. I interviewed Mr. Baba five times. In each interview, he drew “revitalization curve” at that time.

3. Findings

Mr. Baba emphasized that meeting and interaction with disaster volunteers sustain his life in every interview. For example, Figure 2 shows “Revitalization Curve” drawn by Mr. Baba in 2014, 3 years after the earthquake. The peaks means incidents relating to the volunteers or his house reconstruction. All the dips shows that his house reconstruction have been faced with various difficulty. It is clear that disaster volunteers have taken important role for his recovery, especially, not just helping physically but psychologically. However, it is still not clear how such volunteers have taken a catalyst role enable him to realize his or his community’s asset for long term recovery.

4. Discussion

In the previous disaster recovery cases, survivors were likely not able to consider a recovery of their community until they complete his or her life reconstruction including housing recovery. In all over the affected area of Tohoku, a half of survivors have barely reconstructed their house as of spring of 2016. Therefore, in order to investigate and understand disaster volunteers’ roles for long term recovery, especially, as a catalyst, we still need to continue fieldwork. However, at this point, it seems that volunteers’ activities could help survivors not only physically but psychologically. Although five years passed and the number of volunteers and the financial aid scheme for volunteers decreased, the survivors and the affected areas still need outside peoples’ gathering under the situation that life reconstruction doesn’t proceed well.

The present study explored the individual recovery processes in socio-cultural and collective context, compared to the work of Raphael (1986) which examined the universal recovery process. As a consequence, we can mention several clues which reveal what factors push their graphs up from the interview such as accomplishment of life-reconstruction, meeting with outside supporters. For future study, it is needed to continue interview Mr. Baba and other survivors who didn’t have experiences like Mr. Baba and compare them.

Figure 1. "Adjustment Over Time to Trauma", the author redrew based on Raphael (1986)

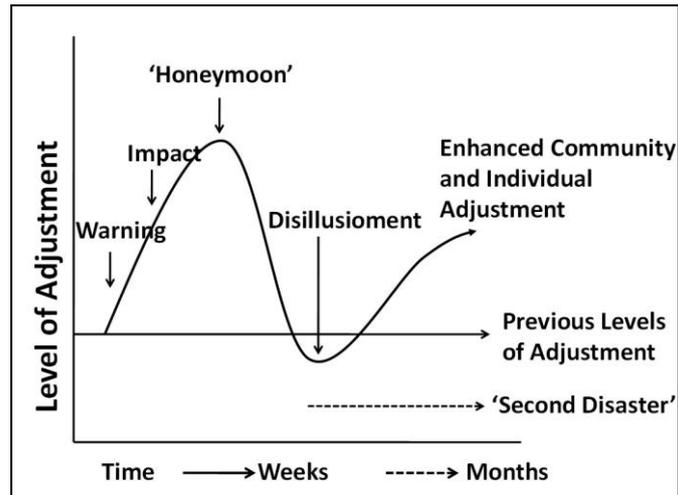
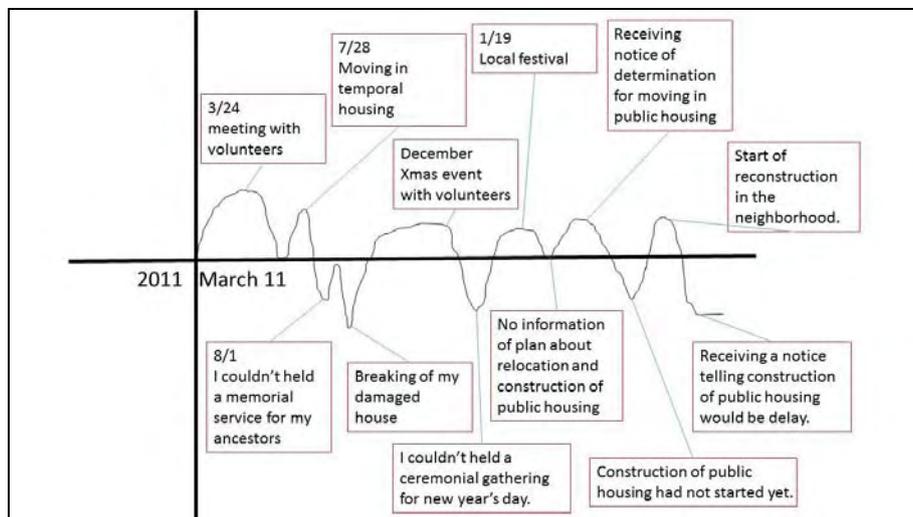


Figure 2. Revitalization curve drawn by Mr. Baba in 2014, 3 years after the earthquake



References

Erikson, K. (1976). *Everything in its path: destruction of community in the Buffalo Creek flood*. New York: Simon and Schuster.

Mileti, D. S. (1999). *Disasters by design : A reassessment of natural hazards in the united states*. Washington, D.C.: Joseph Henry Press.

Miyamoto, T. & Atsumi, T. (2009b). Creative processes of community revitalization using a narrative approach: A case study from Chuetsu Earthquake. *Progress in Asian social psychology series*, 7, 259-278.

Miyamoto, T. & Atsumi, T. (2011). Visualization of Disaster Revitalization Processes-Collective Constructions of Survivors' Experiences in the 2004 Niigata Chuetsu Earthquake, *Progress in Asian Social Psychology*, 8, 307-323

Raphael, B. (1986). *When disaster strikes: How individuals and communities cope with catastrophe*. New York, NY: Basic Books.

Rodríguez, H., Quarantelli, E. L., & Dynes, R. R. (eds.) (2006). *Handbook of disaster research*. New York, NY: Springer.

Tierney, K. J. (2007). From the margins to the mainstream? disaster research at the crossroads. *Annual Review of Sociology*, 33, 503.

THE INFLUENCES OF EXERCISING ON EATING ATTITUDES AMONG KOREAN FEMALE ADOLESCENTS

Michelle Chae R. Kim¹, Kiho Kim², Yun Hye Oh³ & Yoo Sook Joung, M.D., Ph.D.³

¹Shattuck-St. Mary's School (USA)

²Samsung Biomedical Research Institute (Republic of Korea)

³Child & Adolescent Psychiatry, Department of Psychiatry, Samsung Medical Center, Sungkyunkwan University School of Medicine (Republic of Korea)

Abstract

Objectives: To investigate the effect of the characteristics of exercising on eating attitudes among Korean female adolescents.

Design: Used Eating Attitudes Test (EAT-26) and self-report of the frequency of exercising per week, the duration of exercise per time, and the total duration per week.

Method: Questionnaire survey including EAT-26 conducted in a girls' high school located in Korea for 858 students who were 15 to 18 years old.

Results: Three characteristics of exercising were used as predictors of eating attitudes in a multiple linear regression analysis. The overall model was significant and explained 14.5 % of eating attitudes. All characteristics of exercising emerged as statistically significant except the frequency per week ($p=0.616$). As in the bivariate analysis, the duration of exercising per time ($\beta= -0.068$, $p< 0.01$) was negatively associated with EAT scores while the total duration per week ($\beta=1.708$, $p <0.001$) was positively associated with EAT scores.

Conclusion: The results indicate that the longer the exercise is per time the better the eating attitudes become, while the longer the total duration of exercise is per week the worse eating attitudes become. These indications may suggest enjoyable but not obsessive exercise can bring about positive eating attitudes.

Keywords: eating attitudes, exercise, eating attitudes test, eating, Korean students.

1. Introduction

Eating is a fundamental activity in everyone's life, yet the eating attitudes do not get as much attention as it deserves. A myriad of aspects of life affects the eating attitudes of people, including what one sees on social media that usually portrays unrealistically thin body images that are deemed ideal. Among various causes, exercising seems to be one of the most influential activities that are related to eating due to its association with health and body.

Garner and colleagues (1982) invented EAT-26 (Eating Attitudes Test-26), which is the shorter version of EAT-40. EAT has been acknowledged as the valid measure of screening anorexia nervosa patients since 1979. Garner and colleagues have proposed the reliability and validity of EAT-26 and the high correlation between EAT-40 and EAT-26 (Garner, Olmsted, Bohr, & Garfinkel, 1982). Various psychological features such as depression or low self-esteem are suggested to have high correlation with high EAT scores (Thomas, James, Bachmann, 2002). There have been studies about the psychological features associated with negative eating attitudes, but the correlation between exercising and eating attitudes has not been explored much. In this study, exercising time and eating attitudes have been measured and their relationship is analyzed.

2. Design

Used EAT-26)and self-report of the frequency of exercising per week, the duration of exercise per time, and the total duration per week.

3. Objectives

To investigate the effect of the characteristics of exercising on eating attitudes among Korean adolescents.

4. Methods

Questionnaire survey including EAT-26 conducted in a girls' high school located in Korea for 858 students who were 15 to 18 years old. Three characteristics of exercising, the frequency of exercising, the duration of exercising per time, and the total duration of exercising per week, were used as predictors of eating attitudes in a SPSS multiple linear regression analysis.

5. Results

The overall model was significant and explained 14.5 % of eating attitudes. All characteristics of exercising emerged as statistically significant except the frequency per week (*n.s.*). As in the bivariate analysis, the duration of exercising per time ($\beta = -0.07$, $p < 0.01$) was negatively associated with EAT scores while the total duration per week ($\beta = 1.71$, $p < 0.01$) was positively associated with EAT scores. These results suggest that the longer the exercise per time, the EAT scores decrease and the eating attitude improves, while the longer the duration of exercise per week is, the EAT scores increase and the eating attitudes become worse.

6. Discussion

The studies about eating attitudes that have been published mostly dealt with the psychological features associated with them. The subjects were usually limited in diversity in regards to gender or race. The gender factor has been a source of controversy, and some have declared that disturbed eating attitudes is most prominent in fourth to seventh graders (Yang, Kim, & Yoon, 2010), but anorexia nervosa is usually prevalent among females in late teens and early 20s. Thus, to eliminate the confounding variable of gender and age, this study focused on females ranging in age between 15 and 18.

Most of the studies are also done in the Western culture, and not much has been explored in the Eastern culture. Korea is a country well known for its rigorous education system as well as high pressure to look aesthetically appealing, most prominently seen in the percentage of females getting plastic surgeries. The K-pop singers have recently become the idealized standard for most of the Korean teenage girls, but the eating attitudes have not been a topic of consideration in Korea. It would have been beneficial to take into account the cultural factors, but due to its complexity it would add to the study as a confounding variable, this study only focused on the eating attitudes and exercising.

This study has meaningful implications because it distinguishes between the excessive exercising and moderate exercising and their correlations with eating attitudes. However, it does have several limitations. This study was based on self-report questionnaires, so some of the data might not have been as objective. Other intervening variables related to exercising such as motivation, attitude, and the kind of exercise, were not considered. The population of female high school students was also not categorized specifically to distinguish the ones who focus on P.E. as their future college major, though a very small percentage of the school. Due to lack of instructions, some students might have included the P.E. time in their amount of exercise while some did not. Future studies could be developed by comparing the Korean and Western culture.

7. Conclusions

The results indicate that the longer the exercise per time is the better the eating attitudes become, while the longer the total duration of exercise is per week the worse eating attitudes become. These indications may suggest enjoyable but not obsessive exercise can bring about positive eating attitudes. These results may suggest that regarding the competitive and busy Korean students' culture, the ones who enjoy exercising have good eating attitudes while the ones who spend excessive amount of time rather have obsessive eating attitudes and exercise obligatorily.

Table 1. Results of characteristics of eating attitudes as predictors of eating attitudes (* $p < 0.01$)

Independent Variables	Non-standardized Coefficient		Standardized Coefficient	T	F	R2
	β	SE	Beta			
Constants	1.37	1.74		.77		
Frequency per week	-.235	.200	-.067	-1.17	15.85	0.15
Duration per time	-.07*	.014	-.30	-4.77		
Total duration per week	1.71*	.28	.49	6.14		

References

- Choi JH, Ahn DH, Nam JH, Jo YK, Choi BY. (1998). Reliability and validity of eating attitude test for Korean adolescents (EAT-26KA). *Korean J Child & Adol Psychiatry*;9:91-7.
- Garner DM, Olmsted MP, Bohr Y, Garfinkel PE. (1982). The eating attitudes test: psychometric features and clinical correlates. *Psychol Med*;12:871-8.
- Pastore DR, Fisher M, Friedman SB. (1996). Abnormalities in weight status, eating attitudes, and eating behaviors among urban high school students: correlations with self-esteem and anxiety. *J Adolesc Health*;18:312-319.
- Thomas CL, James AC, Bachmann MO. (2002). Eating attitudes in English secondary school students: Influences of ethnicity, gender, mood, and social class. *Int J Eat Disord*;31:92-96.
- Yang SJ, Kim JM, Yoon JS. (2010). Disturbed eating attitudes and behaviors in South Korean boys and girls: a school-based cross-sectional study. *Yonsei Med J*;51(3):302-309.
- Halstead M, Johnson SB, Cunningham W. (1993). Measuring Coping in adolescents: An application of the ways of coping checklist. *J Clin Child Psychol*. 22(3); 337-344.
- Kang JJ. (2001). The study of relationship between satisfaction with body image and stress coping style. PhD thesis. Ehwa Women's University, Psychology Department

THE CONTRIBUTION OF HOME ATTACHMENT TO MENTAL HEALTH¹

**Sofya Reznichenko, Sofya Nartova-Bochaver, Natalya Dmitrieva,
Aleksandra Bochaver & Ekaterina Braginets**
Higher School of Economics, National Research University, Moscow(Russia)

Abstract

Based on the environmental psychology researches (Jorgensen & Stedman, 2006; Korpela et al., 2002; Pretty, et al., 2003) we have assumed that home attachment, being a reflection of subjective satisfaction with home environment and evaluation of home in terms of emotional closeness and place identity, contributes to dwellers' mental health. To measure home attachment we have modified and adapted Place Attachment Scale developed by J. Inglis (Inglis, 2008). Mental health was measured using Warwick-Edinburgh Mental Well-being Scale (Tennant et al., 2007) and A. Antonovsky's Sense of Coherence Scale (Osini, 2007). Participants were 178 young adults ($M_{age}=24.1$, 38 males, 140 females). The results have shown that home attachment is a reliable predictor of psychological well-being and sense of coherence; relationships between these variables are reciprocal. Men's mental health is more dependent on home attachment than women's one. The lower the level of home attachment is, the more sensitive to it the psychological well-being and sense of coherence are. In discussion, the high importance of instrumental study of home attachment as the predictor of mental health is argued.

Keywords: *home attachment, questionnaire, well-being, sense of coherence.*

1. Introduction

The home environment is a powerful ecosocial resource that contributes to mental health and helps preventing certain forms of deviant behavior (vagrancy, runaways, etc.). Therefore, it seems to be essential for modern psychologists to keep in his methodical arsenal a tool to measure the man's attachment/alienation to his home level. There are no such techniques in our country by now. We tried to validate the questionnaire by J. Inglis, originally developed to study ecological attitudes of Australians toward a specific geographical areas (the park or district area, lake).

2. Objectives and method

The phenomenon of place attachment is understood as an experience of deep emotional closeness to the community, culture, nature factors and also as the perceivable signification of a certain place as significant, fateful, and saturated with personal meanings (Inglis, 2008, Jorgensen & Stedman, 2006, Reznichenko, 2014).

Place attachment is formed by place dependence and place identity. Place dependence – a sort of functional place attachment – is one's «knowing» of functional environment possibilities and evaluation the conformity degree between environment functionality and multilevel needs of a man (of certain activities, recreation, development). The more functions providing relevant activity and actualizing the individual's aspirations and values in the environment are, the higher satisfaction with the quality of living there it is (Korpela et al., 2002).

The other component, place identity, is associated with symbolic significance of the image of a place; it affects more the cognitive level of motivational basis of place attachment. The place and memories of childhood connection, the image of a place as a reflection of a family or personal life history, the maintaining of cultural identity and historical succession are only a few examples of the place identity functions (Pretty, et al., 2003).

The original tool for measuring the place attachment level is the Place Attachment questionnaire developed by J. Inglis, which consists of 17 statements (14 direct and 3 inverse ones) related to a particular place in the categories "native / alien", "close / causing alienation"; the 5-point scale is used to estimate the degree of agreement with each statement (Inglis, 2008).

¹ Supported by Russian Scientific Foundation, project № 14-18-02163.

According to this conceptual framework and statistical analysis of empirical data the questionnaire has five-factor structure: 1) the place identity scale; 2) the place dependency scale; 3) the place alienation or detachment scale; 4) the place exclusivity scale (describes the functionality of the space in the dichotomy of universal/unique); 5) the scale of social attachment to a place (describes the group identity role as motivational basis of place attachment).

We have adapted the method to the Russian population and have modified it (See paragraph 3.1.). Furthermore, to investigate relations between home attachment and mental well-being, we used two scales - The Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (Tennant et al., 2007) and Sense of Coherence Scale (SOC) developed by A. Antonovsky.

We understand mental well-being in terms of positive functioning and satisfaction with real self-image in the context of the living circumstances (Nartova-Bochaver et al., 2015).

Sense of Coherence (SOC) as conceived by A. Antonovsky is a counterpart of stress resistance and a predictor of physical and psychological health. Sense of coherence is defined as a personal disposition to active searching for environmental factors (including physical environment) that contribute to the maintenance of psychological well-being and health and helps people coping with difficult life situations, relationships and other stress factors. This is essentially a mediator between 1) stressful life events; 2) psychological and physical health; 3) psychological well-being. (Antonovskiy, 1981). The concept consists of three interrelated components: Comprehensibility (the cognitive component), Manageability (the instrumental component) and Meaningfulness (the motivational component) (Forsberg-Warleby et al., 2002). However, during validation on Russian population, the only single-factor model was identified as fitting one, so there is one scale – the general Sense of Coherence level (Osina, 2007).

3. Results

3.1. Pilot study: questionnaire validation

Since the original Place Attachment questionnaire (Inglis, 2008) is based on integrated ideas of anthropocentrism, biocentrism, egocentrism and psychology environment, it involves the study of attachment to large territorial units – districts, local nature, public places of recreation. In our study, we have emphasized the home environment: in each of the statements, the territorial unit has been replaced by residential environment one (e.g.: "I feel that my home is a part of me") (Reznichenko et al., 2015).

The pilot study involved 287 participants (30% male, 70% female) aged from 14 to 40 ($M_{age}=21.5$, $SD=7.2$). The factor solution was found by exploratory factor analysis building on Kaiser's criterion, scree plot test, Multiple correspondence analysis (MCA) (See Table 1). It has been shown that the single-factor model represents the questionnaire's structure most appropriately. Confirmatory factor analysis (CFA) allowed rejecting 4-factor solution that represented a poor fit to empirical data ($CMIN/DF>3$; CFI and IFI indices <0.90 ; $RMSEA>0.08$) (Arbucke et al., 1999). The goodness-of-fit testing (Akaike Information Criterion, AIC) results confirmed the single-factor model as the most preferred.

Table 1. The results of confirmatory factor analysis: fit indices for 2 factor models

Model	χ^2	df	CMIN / DF	RMSEA	IFI	CFI	AIC
Model 1 (4 factors)	572.0*	10	52.2	.443	-3.55	.000	572.0
Model 2 (1 factor)	387.5*	118	3.26	.089	.872	.871	454.5

Note: * $p < .001$

Thus, the factor analysis results allows us identifying a single-factor structure of the questionnaire - the home attachment scale which had a high coefficient of Cronbach's alpha ($\alpha = .77$). In addition, we decided to remove the three inverse questions to increase a content validity of the questionnaire to $\alpha = .89$. The Home attachment questionnaire, validated to the Russian population, has 14 direct questions and is described by one scale reflecting the general level of individual's attachment to his home. We assume that the factor structure reduction of the questionnaire is primarily associated with the choice of home environment as the subject of study instead of public urban territorial units, as well as with the sample specificity.

3.2. Main study

Since we suggest that home attachment and satisfaction with quality of life are significant contributors to mental health, we carried out a regression analysis of Home Attachment Scale data and data of two other scales – the Mental Well-being Scale (WEMWBS) and Sense of Coherence Scale (SOC).

Correlation analysis ($N=178$, $M_{age}=24.0$, $SD=7.4$) has confirmed a significant positive relation between home attachment and psychological well-being ($r_s = .147$, $p < .05$), as well as a strong positive relationship between home attachment and sense of coherence ($r_s = .256$, $p < .001$).

The results of regression analysis show that home attachment appears to be a significant predictor of psychological well-being ($\beta = 0,205$, $p < .01$) and sense of coherence ($\beta = 0,276$, $p < .01$).

4. Discussion

The results of our study show that home attachment is an important predictor of individual's mental well-being. But an even stronger relationship has been found between home attachment and sense of coherence.

We assume that this is because of too broad phenomenological field of psychological well-being, that depends on a larger number of interfering factors compared to sense of coherence meaning. Sense of coherence seems to be more specific construct than well-being is, and linear relationship between this variable and other factors can be more obvious.

The study results are consistent with other outcomes that place attachment has a positive impact on life satisfaction and social relations, continuity and self-efficacy (Tartaglia, 2012). It can be assumed that people with a lack of home attachment have fewer resources to cope with difficult life events and have higher stress levels (Stokols&Shumaker, 1982).

5. Conclusion

Instrumental study of home attachment has fundamental importance not only in assessment of home environment friendliness level and satisfaction with environmental conditions, but also it may be one of the indirect indicators defining the mental well-being level and sense of coherence.

References

- Antonovsky, A. (1981). *Health, stress and coping. New perspectives on mental and physical well-being*. 1st edn. San Francisco: Jossey-Bass Publishers.
- Arbuckle, J.L., & Wothke, W. (1999). *AMOS 4.0 user's guide*. Chicago, IL: Small Waters Corporation.
- Forsberg-Warleby, G. Moller, A., Blomstrand, C. (2002) Spouses of First-Ever Stroke Victims: Sense of Coherence in the First Phase After Stroke. *J Rehabil Med, Vol 34*. 128–133.
- Inglis, J. (2008). *Using human-environment theory to investigate human valuing in protected area management: PhD thesis*. Victoria University. Retrieved October 27, 2008, from: <http://vuir.vu.edu.au/id/eprint/1513>.
- Jorgensen, B., Stedman, R. (2006). A Comparative Analysis of Predictors of Sense of Place Dimensions: Attachment to, dependence on, and identification with lakeshore properties. *Journal of Environmental Management, Vol. 79 (3)*. 316–327.
- Korpela, K., Kytä, M., Hartig, T. (2002). Restorative experience, self-regulation, and children's place preferences. *Journal of Environmental Psychology, Vol. 22*. 387–398.
- Nartova-Bochaver, S., Dmitrieva, N., Reznichenko, S., Kuznecova, V., & Braginec, E. (2015). Metod ocenki druzhestvennosti zhilishha: oprosnik "Funkcional'nost' domashnej sredy". *Psihologicheskij zhurnal, Vol. 36(4)*, 71–83.
- Osin E. (2007). Chuvstvo svyaznosti kak pokazatel' psichologicheskogo zdorov'ya i ego diagnostika. *Psichologicheskaya diagnostika, Vol. 3*. 22–40.
- Pretty, G.; Chipuer, H.; Branston, P. (2003). Sense of place amongst adolescents and adults in two rural Australian towns: the discriminating features of place attachment, sense of community and place dependence in relation to place identity. *Journal of Environmental Psychology, Vol. 23*. 273–287.
- Reznichenko, S. (2014) Privyazannost' k mestu i chuvstvo mesta: modeli i fenomeni. *Social'naya psichologia i obshestvo, Vol. 3*. 15–27.
- Reznichenko, S., Nartova-Bochaver S., Kuznecova, V. (2015). Metod ocenki privyazannosti domashnej srede. *Psichologia. Jurnal Vishey shkoli ekonomiki*. – In press.
- Stokols, D., Shumaker, S. (1982). The psychological context of residential mobility and well-being. *Journal of Social Issues, Vol. 38*. 149–171.
- Tartaglia S. (2012). Different predictors of quality of life in urban environments. *Social Indicators Research, Vol. 113(3)*. 1045–1053.
- Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., Parkinson, J., Secker, J., & Stewart-Brown, S. (2007). The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): development and UK validation. *Health and Quality of Life Outcomes, Vol. 5(63)*. Retrieved November 27, 2008, from: <http://dx.doi.org/10.1186/1477-7525-5-63>

THE ROLE OF DEFENSE MECHANISMS IN THE PSYCHOLOGICAL ADAPTATION TO RARE ONCOLOGICAL DISEASE

Valentina E. Di Mattei¹, Letizia Carnelli², Martina Mazzetti¹, Martina Bernardi¹,
Giorgia Mangili² & Fabio Madeddu³

¹Vita-Salute San Raffaele University, Faculty of Psychology, Milan (Italy)

²Clinical and Health Psychology Unit, Department of Clinical Neurosciences, IRCCS San Raffaele Hospital, Milan (Italy)

³University of Milano Bicocca, Department of Psychology, Milan (Italy)

Abstract

Introduction & Aim: Gestational Trophoblastic Disease (GTD) comprises a group of disorders that derive from the placenta and arise after a rare gestational event. They can be divided into pre-malignant forms (partial and complete hydatidiform mole) and malignant forms called Gestational Trophoblastic Neoplasia (GTN), which include choriocarcinoma, placental site trophoblastic tumor and epithelioid trophoblastic tumor. Despite a favorable prognosis, the nature of this group of disorders can be a source of stress for patients who are affected by this disease.

Method: Thirty-one patients diagnosed with GTD at a hospital in Northern Italy completed a battery of tests aimed at analyzing the psychological adaptation to the disease. The variables analyzed were the following: defense mechanisms (using the Response Evaluation Questionnaire-71), anxiety (using the State Trait Anxiety Inventory Form-Y), depression (using the Beck Depression Inventory Short Form) and infertility-related stress (using the Fertility Problem Inventory).

Results: Patients with GTN use mature defense mechanisms significantly more than patients with hydatidiform mole. Perhaps patients with GTN are more aware of the gravity of the situation and of the threat this illness may have on their existential goals. Regression analyses highlight that immature defense mechanisms are significantly related to state anxiety. Immature defense mechanisms also significantly predict Global infertility-related stress.

Conclusions: This study aims to better understand the psychological impact of GTD. The results show the importance of taking into consideration defense mechanisms used by patients suffering from this group of trophoblastic tumors as they are involved in the modulation of psychological adaptation to GTD.

Keywords: *Defense mechanisms, fertility-related stress, gestational trophoblastic disease, psychological adaptation, oncology.*

1. Introduction

Gestational Trophoblastic Disease (GTD) comprises a spectrum of rare tumours that arise from the placenta. GTD encompasses both benign forms including complete and partial hydatidiform mole and malignant forms made up of invasive mole, choriocarcinoma, placental site trophoblastic tumour (PSTT) and epithelioid trophoblastic tumour (ETT) (Mangili et al., 2014).

GTD is presently considered one of the most curable gynaecological cancers. The progress can be attributed to: the high tumour chemosensitivity, aggressive multimodality therapy, and the presence of a tumour marker (the beta subunit of human chorionic gonadotropin; β -hCG). This marker helps identify patients who need chemotherapeutic treatment and helps to monitor patients during follow-up.

Despite the favourable prognosis of GTD, the diagnosis, treatment and follow-up present a sudden and prolonged factor of stress, which forces the patient to find a new psychological accommodation (Wenzel Robinson, Goldstein & Bernstein, 1994). Fear of the disease, waiting for normalization of β -hCG during follow-up, concerns about fertility and future pregnancies are the main determinants of distress among GTD patients (Di Mattei et al., 2014, 2015).

Research into the psychological consequences of GTD have been limited and, to our knowledge, no study has explored the role of defense mechanisms (unconscious mental processes initiated to avoid experiencing conflict or anxiety) in the psychological adaptation to GTD. The present study aims to understand the psychosocial consequences of GTD and the impact of defense mechanisms on GTD.

2. Methods

This study was approved by the Medical Ethical Committee and comprised a sample of 31 women ($M=35.97$ years, $SD= 9.745$) with GTD. The study took place between October 2014 and May 2015 and women were invited to participate in the research during their weekly follow-up visit.

The following validated questionnaires were administered: the *State Trait Anxiety Inventory Form-Y* (STAI-Y, Spielberger, Gorsuch & Lushene, 1970) to measure state and trait anxiety; the *Beck Depression Inventory* (BDI-SF, Furlanetto, Mendlowicz & Bueno, 2005), which aims to detect moderate to severe depressive episodes on a cognitive-affective scale; the *Fertility Problem Inventory* (FPI, Newton Sherrard & Glavac, 2007), which measures infertility-related stress on 5 scales. A composite measure of Global stress is derived by summing the scores of all 5 scales. The *Response Evaluation Measure* (REM-71, Steiner, Araujo & Koopman, 2001) is a self-report questionnaire for the assessment of defenses measured along a continuum from mature to immature. The questionnaire has two subscales: Factor 1: the global score of immature defenses and Factor 2: evaluates the mature defense mechanisms.

Statistical analyses were conducted using SPSS software (IBM Corp., 2013). The sample was divided into two subgroups on the basis of diagnosis: 23 patients were diagnosed with hydatidiform mole ($M=35.78$, $SD=9.33$) and 9 patients were diagnosed with GTN ($M=36.50$, $SD= 11.52$). Differences between the two subsamples, were measured using a Mann-Whitney test. Through multiple linear regression analysis models, the relationships between defense mechanisms and psychopathological variables and infertility-related stress were examined, after controlling for age, time since diagnosis and type of diagnosis. The level of significance was set at $p<.05$.

3. Results

The mean scores obtained on the two STAI questionnaire subscales (45.39 and 40.35 for state and trait anxiety respectively) were within a medium anxiety range (40-59). On the BDI, mean depression scores (4.68) were below clinical significance (≥ 9), this was also true for the FPI global stress scores (13.17; clinically significance ≥ 27). On Factor 1 of the REM-71 questionnaire patients reported a mean score (4.15) that was slightly below clinical significance (≥ 4.40).

A significant difference emerged between our two diagnostic subsamples on Factor 2 ($U=45.00$, $p<.05$). Patients with GTN reported a significantly higher score on the mature defense mechanisms subscale (mean range=21.88) compared to women with hydatidiform mole (mean range=13.96). No significant difference emerged with regards to Factor 1.

An initial multiple linear regression showed that a significant association was maintained between immature defenses and the state anxiety subscale of the STAI ($R^2=.425$, $F(4,26)=4.813$, $p<.01$): the higher the Factor 1 score, the higher the anxiety score on the state scale of the STAI ($\beta=.464$, $t(26)=3.009$, $p<.01$). Moreover, a significant relationship emerged between immature defense mechanisms and infertility-related stress, specifically on the Global Stress subscale ($R^2=.326$, $F(4,26)=3.139$, $p<.05$). Thus, as the score of Factor 1 increased, so did the score on the FPI questionnaire ($\beta=.373$, $t(26)=2.230$, $p<.05$). Considering single subscales of the FPI questionnaire, the regression analyses reveal a significant relationship between Factor 1 and Social Concern ($R^2=.354$, $F(4,26)=3.569$, $p<.05$): the higher the immature defense score, the higher the FPI Social Concern ($\beta=.494$, $t(26)=3.017$, $p<.01$). Lastly, Factor 1 was found to be associated to Sexual Concern ($R^2=.302$, $F(4,26)=2.815$, $p<.05$). Although this result was borderline significant, a trend emerged whereby the more the use of immature defense mechanisms, the higher the Sexual Concern score ($\beta=.345$, $t(26)=2.030$, $p=0.053$).

4. Discussion

The present research aims at bettering our understanding of the psychological impact of GTD through the analysis of the role of defense mechanisms on patient well-being. A significant difference emerged between GTN and hydatidiform mole patients regarding the use of defense mechanisms: GTN patients report higher mature defenses scores compared to benign GTD patients. This could be explained, in part, because patients with these two differing diagnoses may develop different mental illness representation. GTN are characterized by a more severe and debilitating clinical picture compared to molar pregnancies. This increased severity could be reflected in a greater awareness regarding their medical condition and of the threat that GTN may have on their life and on their existential goals. This could induce GTN patients to mobilize more mature resources in an attempt to integrate feelings of

distress and frustration tied to the disease and search for new functional ways to adapt to it (Lingiardi & Madeddu, 2002).

Immature defense mechanisms were found to be associated with state anxiety. This result is in line with previous research that documents that immature defenses are psychological markers for psychopathological vulnerability. A longitudinal study revealed how immature defenses predict a more impaired psychological adaptation and also lead to anxiety and depression (Schlatter & Cameron, 2010).

Regarding the relationship between immature defenses and infertility-related stress, the use of immature defense mechanisms seems to influence the relational aspects of infertility-related stress. No studies had previously explored this connection. However, the results are in line with interpersonal-relational psychoanalytical theories. These theories highlight how defense mechanisms are not only intended to protect the subject from unacceptable ideas or feelings but that these defenses can also have a role in relationships and on the environmental influence in the construction of the self (Prunas, Preti, Huemer, Shaw & Steiner, 2014).

A few study limitations must be acknowledged including: the small sample size and the non-generalizability of results. Notwithstanding these limitations, given the rarity of GTD, these results are still very much pertinent in this area of study.

The results highlight the need to incentivize multidisciplinary support programs to promote overall well-being and the need to take defense mechanisms into account. A more immature defensive style could predict a more impaired psychological adjustment to disease.

References

- Di Mattei, V. E., Carnelli, L., Ambrosi, A., Mangili, G., Candiani, M., & Sarno, L. (2014). Gestational trophoblastic disease: psychological aspects and fertility issues. *The Journal of Reproductive Medicine*, 59(9-10), 488-495.
- Di Mattei, V. E., Carnelli, L., Bernardi, M., Pagani Bagliacca, E., Zucchi, P., Lavezzari, L., ... Sarno, L. (2015). An investigative study into psychological and fertility sequelae of gestational trophoblastic disease: the impact on patients' perceived fertility, anxiety and depression. *Plos One* 10(6), e0128354. doi:10.1371/journal.pone.0128354.
- Furlanetto, L. M., Mendlowicz, M. V., & Bueno, J. R. (2005). The validity of the Beck Depression Inventory-Short Form as a screening and diagnostic instrument for moderate and severe depression in medical inpatients. *Journal of Affective Disorders*, 86(1), 87-91.
- IBM Corp. (2013). IBM SPSS Statistics for Windows (Version 22.0). Armonk, NY: IBM Corp.
- Lingiardi, V. (2002). Difese e malattia fisica. In: V. Lingiardi, & F. Madeddu (Eds.), *I meccanismi di difesa. Teoria, valutazione, clinica* (pp. 313-319). Milano: Raffaello Cortina Editore.
- Lurain, J. R. (2010). Gestational trophoblastic disease I: epidemiology, pathology, clinical presentation and diagnosis of gestational trophoblastic disease, and management of hydatidiform mole. *American Journal of Obstetrics and Gynecology*, 203(6), 531-539.
- Mangili, G., Lorusso, D., Brown, J., Pfisterer, J., Massuger, L., Vaughan, M., ... Seckl M. J. (2014). Trophoblastic disease guidelines of diagnosis and management. A joint report from the International Society for the Study of Trophoblastic Disease, European Organisation for the Treatment of Trophoblastic Disease, and the Gynecologic Cancer InterGroup. *International Journal of Gynecological Cancer*, 9(9 Suppl 3), 109-116.
- Newton, C. R., Sherrard, M. A., & Glavac, I. (1999). The Fertility problem Inventory: measuring perceived infertility-related stress. *Fertility and Sterility*, 72(1), 54-62. doi:10.1016/s0015-0282(99)00164-8.
- Prunas, A., Preti, E., Huemer, J., Shaw, R. J., & Steiner H. (2014). Defensive functioning and psychopathology: a study with the REM-71. *Comprehensive Psychiatry* 55(7), 1696-1702.
- Schlatter, M. C., Cameron, L. (2010). Emotional suppression tendencies as predictors of symptoms, mood and coping appraisal during AC chemotherapy for breast cancer treatment. *Annals of Behavioral Medicine*, 40(1), 15-29.
- Spielberger, C. D., Gorsuch, R. C., & Lushene, R. E. (1970). *Manual for the state-trait anxiety inventory*. Palo Alto, CA: Consulting Psychologists Press.
- Steiner, H., Araujo, K. B., & Koopman, C. (2001). The Response Evaluation Measure (REM:71): a new instrument for the measurement of defenses in adults and adolescents. *American Journal of Psychiatry*, 158(3), 467-473.
- Wenzel, L. B., Berkowitz, R. S., Robinson, S., Goldstein, D. P., & Bernstein M. R. (1994). Psychological, social and sexual effects of gestational trophoblastic disease on patients and their partners. *Journal of Reproductive Medicine*, 39(3), 163-167.

VIRTUAL PRESENTATIONS

The image features a vertical abstract design on the right side. It consists of various splatters and brushstrokes in shades of purple, lavender, and orange. A faint, light-colored globe is visible in the background, partially obscured by the abstract elements. The overall aesthetic is modern and artistic.

WHAT IS THE RATIONALE BEHIND RESEARCHING MENTAL HEALTH OF YOUNG ADULTS OF DIFFERENT RELATIONSHIP STATUSES?

Katarzyna Adameczyk¹ & Chris Segrin²

¹ *Institute of Psychology, University of Adam Mickiewicz in Poznań (Poland)*

² *Department of Communication, University of Arizona, Tucson, AZ 85721 (USA)*

Abstract

One of the normative experiences in people's lives is the desire for enduring intimate relationships (Spielman et al., 2013) due to the human need for relatedness, which involves the need to establish relationships (Baumeister & Leary, 1995; Deci & Ryan, 1991). In young adulthood a special meaning is ascribed to a close, intimate bond with a romantic partner/spouse (Erikson, 1980; Rauer, Pettit, Lansford, Bates, & Dodge, 2013). The failure to establish and sustain a committed intimate relationship during young adulthood may have serious negative implications for well-being, both concurrently and later in the life span (Kiecolt-Glaser & Newton 2001). Simon and Barrett (2010) emphasized that fewer studies have examined the association between nonmarital intimate relationships and mental health among adults, and those studies that exist compared adults in cohabiting relationships to those in married relationships rather than to those not currently in intimate relationships. Several studies show that involvement in unmarried romantic relationships can be beneficial in terms of lower depression or other forms of psychological distress and higher life satisfaction (e.g., Ross, 1995; Simon & Barrett, 2010; Uecker, 2012). In the light of the great diversity of relationship statuses in adulthood, and the increasing number of single persons in Europe and in the United States of America (Poortman & Liefbroer, 2010), there is clear need to examine relationship statuses not just as a simple two category scheme, that is single vs. married, but as a multi-categorical variable including various levels of relationship status, such as single, married, divorced, living with partner, engaged, separated, and living with a fiancé (Lehnart, Neyer, & Eccles, 2010). In our presentation we would like to explain the rationale for investigating mental health among young adults representing different relationship statuses. We also seek to present a research proposal for longitudinal study of differences in young adults' mental health as a function of different relationship statuses (i.e., single, steady dating relationship, cohabiting, engaged, married). This includes a proposed test of a theoretical model in which we postulated several associations between variables recognized in literature (i.e., relationship satisfaction, relationship duration, romantic loneliness, dating anxiety, interpersonal competence) as explanatory mechanisms in the mental and physical health of people in different relationship status categories.

Keywords: *mental health, relationship status, young adults, loneliness, dating anxiety.*

1. Introduction

Although the association between relationship status, in particular marital status, and mental and physical health is well-documented in literature (e.g., Braithwaite, Delevi, & Fincham, 2010; Carr & Springer, 2010; Gibb, Fergusson, & Horwood, 2011), a careful review of literature and recent calls for future research directions formulated by researchers encourage and strongly justify pursuit of additional research on relationship status and well-being. These justifications are supported by the following major trends in the research literature:

Young adulthood is a particular point in the life span when the formation of intimacy and mating relationships have high importance (Masten, Burt, Roisman, Obradovic, Long, & Tellegen, 2004), and when individuals typically form enduring romantic relationships (Donnellan, Larsen-Rife, & Conger, 2005). At the same time, social-cultural changes in the last 20-30 years in Poland, Europe, and throughout the world have significantly contributed to a great diversity in alternative forms of marital and family life such as singlehood, cohabitation, single parent, and homosexual relationships (Soons & Liefbroer 2008). The above-mentioned alternative living arrangements and the increase in divorce rates have blurred the once clear-cut distinction between married and unmarried adults (Soons & Liefbroer, 2008). Moreover,

nonmarital relationships play a more prominent role than ever in the lives of young adults, their identity, and self-concept, and are recognized to be an important factor for emotional well-being in early adulthood (Simon & Barrett, 2010).

In the past decades in Europe and the United States of America the number of single persons has risen, and this trend will probably continue in these regions (Poortman & Liefbroer, 2010). A similar tendency is also observed in Poland (Such-Pyrgiel, 2014). What is important, to date, in most studies single individuals were mainly treated as a unique group (never-married, separated, divorced and widowed) (Cotton, 1999) and compared with married individuals serving as the benchmark against which all other relationship statuses are compared (Carr & Springer, 2010). Therefore, less attention has been given to the association between different relationship types (statuses) and its outcomes during young adulthood (Soons & Liefbroer, 2008).

Despite that failure to establish and sustain a committed intimate relationship during young adulthood may have serious negative implications for well-being, both concurrently and later in the life span (Kiecolt-Glaser & Newton, 2001), most studies of adult health focus on the protective effects of marriage, guided by the assumption that this is the most salient relationship for most adults (Carr & Springer, 2010). This assumption, however, has been challenged in the past decade (Carr & Springer, 2010) due to recent changes in the extent of marital and family life forms.

Relationship status is often conceptualized as a static variable in the vast majority of past investigations. The proposed methodology of this investigation will allow for study of changes in relationship status that naturally occur over time, as well as the role of an important social psychological variable (interpersonal competencies) in the establishment and maintenance of close relationships over time.

Finally, the vast majority of prior studies in this field were performed in the USA. Therefore, there is an urgent need to perform a cross-cultural research on relationship status in the field of psychology (Boski, 2010). The inclusion of an American sample in the project proposal creates an excellent opportunity to perform cross-cultural comparisons between Polish and American societies. This contributes to investigation of whether Polish and American culture affects the linkage between the relationship status and mental and physical health, and consequently, to a wider generalizability of the project's results.

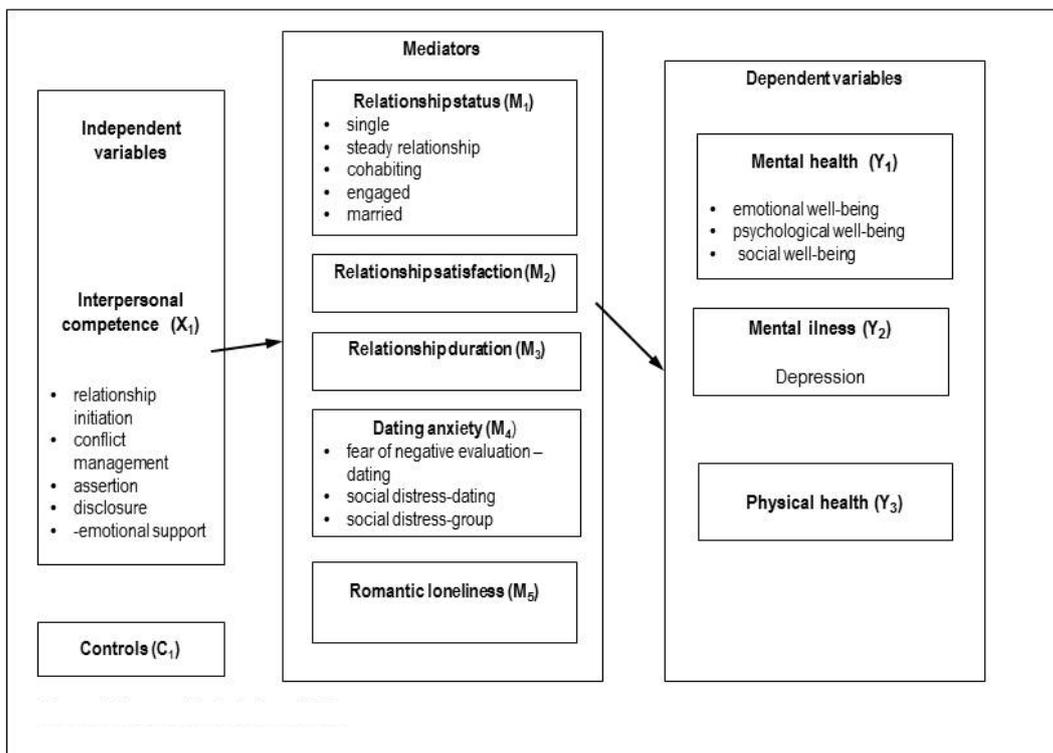
2. Objectives

The specific aim of the proposed investigation is to test the predictive role of relationship status (i.e., single, steady dating, cohabiting, engaged, married) on the mental and physical health of Polish and American young adults over the course of a 3-year period. In the current cross-cultural research proposal three major aims were formulated: (1) longitudinal assessment (over the course of a 3-year period) of differences in mental and physical health of Polish and American young adults (aged 20- 40) (a) of various relationship statuses (i.e., single, steady relationship, cohabiting, engaged, married); (b) performance of cross-cultural comparisons of the mental and physical health of young adults in Poland and in the United States of America; and (c) provision of further and deeper explanation of factors associated with mental and physical health of young adults. In the service of this aim, we intend to test a theoretical model in which we postulated several associations between variables recognized in the literature as factors that are predictive of mental and physical health (i.e., relationship status, relationship satisfaction, relationship duration, romantic loneliness, dating anxiety, interpersonal competence) (see Figure 1).

In this model we included new factors that have been rarely investigated in prior research. These factors include (1) dating anxiety which is predominantly investigated in regard to adolescence but not in regard to young adulthood. This aspect of psychosocial activity in young adults is getting more important because in Poland and in the United States of America young people postpone getting married until later ages (Rauer, Pettit, Lansford, Bates, & Dodge, 2013). As a result, dating relationships will become more prevalent and more consequential for many young adults; (2) loneliness seen from a multidimensional not a unidimensional perspective, including the domain of romantic partners. The multidimensional approach might be especially useful for studying loneliness among young adults who undertake developmental tasks, enter into new social networks, where they enter into new social roles, including a role of lifetime partner/spouse, and find new sources of social support (Bernardon et al., 2011). Therefore, the transition to adulthood may be associated with feelings of loneliness in one domain and not another (Bernardon, Babb, Hakim-Larson, & Gragg, 2011), depending on what particular relationship deficit is experienced by an individual; (3) we are also expanding the theoretical rationale of this investigation to include assessment of relationship satisfaction and relationship duration among those who are in a partnered relationship. Prior research shows that it is not the mere presence of a partner that protects against

physical and mental health problems, but rather the quality of the relationship with the partner (DePaulo & Morris, 2005). With respect to relationship duration, a recent a 30-year longitudinal study by Gibb et al. (2011) revealed that increasing relationship duration, but not legal relationship status, has a protective effect on mental health for men and women. Therefore, we included in our research proposal relationship satisfaction and relationship duration as key variables, that are often overlooked in past studies; (4) The three waves of data proposed for collection in this study will allow for an unprecedented test of mediation of the relationship between interpersonal competencies and well-being.

Figure 1. The model of study variables



3. Methods

3.1. Participants and procedure

In the current study we intend to perform a 3-wave longitudinal panel study. The study is planned to be conducted in the form of an online survey on a Polish and American sample by using an internet based computer program. At the same time, in order to recruit non-student individuals, university students will be asked to refer their non-student acquaintances and friends aged 20-40 years old to participate in the study. To conform to the requirements of the study, participants should be aged 20-40 years (defined as young adulthood period), heterosexual, and fitting into one of the following categories of relationship status: (1) single, (2) steady relationship, (3) cohabiting, (4) engaged, (5) married. Being single is defined as “not in a committed relationship for at least 6 or more months, but wanting to become committed in the near future (within the next year or so)”. In turn, partnered status (i.e., steady relationship, cohabiting, engaged, married) was defined as “in a committed relationship for at least 6 or more months, and wanting to be committed in the near future (within the next year or so)”.

3.2. Materials

The questionnaire package presented to the subjects that will be used in the project will be comprised the following instruments: (1) *Demographic Questions*. This questionnaire will be designed to obtain general descriptive information about participants’ background such as their age, gender, faculty, living arrangement, current relationship status and relationship duration; (2) *The Mental Health Continuum Short Form* (MHC-SF; Keyes, 2009). The MHC-SF consists of 14 items that were chosen as the most prototypical items representing the construct definition for each facet of well-being; (3) *Quality Metrics’ SF-12 Health Survey* (Polish adaptation delivered by Publisher Quality Metrics) contains 12 items assessing subjective health through eight different health indicators/domains: physical functioning, role physical (referring to the limitations due to physical health problems), bodily pain, general health,

vitality, social functioning, role-emotional (referring to limitations due to emotional problems), and mental health; (4) *The Center for Epidemiologic Studies Depression Scale* (CES-D; Radloff, 1977). This scale includes 20 items comprising six scales reflecting major dimensions of depression: depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance; (5) *Interpersonal Competence Questionnaire - Revised* (ICQ-R; Buhrmester, Furman, Wittenberg, & Reis, 1988). The ICQ-R consists of 40 items and it is comprised of the five following subscales: Initiating Relationships, Asserting Influence, Self-Disclosure, Emotional Support, and Conflict Resolution. The score for each scale is the average scale score; (6) *Dating Anxiety Scale for Adolescents* (DAS-A; Glickman & La Greca, 2004). This scale contains 21 items with an additional five filler items. The questionnaire is comprised of the following three subscales: Fear of Negative Evaluation – Dating (FNE-Dating; 10 items) which measures concern or worry that a date or a member of the other sex would judge the adolescent in a negative manner; Social Distress-Dating assessing inhibition and distress while interacting with a member of the other sex on a date or socially; and Social Distress-Group reflects inhibition and distress during heterosocial group situations; (7) *The Social and Emotional Loneliness Scale for Adults - Short Form* (SELSA-S; DiTommaso, Brannen, & Best, 2004). The SELSA-S is a multidimensional measure of loneliness that consists of 15 items. It was designed to measure emotional (romantic and family) and social loneliness. Each subscale consists of five statements about feelings of loneliness within the past year. The family loneliness subscale assesses feelings toward family relationships. The social loneliness subscale measures feelings toward being part of a social group. The romantic loneliness subscale measures the degree to which participants feel they have significant others in their lives; (7) *Relationship Assessment Scale* (RAS; Hendrick 1988). The RAS is a 7-item instrument with items that tap global satisfaction with the relationship. It is a generic relationship satisfaction measure appropriate for assessing satisfaction with any close relationship: couples who are living together, dating couples, gay couples, and for married couples.

4. Conclusions

The justification for the project proposal comes from the urgent need to undertake a multi-level investigation on the factors associated with mental and physical health and diverse relationship statuses in young adulthood. This research problem is congruent with other researcher's recognition of the actual state of knowledge in this area as just "beginning to document sources of heterogeneity in health outcomes associated with each unmarried category, and distinctive health stressors or health-enhancing resources unique to each unmarried status" (Carr & Springer, 2010, p. 748). We believe that addressing this research problem through longitudinal investigation in two different cultural samples may significantly contribute to basic research in the field of human development and clinical and health psychology. This is because these issues are of vital importance to mental and physical health, and because family, marital, and romantic relationships are of normative and crucial significance in young adulthood. In particular, cross-cultural comparisons are sorely needed in social psychology because in the last decades of the twentieth century most research has been conducted predominantly by American scholars (Boski, 2010). Therefore, this phenomenon raises questions about the external validity or larger ability to generalize from American findings, concerned manifestations and mechanisms of social behaviors, to other cultures (Boski, 2010) such as Polish culture.

Acknowledgments

The presented project proposal is financed by a grant from the Polish Scientific National Centre as part of the research project "A Longitudinal investigation of mental and physical health of Polish and American young adults" (UMO-2014/13/B/HS6/01382).

References

- Bernardon, S., Babb, K. A., Hakim-Larson, J., & Gragg, M. (2011). Loneliness, attachment, and the perception and use of social support in university students. *Canadian Journal of Behavioural Science*, 43(1), 40–51. doi: 10.1037/a0021199
- Boski, P. (2010). *Kulturowe ramy zachowań społecznych. Podręcznik psychologii międzykulturowej*. [Cultural framework of social behaviours. Handbook of cross-cultural psychology]. Warszawa: Wydawnictwo PWN i ACADEMICA Wydawnictwo SWPSS.
- Braithwaite, S. R., Delevi, R., & Fincham, F.D. (2010). Romantic relationships and the physical and mental health of college students. *Personal Relationships*, 17(1), 1-12.

- Buhrmester, D., Furman, W., Wittenberg, M. T., & Reis, H. T. (1988). Five domains of interpersonal competence in peer relationships. *Journal of Personality and Social Psychology*, 55(6), 991–1008. doi: 10.1037/0022-3514.55.6.991
- mental health of college students. *Personal Relationships*, 17(1), 1–12.
- Carr, D., & Springer, K. W. (2010). Advances in families and health research in the 21st century. *Journal of Marriage and Family*, 72, 743–761. doi: 10.1111/j.1741-3737.2010.00728.x
- Donnellan, M. B., Larsen-Rife, D., & Conger, R. D. (2005). Personality, family history, and competence in early adult romantic relationships. *Journal of Personality and Social Psychology*, 88(3), 562–576. doi: 10.1037/0022-3514.88.3.562
- DePaulo, B., & Morris, W. (2005). Singles in society and science. *Psychological Inquiry*, 2-3, 57-83.
- DiTommaso, E., Brannen, C., & Best, L. A. (2004). Measurement and validity characteristics of the short version of the Social and Emotional Loneliness Scale for Adults. *Educational and Psychological Measurement*, 64(1), 99-119. doi: 10.1177/0013164403258450
- Gibb, S. J., Fergusson, D. M., & Horwood, L. J. (2011). Relationship duration and mental health outcomes: findings from a 30-year longitudinal study. *The British Journal of Psychiatry*, 198, 24-30 doi: 10.1192/bjp.bp.110.083550
- Glickman, A. R. & La Greca, A. M. (2004). The Dating Anxiety Scale for Adolescents: Scale development and associations with adolescent functioning. *Journal of Clinical Child and Adolescent Psychology*, 33, 566-578.
- Hendrick, S. S. (1988). A generic measure of relationship satisfaction. *Journal of Marriage and the Family*, 93-98.
- Keyes, C. L. M. (2009). Atlanta: Brief description of the mental health continuum short form (MHC-SF). Retrieved from <http://www.sociology.emory.edu/ckeyes/> [22.08.2012].
- Kiecolt-Glaser, J. K., & Newton, T. L. (2001). Marriage and health: His and hers. *Psychological Bulletin*, 127, 472–503. doi:10.1037/0033-2909.127.4.472
- Masten, A. S., Burt, K. B., Roisman, G., Obradovic, J., Long, J. D., & Tellegen, A. (2004). Resources and resilience in the transition to adulthood: Continuity and change. *Development and Psychopathology*, 16, 1071–1094. doi:10.1017/S0954579404040143
- Poortman, A. R., & Liefbroer, A. C. (2010). Singles' relational attitudes in a time of individualization. *Social Science Research*, 39(6), 938–949. doi: 10.1016/j.ssresearch.2010.03.012
- Radloff, L.S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1(3), 385-401. doi: 10.1177/014662167700100306
- Rauer, A. J., Pettit, G. S., Lansford, J. E., Bates, J. E., & Dodge, K. A. (2013). Romantic relationship patterns in young adulthood and their developmental antecedents. *Developmental Psychology*, 49(11), 2159-2171. doi: 10.1037/a0031845.
- Simon, R. W., & Barrett, A. E. (2010). Nonmarital romantic relationships and mental health in early adulthood: Does the association differ for women and men? *Journal of Health and Social Behavior*, 51(2), 168-182. doi: 10.1177/0022146510372343
- Soons, J. P. M., & Liefbroer, A. C. (2008). Together is better? Effects of relationship status and resources on young adults' well-being. *Journal of Social and Personal Relationships*, 25(4), 603-624.
- Such-Pyrgiel, M. (2014). The lifestyles of single people in Poland. *Procedia - Social and Behavioral Sciences*, 109, 198 – 204.

SCHIZOPHRENIA: CLINICAL SYMPTOMATOLOGY, ETIOLOGY, LINGUISTIC DEFICITS AND COGNITIVE REHABILITATION

Georgios Moutsinas

Hellenic Ministry of Education, Research and Religious Affairs (Greece)

Abstract

The present paper discusses issues of psychopathology, focusing on the assessment and rehabilitation of individuals with schizophrenia. Schizophrenia constitutes a mental illness with a range of behavioral, social – emotional, cognitive and clinical symptoms, where a deterioration of executive functions, such as language and attention, is observed. Being of partly undetermined etiology, it is attributed to genetic – parentally inherited, prenatal and neuroanatomic factors. The treatment of schizophrenia is based on antipsychotic medication, treating the majority of its symptomatology, but not improving its cognitive functions. The subject paper aims to develop the clinical profile of patients with schizophrenia, highlighting the methods of cognitive rehabilitation of their language deficits. A literature review research strategy is followed, comparing the clinical symptoms, the causal parameters and the methods of cognitive rehabilitation of the patients' linguistic deficits. Besides the aforementioned symptomatology, it is observed that schizophrenia involves language impairments mainly on the level of semantics, pragmatics and concerning the broader capacity of a structured propositional organization. Mnemonic, psychomotor speed and language skills exercises, etc., combined with cognitive – behavioral psychotherapy, improve the patients' cognitive abilities beyond the typical rehabilitation of their social skills and autonomy. Conclusively, along with pharmacotherapy, effective cognitive rehabilitation interventions exist for the language deficits of individuals with schizophrenia, contributing to their overall support.

Keywords: schizophrenia, clinical symptomatology, etiology, linguistic deficits, cognitive rehabilitation.

1. Introduction

Schizophrenia constitutes a disorder of thought and volition which entails changes in an individual's state of consciousness, disturbing the cerebral information processing. It occurs in 1% of the population, slightly more often in males and usually in individuals undergoing the twentieth year of their age (APA, 2000; Kandel, Kupfermann, & Iversen, 2006). The treatment of the disease is based on antipsychotic medication, addressing its symptomatology as regards to the support of social skills and autonomy, however not improving the patients' linguistic deficits (Africa & Schwartz, 2000). Consequently, in the present paper the clinical symptoms and the etiology of schizophrenia, the specific linguistic changes observed and the brain structures that present neuronal deteriorations are developed, as well as ways of restoring the declining cognitive abilities. Thus, following a literature review research strategy, the clinical symptoms, the causal parameters and the methods of cognitive rehabilitation of the patients' linguistic deficits are compared.

2. Schizophrenia's symptomatology and etiology

According to the literature, firstly, certain positive psychotic features of schizophrenia exist (Andreasen, 1984, 1985; Kay, 1991), such as hallucinations; delusional ideas; bizarre behavior; positive morphological (formal) thought disorder; and inappropriate affect (Andreasen, 1984; Butler & Braff, 1991). Secondly, specific negative psychotic symptoms of the disease have been distinguished, among others, the flat or blunted affect; irrationality; aboulia – apathy; anhedonia – lack of sociability; and the individual's attention concentration inability (Andreasen, 1984, 1985). Furthermore, communication dysfunctions of the prefrontal cortex with the thalamus and the cerebellum exist, as well as malfunctions in the caudal lateral prefrontal and frontal cortex, the dorsal anterior cingulate gyrus, the amygdala, along with the anterior brain (Alloy, Acocella, & Bootzin, 1996; Kandel et al., 2006). Also, decreased

hippocampal activation in memory control assays, size reduction of the brain island and thalamus and increased blood flow in the left middle temporal lobe occur (Phillips, Drevets, Rauch, & Lane, 2003; Sadock & Sadock, 2007;). Lastly, a malfunction in the patients' eye movement (Africa & Schwartz, 2000) and an asymmetry of the cerebral hemispheres is observed (Cutting, 1990; Davidson & Hugdahl, 1995; Petty, 1999).

Regarding schizophrenia's etiology, it is due to increased brain levels of dopamine, reduced serotonergic activity, substances blocking the glutamatergic receptors, such as phencyclidine (PCP) (Brian, Susan, & Judith, 2005), or inadequate GABA-ergic inhibition (gamma aminobutyric acid) (Roberts, 1972, 1976). What's more, potential complications during pregnancy, trauma during birth, medical conditions over the early infancy (Alloy et al., 1996; Sadock & Sadock, 2007; Murray & Callaghan, 1991), as well as infections and malnutrition in fetal life and early childhood have been relatively implicated (Kandel et al., 2006; Pinel, 2007). Moreover, an approximately 12-40% probability of developing schizophrenia in children of families wherein one (Kendler & Diehl, 1995; Kety, 1987) or both parents suffer from the disease (Sadock & Sadock, 2007) has been noted. In fact, the incidence rates in twins are 47% among monozygotic, versus 12%-14% among dizygotic ones (Alloy et al., 1996; Sadock & Sadock, 2007).

Nevertheless, emphasis is given to the existence of a double bond in the parent-child communication (Gottesman & Shields, 1967), the disturbed triadic relationship between mother, father and child (Motlova, 2007) and the stereotypy and rigidity in the family members' roles (Torrey, 1985), together with the existence of false reciprocity and false hostility in the family's verbal communication (Wynne, Ryckoff, Day, & Hirsch, 1958). Actually, the expression of critical comments, anger, hostility, emotional overengagement, etc. seems to characterize families of individuals with psychotic symptoms (Brown, Birley & Wing, 1972; Falloon, 1992; Kavanagh, 1992; Vaugh & Leff, 1976). Accordingly, research indicates that the "family burden" (increased objective and subjective difficulties) (Hoenig & Hamilton, 1966; Schene, Wijngaarde, & Koeter, 1998) is associated or significantly interacts with feelings of high intensity expressed in families of people with schizophrenic symptoms (Bellack & Mueser, 1993; Scazufca & Kuipers, 1996).

Finally, the socioeconomic and environmental conditions (industrialization, urbanization, climate juncture, environmental pollution, immigration, urban noise, etc.) (Freeman & Stansfeld, 1998; Lundberg, 1998) in combination with age, gender, ethnicity and educational level parameters (Gerard, 2000) influence the manifestation of schizophrenia. Relatively, the vulnerability to stress model has been proposed (Curran & Cirelli, 1988; Sadock & Sadock, 2007). Thus, on the one hand, emphasis has been given to the theory of the role of "strange / special", in the interest of social inclusion (Mortensen, 1997). On the other hand, the theory of the mental illness stigma / labelling has been put forward (Rosenhan, 1973), comprising isolation, psychological suggestibility and close adherence to a stereotypical role (Berne, 1961; Clinard, 1974; Pilgrim & Rogers, 1997).

3. Linguistic deficits of patients with schizophrenia and their neuropathology

The schizophrenics' "disorganized speech" (Marini et al., 2008) comprises the inability to use pragmatic and semantic rules, deficiencies in recognizing non-literal propositions (Colle et al., 2013) and specific communicative circumstances (Varga et al., 2013), as well as cognitive deficits such as in attention and in executive functions (Marini et al., 2008). In addition, the term "schizophasia" describes the particular features of speech found in aphasic patients, for instance, neologisms and aprosody (Colle et al., 2013). On the contrary, the grammatical, syntactic and morphological rules are scarcely affected (Marvel, 2006), whereas speech perception deficiencies are present, owing to propositional word connecting difficulties (Covington et al., 2005). In particular, linguistic deficits are due to the patients' debility to analyze the phonemes of speech (Marvel, 2006). Moreover, simplified syntax during spontaneous discourse as a chronic degenerative symptom, not treated after pharmacotherapy, and shortness in syntax understanding have been observed. Nonetheless, vocabulary remains intact, although its revocation is described as inadequate. Also, speech is affected by a deficiency in maintaining the continuity of meanings between sentences (glossomania) (Covington et al., 2005; Marvel, 2006). Notably, the voice of the schizophrenics is characterized by a choking or ramshackle timbre, associated with the symptom of catatonia. Lastly, pauses and hesitation are noted (Covington et al., 2005).

Concerning their etiology, the abovementioned deficits are partially attributed (Crow, 2008) to a weakness of a prevalence of one hemisphere for language (linguistic functions pleftrosis). Likewise, the patients' brain demonstrates neuronal loss and hyperactivity in the left superior temporal gyrus, causing an invasion of thoughts during discourse (Covington et al., 2005). In addition, an abnormal cerebral asymmetry of the planum temporale region has been observed, along with structural and functional abnormalities in the cerebellum, whilst blood flow in the upper right temporal gyrus is increased in the

right hemisphere, compared to the left (Marvel, 2006). Conjointly, an increased activation of the frontal lobe during verbal flow tests has been noted, while the parietal and frontal brain structures are more activated during the initiation of ironic propositions (Marvel, 2006; Varga et al., 2013).

4. Cognitive rehabilitation of patients with schizophrenia

Cognitive dysfunctions are frequently encountered in patients with schizophrenia and mainly concern attention, executive functions, working and verbal memory, verbal flow, psychomotor speed and coordination, along with language. However, the use of atypical psychotic treatment has little effect on the improvement of the aforementioned deficits. For this reason, various corresponding rehabilitation programs have been developed, improving cognition, social adjustment, quality of life, depression and negative psychotic symptoms (Garrido et al., 2013; Gharaeipour & Scott, 2012) either by using computer systems, either through classical methods of paper and pencil (Cavallaro et al., 2009; Garrido et al., 2013). Actually, therapeutic programs exist, targeting specific cognitive functions through education for problem solving (Cavallaro et al., 2009; Kurtz, Seltzer, Shagan, Thime, & Wexler, 2007). In fact, cognitive rehabilitation combined with cognitive – behavioral therapy is particularly effective (Kluwe-Schiavon, Sanvicente-Vieira, Kristensen, & Grassi-Oliveira, 2013). In these cases, greater improvement of social attitudes and autonomy skills has been noted in younger, less disorganized patients, with mild cognitive deficits and who receive a small dosage of antipsychotic medication (Cavallaro et al., 2009; Vita et al., 2013).

At the same time, various computer programs have been developed, including exercises targeting different cognitive domains that are deductible in patients with schizophrenia, together with activities not associated with a single cognitive function, such as language and arithmetic calculations. What's more, the level of difficulty is adjusted, based on the patient's performance and the latter is recorded per session. Ultimately, during training, the psychologist enhances the examinee's effort, assisting the completion of the exercises via different solving strategies, but without directly providing the solution (Cavallaro et al., 2009).

5. Conclusions

Schizophrenia is a mental illness characterized by hallucinations, delusions, bizarre behavior, positive morphological (formal) thought disorder, inappropriate, flat or blunted affect, irrationality, aboulia – apathy, anhedonia, lack of sociability and reduced attention (Kandel et al., 2006). Its causes remain unclarified, although it is recently believed to be due either to genetic, parent-inherited, or antenatal factors. Neuroanatomically, it is associated with changes detected in the neurotransmitter systems, as well as neuronal loss in the cerebral cortex or overactivity of certain brain regions. Furthermore, it is related to a deterioration of cognitive – executive functions such as language and attention. More specifically, linguistic deficits concern mainly the level of semantics, pragmatics and the capability of the organization of different propositions into a broader structure (Covington et al., 2005). Lastly, the treatment of the disease is based on antipsychotic medication which, though facing its positive and negative symptoms, does not seem to improve its cognitive deficiencies.

Therefore, the present paper aimed to develop the clinical symptoms and the etiology of schizophrenia, as well as the specific linguistic changes observed and the brain structures that present neuronal deteriorations, highlighting ways of restoring the declining cognitive abilities. In order to compare the clinical symptoms, the causal parameters and the methods of cognitive rehabilitation of the patients' linguistic deficits, a literature review research strategy was followed. In conclusion, to address the cognitive deficits beyond the typical recovery aimed at improving the patients' social skills and autonomy, specialized programs are implemented, comprising mnemonic, psychomotor speed and linguistic skills exercises, etc., combined with cognitive – behavioral psychotherapy, targeting specific cognitive functions.

References

- Africa, B., & Schwartz, S. (2000). Schizophrenic Disorders. In H. Goldman (Ed.), *Review of General Psychiatry* (5th ed., pp.233-250). Baltimore, MD: Prentice-Hall International.
- Alloy, L. B., Acocella, J., & Bootzin, R. A. (1996). *Mood disorders in Abnormal psychology: current perspectives*. New York, NY: McGraw-Hill.

- American Psychiatric Association (2000). *Diagnostic and statistical manual-text revision (DSM-IV-TR)*, 2000). Washington, DC: American Psychiatric Association (APA).
- Andreasen, N. C. (1984). *The Scale for the Assessment of Positive Symptoms (SAPS)*. Iowa, USA: Department of Psychiatry.
- Andreasen, N. C. (1985). Positive vs. Negative Schizophrenia: A Critical Evaluation. *Schizophrenia Bulletin*, 11(3), 380-389.
- Bellack, A. S., & Mueser, K. T. (1993). Psychosocial treatment for schizophrenia. *Schizophrenia Bulletin*, 19(2), 317-336.
- Berne, E. (1961). *Transactional analysis in psychotherapy: A systematic individual and social psychiatry*. New York, NY: Grove Press.
- Brian, J. M., Susan, M. C., & Judith, A. P. (2005). PCP: from pharmacology to modelling schizophrenia. *Current Opinion in Pharmacology*, 5(1), 101-106.
- Brown, G. W., Birley, J. L., & Wing, J. K. (1972). Influence of family life on the course of schizophrenic disorder: A Replication. *British Journal of Psychiatry*, 121(562), 241-258.
- Butler, R. W., & Braff, D. L. (1991). Delusions: A review and integration, *Schizophrenia Bulletin*, 17(4), 633-647.
- Cavallaro, R., Anselmetti, S., Poletti, S., Bechi, M., Ermoli, E., Cocchi, F., ..., & Smeraldi, E. (2009). Computer-aided neurocognitive remediation as an enhancing strategy for schizophrenia rehabilitation. *Psychiatry Research*, 169(3), 191-196.
- Clinard, M. B. (1974). *Sociology of deviant behavior*. New York, NY: Holt Rinehart & Winston Inc.
- Colle, L., Angeleri, R., Vallana, M., Sacco, K., Bara, B.G., & Bosco, F.M. (2013). Understanding the communicative impairments in schizophrenia: A preliminary study. *Journal of Communication Disorders*, 46(3), 294-308.
- Covington, M. A., He, C., Brown, C., Naci, L., T.McClain, J., Fjordbak, B. S., ..., & Brown, J. (2005). Schizophrenia and the structure of language: The linguist's view. *Schizophrenia Research*, 77(1), 85-98.
- Crow, T. J. (2008). The 'big bang' theory of the origin of psychosis and the faculty of language. *Schizophrenia Research*, 102(1), 31-52.
- Curran, J. P., & Cirelli, A. (1988). The role of psychosocial factors in the etiology, course and outcome of schizophrenia. In H. A. Marshallah, M. T. Tsuang, & J. C. Simson (Eds.), *Handbook of schizophrenia* (pp. 275-295). New York, NY: Elsevier.
- Cutting, J. (1990). *The right cerebral hemisphere and psychiatric disorders*. New York, NY: Oxford University Press.
- Davidson, R., & Hugdahl, K. (1995). *Brain asymmetry*. London, UK: MIT Press.
- Falloon, I. R. (1992). Psychotherapy of schizophrenia. *British journal of hospital medicine*, 48(3-4), 164-170.
- Freeman, H., & Stansfeld, S. (1998). Psychosocial effects of urban environments, noise and crowding, In A. Lundberg (Ed.), *The Environment and Mental Health. A Guide for Clinicians* (pp. 147-174) London, UK: Lawrence Erlbaum Associations.
- Garrido, G., Barrios, M., Penadés, R., Enríquez, M., Garolera, M., Aragay, ..., & Vendrell J. M. (2013). Computer-assisted cognitive remediation therapy: Cognition, self-esteem and quality of life in schizophrenia. *Schizophrenia Research*, 150(2), 563-569.
- Gerard, H. (2000). Social and cultural aspects of health, illness and treatment. In H. Goldman (Ed.), *Review of General Psychiatry* (5th ed., pp. 95-106). Baltimore, MD: Prentice-Hall International.
- Gharaeipour, M. & Scott, B. J. (2012). Effects of cognitive remediation on neurocognitive functions and psychiatric symptoms in schizophrenia patients. *Schizophrenia Research*, 142(1), 165-170.
- Gottesman, I. I., & Shields, J. (1967). A polygenic theory of schizophrenia. *Proceedings of the National Academy of Sciences of the United States of America*, 58(1), 199-205.
- Hoenig, J., & Hamilton, M. W. (1966). The schizophrenic patient in the community and his effects on the household. *International Journal of Social Psychiatry*, 12(3), 165-176.
- Kandel, E. R., Kupfermann, I., & Iversen, S. (2006). Learning and Memory. In E. R. Kandel, J. H. Schwartz, & T. M. Jessell (Eds.), *Principles of neural science* (4th ed., pp. 1227-1246). New York, NY: McGraw-Hill.
- Kavanagh, D.J. (1992). Recent developments in expressed emotion and schizophrenia. *British Journal of Psychiatry*, 160(5), 601-620.
- Kendler, K. S., & Diehl, S. R. (1995). Schizophrenia: Genetics. In H. I. Kaplan, & B. J. Sadock (Eds.), *Comprehensive Textbook of Psychiatry/VI* (pp. 942-957). Baltimore, MD: Williams & Wilkins.
- Kety, S. S. (1987). The significance of genetic factors in the etiology of schizophrenia: Results from the national study of adoptees in Denmark. *Journal of Psychiatric Research*, 21(4), 423-429.

- Kluwe-Schiavon, B., Sanvicente-Vieira, B., Kristensen, C. H., & Grassi-Oliveira, R. (2013). Executive functions rehabilitation for schizophrenia: A critical systematic review. *Journal of Psychiatric Research, 47*(1), 91-104.
- Kurtz, M. M., Seltzer, J. C., Shagan, D. C., Thime, W. R., & Wexler, B. E. (2007). Computer-assisted cognitive remediation in schizophrenia: What is the active ingredient? *Schizophrenia Research, 89*(1), 251–260.
- Lundberg, A. (1998). Environmental change and human health. In A. Lundberg (Ed.), *The Environment and Mental Health. A Guide for Clinicians* (pp. 5-24). London, UK: Lawrence Erlbaum Associations.
- Marini, A., Spoletini, I., Rubino, I. A., Ciuffa, M., Bria, P., Martinotti, G., ... & Spalletta, G. (2008). The language of schizophrenia: An analysis of micro and macrolinguistic abilities and their neuropsychological correlates. *Schizophrenia Research, 105*(1), 144-155.
- Marvel, C. (2006). Schizophrenia and Language. In E. K. Brown, R. E. Asher, & J. M. Y. Simpson (Eds.), *Encyclopedia of Language & Linguistics* (2nd ed, Vol. 2, pp. 14-17). London, UK: Elsevier.
- Mortensen, P. B. (1997). Schizophrenia in Society. *Disease Management & Health Outcomes, 2*(2), 77-84.
- Motlova, L. (2007). Schizophrenia and family. *Neuroendocrinology letters, 28*(1), 147-159.
- Murray, R., & Callaghan, E. (1991). The congenital and adult - onset psychoses: Kraepelin lost, Kraepelin found. In A. Kerr & H. McClelland (Eds.), *Concepts of mental disorder* (pp. 48-66). Washington, DC: American Psychiatric Press.
- Petty, R. G. (1999). Prolactin and antipsychotic medications: mechanism of action. *Schizophrenia Research, 35*(1), 67-73.
- Phillips, M. L., Drevets, W. C., Rauch, S. L., & Lane, R. (2003). Neurobiology of emotion perception II: Implications for major psychiatric disorders. *Society of biological psychiatry, 54*(5), 515-528.
- Pilgrim, D., & Rogers A. (1997). *A sociology of mental health and illness*. Buckingham, UK: Open University Press.
- Pinel, J. P. (2007). *Biopsychology* (6th ed.). Boston, MA: Allyn and Bacon.
- Roberts, E. (1972). Prospects of research on schizophrenia: A hypothesis suggesting that there is a defect in the GABA system in schizophrenia. *Neuroscience Research Program Bulletin, 10*(4), 468-482.
- Roberts, E. (1976). Disinhibition as an organizing principle in the nervous system: The role of the GABA system. Application to neurologic and psychiatric disorders. In E. Roberts, T. N. Chase & D. B. Tower (Eds.), *GABA in Nervous System Function* (pp. 515-539). New York, NY: Raven.
- Rosenhan, D. L. (1973). On being sane in insane places. *Science, 179*(4070), 250-258.
- Sadock, B. J. & Sadock, V. A. (Eds.) (2007). *Kaplan and Sadock's synopsis of psychiatry: Behavioral sciences/clinical psychiatry* (10th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.
- Scazufca, M., & Kuipers, L. (1996). Links between expressed emotion and burden of care in relatives of patients with schizophrenia. *British Journal of Psychiatry, 168*(5), 580-587.
- Schene, A. H., Wijngaarde, B., & Koeter, W. J. (1998). Family caregiving in schizophrenia: domains and distress. *Schizophrenia Bulletin, 24*(4), 609-618.
- Torrey, E. F. (1985). *Surviving schizophrenia: A family manual*. New York, NY: Harper & Row Publishers.
- Varga, E., Simon, M., Tanyi, T., Schnell, Z., Hajnal, A., Orsi, G., ..., & Herold R. (2013). Irony comprehension and context processing in schizophrenia during remission – A functional MRI study. *Brain & Language, 126*(3), 231-242.
- Vaugh, C. E., & Leff, J. P. (1976). The influence of family and social factors on the course of psychiatric illness. A comparison of schizophrenic and depressed neurotic patients. *British Journal of Psychiatry, 129*(2), 125-137.
- Vita, A., Deste, G., Peri, L., Barlati, S., Poli, R., Cesana, B. M., & Sacchetti E. (2013). Predictors of cognitive and functional improvement and normalization after cognitive remediation in patients with schizophrenia. *Schizophrenia Research, 150*(1), 51–57.
- Wynne, L. C., Ryckoff, I. M., Day, J., & Hirsch, S. I. (1958). Pseudo-mutuality in the family relations of schizophrenics. *Psychiatry, 21*(2), 205-220.

DEVELOPMENT OF SELF-REGULATION SKILLS FOR MOTHERS, WHO BRING UP CHILDREN WITH AUTISM SPECTRUM DISORDER

Olga Valentinovna Makarova

Oryol State University n.a. I.S. Turgenev (Russia)

Abstract

In the article there are results of the experiment, that was aimed to develop mental self-regulation skills, increase resistance to stressor and decrease depression of mothers, who bring up children with ASD.

To improve the efficiency of psychoeducational escort of the family, that brings up a child with ASD, it was used computer EEG biocontrol method, based on the principle of biofeedback (BFB). The therapy of affective disorders is a relatively new sphere to use the electroencephalographic training. The course of alpha-stimulating training was held with the help of hardware and software system biofeedback (БОСЛАБ). It was developed by the specialists of State Academy of the Research Institute of molecular biology and biophysics, Siberian branch of Russian Academy of Medical Sciences. Before the beginning of the course, specialists studied an electrobiological activity of the testees' encephalon to define an optimum place to put electrodes and an alpha rhythm band. The main reason for that is that the essential condition for conducting electroencephalographic training is a properly set range of EEG rhythm. That is why the test open/closed eyes was conducted through 2 channels EEG. The monitoring of electrical activity has revealed that all testees had deficiency of alpha-activity in the right frontal lobe and prevalence of alpha-activity in the left frontal lobe (at the bipolar montage of electrodes in the leads F4-O2 and F3-O1). The prevalence of alpha-activity in the right frontal lobe predisposes to the development of a positive emotional reaction. Prepotency of alpha-activity in the left frontal lobe predisposes to the development of depression. The testees can be taught to redistribute alpha-activity so that the right frontal lobe was more alpha-active. Herewith, it significantly decreases the depth of depression. The course of therapy by BFB tear consists of 15 sessions. Activities were carried through individually, 2-3 times a week. First 3-5 sessions were educative. At the next stages testees completed tasks of an increscent complexity to increase the level of the controlled parameter (alpha rhythm index capacity). Testees were suggested to close eyes and increase the incidence of the feedback signal (i.e. to increase alpha-activity) during the 30-minutes session. If the testee was tired, the duration of sessions decreased. The point of feedback signal appearance is set before the beginning of the session so, that alpha-activity initially exceeded it in 30% of cases. The position of electrodes during the alpha-training: bicaudal pickoffs is fastened in points F4-O2.

Keywords: *Autism Spectrum Disorders, depression.*

1. Introduction

In the past decade the amount of children with Autism Spectrum Disorders (ASD) increased significantly, according to statistics. Childhood autism is a distorted variant of pervasive developmental disorder, which is related to the deficiency of basal communication need. This is the result of pathology, first and foremost, of the emotional and intellectual spheres of mind.

When there is a child with such disturbances in the family, it is always related with his parents and close relatives' oppressive sorrows. It is typical of them to be passive, unsociable, vulnerable, confused, they can be in depression, anxious mood and have a high emotional sensitivity. At the same time family relations worsen, relatives feel less confident and are worried about the child's future.

The child's disease causes psychogenic stress and predisposes his mother's depression, bodily diseases and disturbances of mind. It deteriorates mother's psychoemotional and moral state, causes discomfort and lowers her social status. The vast majority of mothers feel acute need of a well-qualified psychoeducational escort.

2. Objective

One of the direction of the experiment, which was conducted on the base of the Center for Child Development in Oryol, was to develop mental self-regulation skills, increase resistance to stressor and decrease depression of mothers, who bring up children with ASD.

3. Method

3.1. Assessment of the severity of depression among mothers, who bring up children with ASD

During the therapy process Montgomery-Asberg Depression Rating Scale (MARDS) was used to assess the severity and dynamics of depression among mothers, who bring up children with ASD. Montgomery-Asberg Depression Rating Scale (MARDS) is used to rapidly assess the severity and dynamics of depression during the therapy process. MARDS is simple and easy to practice, it can be used both by psychiatrists and general practitioner, psychologists and even nurses. It contains only 10 basic indications of depression, which can be estimated by 6 points-based system: every indication is provided by a short glossary and estimated from 0 to 6, according to the augmenting of symptom's severity. The Scale can be used while working with small samples. The MARDS scale allows to get sum of points from 0 to 60. Herewith, the estimation over 25 scores points out at the depression. The severe depression is diagnosed at the sum of points minimum 35.

The enquire WAM (well-being, activity, mood) allowed to estimate the subjective attributes of testees' self-sentiment. WAM is a chart (table), which contains 30 pairs of words, that reflect involved features of psychoemotional state (well-being, activity, mood). While developing the methodology the authors came from the idea, that 3 basic constituents of the functional psychoemotional status - well-being, activity, mood - can be characterized with the help of polar scores and that between them should be a continuous sequence of intermediate values. WAM is widely used to assess a psychic state of sick and healthy people, psychoemotional response to loading to reveal specific features and biorhythm of psychophysiological functions. The essence of assessment was that testees were asked to correlate their state with a number of symptoms at the multistage scale. The scale consists of indices (3 2 1 0 1 2 3) and is located between 30 pairs of words with opposite meanings, that reflect mobility, speed and tempo of functions (activity), strength, health, tiredness (well-being), and characteristics of emotional state (mood). The testee chose and marked the number, which reflect his state at the moment of survey most of all. While analyzing testees' functional status, both separate indices and their ration were taken into consideration. A person, who had a rest, had a relatively equal assessments of well-being, activity and mood. While tiredness grows up, the ration between them changes on account of relative decrease of well-being and activity according to the mood. The meritoriousness of methodology is in its capability of reproducing, which means that the test can be used many times with the same testee.

15 mothers who bring up children with ASD, took part in the experiment.

The testing results on the scale MARDS showed, that the majority of mothers (80%), who bring up children with ASD, had moderate depression (26-30 scores), some mothers (20 %) had severe depression (over 35 scores). There were not found mothers with mild depression or in a normal state.

Test WAM demonstrated that all mothers had a poor state of health, were inert and in a bad mood (<4 scores in all scales).

3.2. Alpha-stimulating training

To improve the efficiency of psychoeducational escort of the family, that brings up a child with ASD, it was used computer EEG biocontrol method, based on the principle of biofeedback (BFB).

The therapy of affective disorders is a relatively new sphere to use the electroencephalographic training. The course of alpha-stimulating training was held with the help of hardware and software system biofeedback (БОСЛИАБ). It was developed by the specialists of State Academy of the Research Institute of molecular biology and biophysics, Siberian branch of Russian Academy of Medical Sciences.

Before the beginning of the course, specialists studied an electrobiological activity of the testees' encephalon to define an optimum place to put electrodes and an alpha rhythm band. The main reason for that is that the essential condition for conducting electroencephalographic training is a properly set range of EEG rhythm. That is why the test open/closed eyes was conducted through 2 channels EEG.

The monitoring of electrical activity has revealed that all testees had deficiency of alpha-activity in the right frontal lobe and prevalence of alpha-activity in the left frontal lobe (at the bipolar montage of electrodes in the leads F3-O1 and F4-O2).

The prevalence of alpha-activity in the right frontal lobe predisposes to the development of a positive emotional reaction. Prepotency of alpha-activity in the left frontal lobe predisposes to the development of depression. The testees can be taught to redistribute alpha-activity so that the right frontal lobe was more alpha-active. Herewith, it significantly decreases the depth of depression.

The course of therapy by BFB tear consists of 15 sessions. Activities were carried through individually, 2-3 times a week. First 3-5 sessions were educative. At the next stages testees completed tasks of an increasing complexity to increase the level of the controlled parameter (alpha rhythm index capacity). Testees were suggested to close eyes and increase the incidence of the feedback signal (i.e. to increase alpha-activity) during the 30-minute session. If the testee was tired, the duration of sessions decreased. The point of feedback signal appearance is set before the beginning of the session so, that alpha-activity initially exceeded it in 30% of cases. The position of electrodes during the alpha-training: bicaudal pickoffs is fastened in points F4-O2.

To achieve the aim of training, testees used different strategies:

- Chi Kung (patients concentrated their attention at the sense of energy transmission through body meridians).
- Autogenic training technique.
- The creation of dynamically positive images (E. Peniston and P. Kulcosky)
- "Free method" (testees were usually suggested to freely change offered methods.)

4. Results

As a result of training, mothers with moderate depression had a redistribution of alpha-activity to the right hemisphere, which was accompanied by positive changes of psychological testing data. Reduction indices of MARDS scale gave an average 52%. There were significant positive changes in tests WAM - substantial improvement indices for well-being (by 45%) and mood (by 60%). The findings attest to the increase of testees' adaptive capability on the background of a conducted course BFB therapy.

Mothers with severe depression had low reduction indices on MARDS scale, which gave an average 24%. The dynamics of psychological parameters in the experimental subgroup gives evidence of an increase of subjective activity and mood indices, judging by the enquirer WAM (by 25% and 12%). That reflects the increase of testees' social adaptability.

Thus positive results of depressive symptomatology reduction were obtained. BFB therapy demonstrated greater efficiency for mothers with moderate depression.

As a part of study, the scheme of impact on depression with the help of biocontrol is oriented on somato-vegetative regulation. The similarity of the involved mechanisms allows to renew processes of self-control and, as consequence, have a pronounced healthcare effect much easier and in relatively short time periods.

At the same time, besides the depressive symptomatology, it was observed a well-marked decrease of motivation for treatment in some cases. Herewith these mothers blamed their relatives and those close to them for their own disease state. Thereby they denied the possibility of the case analysis and the ability to find the way out of the current crisis.

Thus, BFB therapy contributes to the improvement of human abilities to resist stress. A great role in it play person's spare capacities and the abilities to overcome the disease. During sessions may appear the awareness of psychological mechanisms of a disease and their reversibility. Successful activities of self-control improve a well-being, contribute validation, that is why they help to widen capacities and improve adaptiveness. As a result, BFB therapy declines feeling fixation, decreases hypochondria and aggression, increases confidence in one's abilities and improves mood.

Hence, judging by the results of the conducted research, general tolerance of the method and its efficiency allow to recommend BFB therapy for practical implementation for mothers, who bring up children with ASD.

References

- Aksenova L.I. Early aid package for special needs children as one of priority area directed at modern special (remedial) pedagogy. // *Defectology*, 2002, №3. 15 p.
- Baenskaya E.R. Children and teenagers with autism. Psychological accompaniment. / *Arshatskaya O.S., Arshatskiy A.V., Kostin I.A., Libling M.M., Nikol'skaya O.S., Vedenina M.Y.* - M., 2008.
- Doskin V.A. Test for differentiated self-assessment of one's functional status. / *Lavrent'eva N.A., Miroshnikov M.P., Sharay V.B.* // *Psychological questions*. - 1973, - № 6.- 141-145 p.

- Goryacheva T.G., Personality traits of mother, who brings up a special needs child and their influence on child-parent relations. /Solntseva I.A.; under the editorship of Shabel'nikov V.K., Lidars A.G. - M., 2008. 285-298 p.
- Korel'skaya N.G. . «Special» family – «special» child. - M., 2003.
- Lytova E.K. Cribs for parents: Psychoremedial work with hyperactive, aggressive, disquiet and autistic children./ Monina K.B. - SPb., 2002.
- Mamaichuk I.I. Psychologist's help for children with autism. SPb., 2007.
- Mastyukova E.M. Family education of special needs children./ Moskovina A.G./ under the editorship of Seliverstov V.I. - M: *Humanitarian publishing center «VLADOS»*, 2003. 306-318p., 331-333p.
- Montgomery S.A., Asberg M. A new depression scale designed to be sensitive to change. *Br J Psychiatry*. 1979; 134: 382-389.
- Morozov S.A. Fundamental diagnostics and correction of autistic spectrum disorders. M., 2014, 448 p.
- Nisova A.V. Biofeedback method // Non-drug methods for rehabilitation of sick people with borderline mental disorders/ under the editorship of Tikhonenko V.A. - *Collection of scientific papers ГИЦ ЦСН n.a. Serbskiy V.P.* - M., 2005. - 111-128 p.
- Skok A.B. The use of biofeedback to change directly the behaviour of patients with addictive disorders. Synopsis of doctoral dissertation. - *Novosibirsk, 1999.*

COMPETENCES FOR INTERCULTURAL EDUCATION: CONCEPTUALIZATION AND EMPIRICAL FINDINGS

Danijela S. Petrović¹, Blagica Zlatković², Tijana Jokić¹, Milica Erić¹,
Bojana Dimitrijević¹ & Bruno Leutwyler³

¹University of Belgrade (Serbia)

²University of Niš (Serbia)

³University of Teacher Education Zug (Switzerland)

Abstract

Interculturally competent teachers are required to deal appropriately and productively with both the conflicting priorities of individual diversity on the one hand and the societal function of schooling on the other. Against this background, the project “Serbian Education for Roma Inclusion: Understanding and assessing teachers’ intercultural sensitivity in Serbia” aims to incorporate teaching-specific facets (Baumer & Kunter, 2013) into the general understanding of intercultural competence (Deardorff, 2009; Perry & Southwell, 2011). In doing so, the research project uses both qualitative and quantitative methodology. Qualitative part of the project addresses the issue of intercultural sensitivity in the school specific context and strives to operationalize different levels of intercultural sensitivity in teaching. The goal of the quantitative part of the project is to conceptualize teacher competences for intercultural education and to develop a set of instruments that would assess these competences - Intercultural Teacher Competence Profiler (ITCP). Additionally, the quantitative part of the project aims at adjusting ITCP in order to better fit Serbian educational context which is characterized by long history of exclusion of Roma minority students. In this paper, design and results of the quantitative part will be presented and discussed. The analyses conducted so far yield the results that encourage further development of the profiler and justify the need to take specificities of Serbian educational context into consideration when assessing pre- and in- service teacher competences for intercultural education.

Keywords: *intercultural sensitivity in school context, interculturally competent teachers, teacher education, scale assessment, minority students.*

1. Introduction

In an increasingly multicultural, diverse, economically and socially challenged, but interconnected world (OECD, 2010) education puts new demands before teachers requiring for development of intercultural competence and preparing students for life in plural societies. This complex situation also confronts teacher education with new challenges related to teachers’ professionalism in dealing with cultural diversity. Hence, the issue of intercultural competence is becoming more significant than ever. Additional challenge (pre- and in- service) teacher education is facing, arises from the predominantly monocultural setting of schooling (Gogolin, 1994). As key actors in education, teachers are required to deal appropriately and productively with cultural diversity in the classroom. However, many in-service and pre-service teachers have little cross-cultural background, knowledge, and experience to bring into the classroom. Moreover, initial teacher education offers no opportunities for gaining and developing such a background, knowledge or experience. Teachers from the majority culture with little cross cultural experience, prepared and instructed in monocultural educational institutions, may even have a negative impact on students due to the lack of knowledge, skills and comfort with culturally diverse classrooms (Fuller & Ahler, 1987). With this in mind, it is not surprising that 47% of teachers report high or moderate need for professional development for teaching in multicultural setting (OECD, 2010). Serbia is not an exception. “Teachers do not know how to work with children who are not ‘mainstream’ because at the faculty they are taught that children are a homogenous category... They fail to differentiate between the concepts of being equal and being the same... It is not unusual that teachers are afraid of diversity” (Macura-Milovanović, Gera and Kovačević, 2010: 50). As a response to rapidly growing challenges that teachers and teacher educators are facing, international and intercultural project

“Serbian Education for Roma Inclusion: Understanding and assessing teachers’ intercultural sensitivity in Serbia” has been implemented by the University of Teacher Education Zug (Switzerland), University of Belgrade (Serbia) and University of Niš (Serbia).

2. Design

The aim of the entire research project “Serbian Education for Roma Inclusion: Understanding and assessing teachers’ intercultural sensitivity in Serbia” is to incorporate teaching-specific facets (Baumer & Kunter, 2013) into the general understanding of intercultural competence (Deardorff, 2009; Perry & Southwell, 2011). The project approaches these challenges through both qualitative and quantitative methodology. The qualitative part of the project addresses the issue of intercultural sensitivity in the school specific context and strives to operationalize different levels of intercultural sensitivity in teaching. The goal of the quantitative part of the project is to conceptualize teacher competences for intercultural education and to develop a set of instruments that would assess these competences - Intercultural Teacher Competence Profiler (ITCP). Additionally, the quantitative part of the project aims at adjusting ITCP in order to better fit Serbian educational context which is characterized by long history of exclusion of Roma minority students. However, the focus of this paper is the quantitative part of the research. The quantitative part of the research considers the following steps:

1) Conceptualizing teacher competences for intercultural education leaning on the COACTIV model of teacher professional development (Baumer & Kunter, 2013) and relevant literature and instruments in the area of intercultural competence and intercultural education;

2) Developing a set of instruments that would assess these competences - Intercultural Teacher Competence Profiler (ITCP) i.e. developing scales nested under components of the COACTIV model that measure a variety of competences for intercultural education;

3) Adjusting ITCP in order to better fit Serbian educational context which is characterized by long history of exclusion of Roma minority students, i.e. adjusting the abovementioned scales in order to measure intercultural competences for working with Roma students;

4) Piloting and assessing developed scales;

5) Conducting the main study, validating developed scales and testing the ITCP as a model of teacher professional development for intercultural education.

So far, steps 1 to 4 have been conducted.

3. Objectives

The aim of this paper is to present the process of construction and psychometric evaluation of all constructed scales (steps 1 to 4). Additionally, it will discuss results of the analysis conducted so far. In the end, plans for further analysis will be outlined in short.

4. Methods

In order to achieve appropriate intersection of general intercultural competences on one hand and general teaching competences on the other, we sought to detect all the instruments in the area of intercultural sensitivity available to the research community and look at the concepts and constructs they measure through the lenses of teacher competences encompassed by the COACTIVE model. Mapping all the available instruments have resulted in a total of 9 instruments that measure various aspect of intercultural competence: Behavioral Assessment Scale for Intercultural Competence (BASIC) (Ruben, 1976; Ruben & Kealey, 1979); Intercultural Sensitivity Inventory (ICSI) (Bhawuk & Brislin, 1992); Cross-Cultural Adaptability Inventory (CCAI) (Kelley & Meyers, 1995); Global Competency and Intercultural Sensitivity Index (ISI) (Olson & Kroeger, 2001); Multicultural Personality Questionnaire (MPQ) (Van der Zee & Van Oudenhoven, 2000); Scale of Ethno-cultural Empathy (SEE) (Wang et al, 2003); Munroe Multicultural Attitude Scale Questionnaire (MASQUE) (Munroe & Pearson, 2006); Miville - Guzman Universality - Diversity Scale (MGUDS) (Fuertes et al., 2000); Assessment of Intercultural Competence (AIC) (Fantini, 2006).

After completing the list of instruments and constructs they measure, the main task was to define dimensions and facets of intercultural teacher competences that would be adequately represented within the COACTIVE model. This phase of research resulted in conceptualization of three COACTIVE dimensions and 10 scales that belong to these dimensions: 1) *Teachers’ Beliefs, Values and Goals* (Appreciation of cultural diversity, Ethno-relative worldview, Goals of intercultural education and Attitudes towards integration); 2) *Motivational Orientation* (Intrinsic motivation for dealing with cultural diversity, Self-efficacy in dealing with cultural diversity and Commitment to social justice) and (3)

Self-Regulation (Flexibility, Emotional self-monitoring and Tolerance of ambiguity). In the next phase, construction of new items and adaptation of the existing ones was conducted, with a single goal of creating appropriate sets of items that would assess intercultural competence in the classroom-specific context. After item development, two forms of scales were created by adapting the existing items to measure either intercultural sensitivity towards minority students in general, or intercultural sensitivity towards Roma students. These scales are parallel forms distinguished only by the type of minority students they focus on (Roma students or minority students in general).

The scales were then administered to two samples. Firstly, the scales under Motivational Orientation (MOT) were administered to 15 students from the Teacher Education Faculty in Jagodina (Serbia), 11 students from the Teacher Education Faculty in Negotin (Serbia) and 186 from the Teacher Education Faculty in Vranje (Serbia) (212 students in total for MOT). Secondly, the scales nested under Self-Regulation (SR) and Teachers' Beliefs, Values and Goals (BVG) were administered to the sample of 204 students of the Teacher Education Faculty in Vranje. At the time of data collection, students were enrolled in the second, third, fourth or fifth year of study – students who attended the first year were not included in the research due to lack of practical experience in the classroom.

The data were then processed in the following way: (1) Reliability analysis – internal consistency (Cronbach's alpha) was tested. It was used to point out items that were lowering alpha values and items with low item-total correlation, which were subsequently eliminated from the subscales; (2) Factor structure of each scale was assessed by exploratory factor analysis (PFA, Promax). The items that had loadings on other factors rather than the first one were eliminated (in case more than one factor was extracted). The items that had low extraction values (less than 0.45) were also eliminated as they were not well represented in the common factor space; (3) Factor structure of each dimension was assessed in order to check whether the extracted factors matched developed scales. Factor analysis was conducted separately for two forms of scales (general and Roma specific); (4) Factor analysis was also conducted on items of each pair of scales (e.g. items of Flexibility – general and items of Flexibility – Roma specific) in order to see whether the extracted factors matched two forms (general and Roma specific).

Once again, reliability analysis was repeated and internal consistency of all scales either increased or stayed the same.

5. Results and discussion

The aforementioned steps of scale assessment led to final versions of ten scales with very high internal consistency and a satisfactory number of items. Ten scales are nested under three dimensions of the COACTIV model and results of the reliability analysis are shown in the following tables:

Table 1. Number of items and alpha coefficients for scales of dimension 1: Teachers' Beliefs, Values and Goals (BVG)

	Appreciation of cultural diversity	Ethno-relative worldview	Goals of intercultural education	Attitudes towards integration
Cultural diversity-general	7 items; Alpha=.883	5 items; Alpha=.818	6 items; Alpha=.897	5 items; Alpha=.831
Roma culture specific	8 items; Alpha=.908	9 items; Alpha=.898	9 items; Alpha=.926	7 items; Alpha=.888

Table 2. Number of items and alpha coefficients for scales of dimension 2: Motivational Orientation (MOT)

	Intrinsic motivation for dealing with cultural diversity	Self-efficacy in dealing with cultural diversity	Commitment to social justice
Cultural diversity-general	6 items; Alpha=.816	4 items; Alpha=.696	5 items; Alpha=.761
Roma culture specific	7 items; Alpha=.890	6 items; Alpha=.837	5 items; Alpha=.825

Table 3. Number of items and alpha coefficients for scales of dimension 3: Self-Regulation (SR)

	Flexibility	Emotional self-monitoring	Tolerance of ambiguity
Cultural diversity-general	6 items; Alpha=.744	5 items; Alpha=.841	8 items; Alpha=.879
Roma culture specific	7 items; Alpha=.882	7 items; Alpha=.881	8 items; Alpha=.908

Tables 1, 2 and 3 show good to excellent reliability of all scales within three dimensions of the COACTIV model adjusted to the context of intercultural education. Initially, both forms of all scales had the same number of items (items differed only in part referring to students from minority groups in general or specifically to Roma minority students). However, fewer items were deleted from Roma specific scales since more items demonstrated better psychometric characteristics. Consequently, we were encouraged to further investigate characteristics of and relationships between these two forms of scales. Further analysis was guided by the assumption that the reference to a specific minority group in the items, rather than the reference to cultural diversity in general could actually make a difference i.e. the variance on these two forms of scales is explained by somewhat different latent constructs.

Each scale was then brought to have one-factor structure, in order to ensure that only one construct is measured by each scale i.e. single latent variable explains variations on developed items.

Encouraging result is the factor structure of dimensions (BVG, MOT, SR - operationalized through items selected during the aforementioned steps), where the extracted factors completely matched scales included in the analysis. In addition, factor structures of both forms of a dimension (e.g. MOT - cultural diversity in general and MOT - Roma specific) are the same; however, different factors explain the greatest percentage of variance in these two forms. Moreover, factor analysis conducted on items of each pair of scales showed that extracted factors, perfectly matched two forms (general and Roma specific). These results have led to the conclusion that the developed scales nested under the same dimension are, at the same time different enough from each other to be considered as separate scales, and similar enough to be nested under the same dimension. Such results also give enough reason to believe that answering items of different forms is guided by somewhat different latent concepts, although similar enough. Another result that supports this conclusion is statistically significant mean difference ($p < .01$) between two forms of scales within two dimensions: MOT and BVG. On the other hand, almost identical means of two forms of scales within dimension SR calls for reconsideration of the hypothesis that concept of teachers' self-regulation should be adjusted in order to fit context of culturally diverse classroom. Self-regulation might be a concept independent of the teaching context or at least might be insignificantly affected by it.

6. Conclusions

Important contribution of this research is encouragement for further investigation and development of diversity related model of professional development of teachers. These results have given us sufficient evidence to justify and continue investing effort in development of the profiler of teacher professional development in intercultural education. Further development of the knowledge component and further analysis are yet to be conducted, but so far research has yielded promising results. What still remains to be done is validation of scales as well as confirmatory factor analysis in order to test the entire model and its components, and to further verify the abovementioned assumptions.

Another significant contribution of this research is related to specificities of Serbian context. Although Roma minority is the "oldest" ethnic minority in Serbia, social distance towards Roma students is higher than towards students from other minority groups (Petrović, 2010). Consequently, teacher practices towards Roma students result in poorer quality of education for Roma students. In such a sensitive context, it is of utmost importance to map teacher competences for working with Roma students and to undertake necessary measures to improve their skills and competences. This way further reproduction of inequity and inequality could be prevented. Intercultural Teacher Competence Profiler could enable such an endeavor.

In the near future Intercultural Teacher Competence Profiler (ITCP) will be conceptualized based on this research as a multi-dimensional instrument that will enable in-service/pre-service teachers to assess their current level of intercultural competence for teaching in culturally diverse classrooms. Additionally, assessment based on ITCP will help them reflect upon their current level of intercultural competence and identify professional developmental needs related to a successful and productive teaching of migrant/minority/refugee students and dealing with diversity in the classroom.

Acknowledgements

This work was supported by the Swiss National Science Foundation (Grant Number IZ73Z0_152481) and by the Ministry of Education, Science and Technological Development, Republic of Serbia (project number 179018).

References

- Baumert, J., & Kunter, M. (2013). The COACTIV model of teachers' professional competence. In M. Kunter, J. Baumert, W. Blum, U. Klusmann, S. Krauss & M. Neubrand (Eds.), *Cognitive activation in the mathematics classroom and professional competence of teachers*. Results from the COACTIV project (pp. 25-48). New York, NY: Springer
- Bhawuk, D.P.S & Brislin, R. (1992). The Measurement of Intercultural Sensitivity Using the Concepts of Individualism and Collectivism. *International Journal of Intercultural Relations*, 16, 413-436
- Chen, G.M., & Starosta, W. J. (2000). The development and validation of the intercultural communication sensitivity scale. *Human Communication*, 3, 1-15.
- Deardorff, D. K. (2009). Synthesizing Conceptualizations of Intercultural Competence: A Summary and Emerging Themes. In D. K. Deardorff (Hrsg.), *The SAGE Handbook of Intercultural Competence* (S. 265-270). Thousand Oaks: SAGE Publications.
- Fantini, A. E. (2006). Assessment Tools of Intercultural Communicative Competence. Brattleboro, VT. http://www.sit.edu/SITOccasionalPapers/feil_appendix_f.pdf
- Fuller, J. L., & Ahler, J. (1987). Multicultural education and the monocultural student: A case study, *Action in Teacher Education*, 9, 33-40.
- Gogolin, I. 1994. *Der monolinguale Habitus der multikulturellen Schule*. Münster: Waxmann.
- Hachfeld, A., Hahn A., Schroeder, S., Anders Y., Stanat, P., & Kunter, M. (2011). Assessing teachers' multicultural and egalitarian beliefs: The Teacher Cultural Beliefs Scale. *Teaching and Teacher Education* 27, 986-996.
- Kelley, C., & Meyers, J. E. (1987). *Cross-Cultural Adaptability Inventory manual*. Minneapolis, MN: National Computer Systems
- Olson, C., & Kroeger, K. R. (2001). Global competency and intercultural sensitivity. *Journal of studies in international education*, 5(2), 116-137.
- Macura-Milovanović, S., Gera, I. & Kovačević, M. (2010). *Mapping policies and practices for the preparation of teachers for inclusive education in context of social and cultural diversity – Serbia country report*. European Training Foundation.
- Miville, M. L., Gelso, C. J., Pannu, R., Liu, W., Touradji, P., Holloway, P., et al. (1999). Appreciating similarities and valuing differences: The Miville-Guzman Universality-Diversity Scale. *Journal of Counseling Psychology*, 46, 291–307.
- Munroe, A., & Pearson, C. (2006). The Munroe Multicultural Attitude Scale Questionnaire A New Instrument for Multicultural Studies. *Educational and Psychological Measurement*, 66(5), 819-834.
- OECD (2010). *Educating Teachers for Diversity: Meeting the Challenge*, OECD Publishing, Paris
- Perry, L. B. & Southwell, L. (2011). Developing intercultural understanding and skills: models and approaches. *Intercultural Education*, 22(6), 453-466.
- Petrović, D. (2010). To what extent do teachers perceive Roma discrimination in Serbian educational system. In M. Patricia (Ed.), *Intercultural Education as Project for Social Transformation – Linking Theory and Practice Towards Equity and Social Justice. Malta Conference proceedings* (pp.156-172).
- Roth. G., Assor, A., Kanat-Maymon, Y. & Kaplan, H. (2007). Autonomous Motivation for Teaching: How Self Determined Teaching Leads to Self-Determined Learning. *Journal of Educational Psychology*, 99 (4), 761-774.
- Ruben, B. D. (1976). Assessing communication competency for intercultural adaptation. *Group and Organization Studies*, 1(3), 334-354.
- Ruben, B. D., & Kealey, D. J. (1979). Behavioral assessment of communication competency and the prediction of cross-cultural adaptation. *International Journal of Intercultural Relations*, 3, 15-47.
- Van der Zee, K. I., & van Oudenhoven, J. P. (2000). The Multicultural Personality Questionnaire: A multidimensional instrument of multicultural effectiveness. *European Journal of Personality*, 14, 291-309.
- Wang, Y. W., Davidson, M. M., Yakushko, O. F., Savoy, H. B., Tan, J. A., & Bleier, J. K. (2003). The scale of ethnocultural empathy: development, validation, and reliability. *Journal of counseling psychology*, 50(2), 221.

WHO IS MORE SCARED OF DATING? INVESTIGATING SEX DIFFERENCES IN THE DATING ANXIETY AMONG POLISH YOUNG ADULTS

Katarzyna Adamczyk

Institute of Psychology, University of Adam Mickiewicz in Poznań (Poland)

Abstract

The aim of the study was to investigate sex differences with regard to dating anxiety among Polish young adults. Drawing on research up to date, our hypothesis was that women would report a higher level of dating anxiety than men. Dating Anxiety Scale for Adults was administered to a sample of 330 young adults (205 females and 125 males) aged 20-30, with the average age of participants being 22.64 ($SD = 3.18$). The questionnaire was distributed across different courses. A one-way ANOVA was used to analyse the data. The results indicated that women reported higher level of fear of negative evaluation in dating situations, $F(1, 323) = 6.07, p = .014$, higher level of social distress in dating situations, $F(1, 328) = 6.42, p = .012$, and higher level of total dating anxiety, $F(1, 328) = 4.85, p = .028$ than did men. In dating situations women reported higher dating anxiety compared to men, as well as experienced higher concerns that a date or a member of the other sex would judge them in a negative way, and higher distress while interacting with a member of the other sex on a date or socially.

Keywords: dating anxiety, sex differences, young adults, Poland.

1. Introduction

During young adulthood people often seek a partner with whom they will spend a substantial part of later life (Meeus, Branje, Van der Valk, & De Wied, 2007) and one means of doing so is dating (Allen, Bourhis, Emmers-Sommer, & Sahlsteind, 1998). Unfortunately, for some young adults, dating is associated with inherent anxiety that sometimes results in avoidance (Allen et al., 1998). Dating anxiety is a significant problem among college students and adults, and feelings of anxiety and distress in dating situations can interfere with the ability to form and sustain close and intimate romantic relationships (Chorney & Morris, 2008). Therefore, the inability to comfortably participate in romantic interactions may eventually lead to the development of dysfunctional patterns of behavior (Allen et al., 1998). It turns, the anxiety experienced in dating situations may be to some degree the result of negative consequences anticipated by an individual, which are caused by deficits in the social skills necessary for successful dating interactions (Curran et al., 1976). Consequently, dating anxiety may prevent many young adults from establishing romantic partnerships (La Greca & Mackey, 2007).

2. Objectives

Regarding the significance of dating anxiety for successful dating and establishing and maintaining romantic relationships in young adulthood, the necessity of effective assessment of dating anxiety among young adults is an essential issue for researchers and clinicians. Furthermore, it is worth noting that previous research utilized a well-known scale, The Dating Anxiety Scale for Adolescents (DAS-A) developed by Glickman and La Greca (2004), as a tool for measuring adolescents' experience of anxiety in dating situations and heterosexual situations. The fact that those tests were performed on samples of adolescents, and not on samples of young adults, encouraged the present author to perform a study with a focus on young adults. Interestingly, with respect to sex differences, the original study by Glickman and La Greca (2004) revealed that boys reported higher levels of distress in heterosexual group situations when compared to girls (Glickman & La Greca, 2004). In addition, the fact that in Poland the issue of dating anxiety, particularly with regard to sex differences was not widely investigated, the aim of the present study was to explore sex differences with regard to dating anxiety among Polish young adults.

3. Methods

3.1. Participants and procedure

The study was conducted on a sample of 188 university students from different faculties at Adam Mickiewicz University in Poznan, Poland (57%) and 142 non student participants (43%) who resided in a large Polish city with a population exceeding 500,000. The age of participants ranged from 20 to 30 years old, with the average age of 22.64 ($SD = 3.18$). All the respondents were heterosexual, unmarried, and had no children. Women represented 62.12% ($n = 205$) of the sample and men represented 37.88% ($n = 125$). One hundred ninety-one participants (57.90%) reported being in a romantic relationship at the time of the assessment, while 139 participants (42.10%) were not.

To recruit participants, the present author distributed questionnaires through university students who were also asked to refer members of their social networks to participate in the investigation. The questionnaire packages were administered in classrooms to groups of 20 to 30 students at a time and participation was voluntary. The nonstudent participants were obtained through university students who passed questionnaires to members of their social networks. The study was conducted according to the ethical guidelines in the Polish Code of Professional Ethics for the Psychologist that apply to psychologists who are researchers and practitioners.

3.2. Materials

The questionnaire presented to participants was comprised of the following instruments:

Demographic Questionnaire. A series of demographic questions was asked to obtain general descriptive information about participants' background such as their age, sex, education level, and current relationship status.

Dating Anxiety Scale for Adolescents (DAS-A; Glickman & La Greca, 2004) (Polish adaptation for adults – Adamczyk, 2015). The original DAS-A assesses adolescents' anxiety in heterosocial and dating situations. It contains of 21 items rated on a 5-point scale ranging from 1 (not at all characteristic of me) to 5 (extremely characteristic of me) with additional five filler items. The questionnaire is comprised of the following three subscales: Fear of Negative Evaluation – Dating (FNE- Dating; concern or worry that a date or a member of the opposite sex would judge the self in a negative manner), Social Distress-Dating (SD - Date; distress while interacting with a member of the opposite sex on a date or social occasion), and Social Distress-Group (SD - Group; inhibition and distress during heterosocial group situations). Glickman and La Greca (2004) investigated and found the subscales to have good internal consistency: .94 for total DAS-A, .92 for FNE-Dating, .88 for SD-Date, and .81 for SD-Group. The Cronbach's alphas in the present study were .92 for FNE-Dating, .89 for SD-Date, .81 for SD-Group, and .95 for the total DAS.

4. Results

A one-way ANOVA was used to analyse the data. The results indicated that women reported higher level of fear of negative evaluation in dating situations, $F(1, 323) = 6.07, p = .014$, higher level of social distress in dating situations, $F(1, 328) = 6.42, p = .012$, and higher level of total dating anxiety, $F(1, 328) = 4.85, p = .028$ than did men.

5. Discussion

The present study yielded preliminary results providing evidence that sex differences regard to dating anxiety exist in a sample of Polish young adults. The performed analyses revealed that, in dating situations, women reported higher general dating anxiety compared to men, as well as experienced higher concerns that a date or a member of the other sex would judge them in a negative way (i.e., fear of negative evaluation in dating situations), and higher distress while interacting with a member of the other sex on a date or socially (i.e., social distress in dating situations).

The higher level of dating anxiety among women, as compared to men, might be related to the fact that women generally tend to display a stronger desire for intimacy and higher motivation to enhance it than men, whereas men are more focused on instrumentality and achievement compared to women (Feldman, Gowen, & Fisher, 1998). Therefore, as women attribute greater significance to romantic relationships, they may be more afraid of negative evaluation as dating situations are a possible means of drawing attention and interest of a potential partner. In other words, women may experience higher fear of being negatively evaluated. In turn, a positive evaluation might create a chance for successful dating and in the future successful formation of a romantic relationship.

Furthermore, what is interesting, contrary to the present study, in the original study by Glickman and La Greca (2004) boys reported a higher level of distress in heterosocial group situations than girls (Glickman & La Greca, 2004).

The pattern of results obtained in the Polish sample may be related to the specificity of dating in young adulthood compared to adolescence when the peer group plays a much more important role in the adolescent's development (Bakiera, 2009; Glickman & La Greca, 2004) than in young adulthood. The obtained results may suggest that for young adult women situations of a more dyadic character are more stressful than those of group character.

There are several limitations of this study. First, the correlational nature of the study precludes any causal inferences concerning the associations between dating anxiety and gender. Second, all participants were never married, heterosexual, childless, and residing in a large city. In addition, the age of the sample, even though representing a unique developmental state, precludes any generalizations to individuals in middle and late adulthood.

Despite these limitations, the present findings underscore the importance of further investigation of sex differences in regard to dating anxiety. In addition, I believe that this study performed with a sample of Polish young adults will increase the validity of generalizing from American findings regarding dating anxiety in young adulthood to other cultures.

References

- Adamczyk, K. (2015, in press). Development and validation of the Polish-language version of the Dating Anxiety Scale in a sample of young adults. *Psychologia Społeczna*.
- Allen, M., Bourhis, J., Emmers-Sommer, T., & Sahlsteind, E. (1998). *Communication Reports*, 11(1), 49-55. doi: 10.1080/08934219809367684
- Bakiera, L. (2009). *Czy dorastanie musi być trudne?* [Does adolescence have to be difficult?]. Warszawa: Wydawnictwo Naukowe Scholar.
- Chorney, D. B., & Morris, T. L. (2008). The changing face of dating anxiety: Issues in assessment with special populations. *Clinical Psychology: Science and Practice*, 15(3), 224-238. doi: 10.1111/j.1468-2850.2008.00132.x
- Curran, J. P.; Gilbert, F. S.; Little, L. M. (1976). A comparison between behavioral replication training and sensitivity training approaches to heterosexual dating anxiety. *Journal of Counseling Psychology*, 23(3), 190-196. doi: 10.1037/0022-0167.23.3.190
- Feldman, S. S., Gowen, L. K. G., & Fisher, L. (1998). Family relationships and gender as predictors of romantic intimacy in young adults: A longitudinal study. *Journal of Research on Adolescence*, 8, 263-286. doi: 10.1207/s15327795jra0802_5
- Glickman, A. R. & La Greca, A. M. (2004). The Dating Anxiety Scale for Adolescents: Scale development and associations with adolescent functioning. *Journal of Clinical Child and Adolescent Psychology*, 33, 566-578.
- La Greca, A. M., & Mackey, E. R. (2007). Adolescents' anxiety in dating situations: The potential role of friends and romantic partners. *Journal of Clinical Child and Adolescent Psychology*, 36(4), 522-533. doi: 10.1080/15374410701662097
- Meeus, W., Branje, S., Van der Valk, I., & De Wied, M (2007). Relationships with intimate partner, best friend, and parents in adolescence and early adulthood: A study of the saliency of the intimate partnership. *International Journal of Behavioral Development*, 31(6), 569-580. doi: 10.1177/0165025407080584

TIME PERSPECTIVE AND TENDENCY TO ABUSE SUBSTANCES IN ADOLESCENCE GIRLS

Maryam Shafikhani, Fatemeh Bagherian & Omid Shokri

Department of psychology, shahid beheshti university (Iran)

Abstract

Purpose: This research was conducted to study the relationship between time perspective and the tendency to abuse substances in adolescents. Time perspective is a cognitive style about how people link their past, present and future and how it influences behavior and thoughts and attention (Bonivell & Zimbardo, 2004). Time perspective includes Future Time, Present Fatalistic and Present Hedonistic, Past Positive and Past Negative. Future time perspective refer to future goals and rewards, present fatalistic drives a person toward helplessness and hopelessness about the future and life, present hedonistic search immediate pleasure in life and shows little concern about future consequences, past positive is generally positive, warm and emotional about the past (Zimbardo & Boyd,1999). And past negative means being negative about the past and perhaps experiencing traumatic events (Bonivell & Zimbardo, 2004). This study examined the relationship between time perspective and tendency to use substance among female adolescents.

Methods: The participants were all high school girls in Tehran. Among them, 405 students were selected by multistage sampling. They were administered the Zimbardo Time Perspective Inventory and the Addiction Potential Scale.

Results: Pearson correlation and stepwise regression were used to analyze the data. The results of Pearson correlations showed significant positive correlations between Past Negative, Present Hedonistic, and Present Fatalistic with the tendency to abuse substances. The results also showed a significant negative correlation between Future Time perspective and the tendency to abuse substances. In addition, regression analysis revealed that among dimensions of time perspective, four dimensions of Past Negative, Present Hedonistic, and Present Fatalistic are predictor variables with conditions of entry in the final regression to the equation to explain the tendency to abuse substances.

Conclusion: Time perspective is an important and key factor in the tendency to use substances. The study suggests training one toward future time perspective and educating one how to delay immediate enjoyment by considering the consequences of present actions in order to have a balanced time perspective can be effective in preventing substance abuse in adolescents.

Keywords: *time perspective, tendency to abuse substances, adolescents.*

1. Introduction

Adolescents face rapid changes in physical, psychological, social, cultural and cognitive parts of life which might make them vulnerable to health problems. Many health risky factors and risky behaviors might begin during this age (Armstrong and Costello, 2002; Crosby, Santelli & DiClemente, 2009). In fact, adolescence time seems to be a critical period to begin behaviors such as substance abuse (Tash and Simmons, 2007). The results of a study in Iran suggested that in general, 15.1% of adolescents had experienced alcohol, which is significantly higher among boys (21.9%) compared to girls (8.4%) ($P = 0.001$). 3.1% of adolescents had experienced using opium and marijuana. 5.6% had used ecstasy (Baheiraei, Hamzehgardeshi, Mohammadi, Nedjat, Mohammadi, 2013). Among variety of factors, time perspective is among important factors predicting risky behaviors. Time perspective plays a major role in shaping perception, forming expectation and interpretation, achievement, motivation and a sense of control (Zambianchi, Bitti & Paola, 2010). Research shows that future orientation inverse relationship with the substance use (Hanson & Carey, 2006; Beenstock, Adams & White, 2010). Findings of a study by Zentsova & Leonov (2013) show that addicted people have stronger tendency toward Past Negative, Present Hedonistic, and Present Fatalistic than non-addicted people. Results of study by Chavarria, Allan, Moltisanti, Taylor (2015) also suggest that present hedonistic and past negative predict significantly

alcohol consumption and substance use. Results of studies in this area, in general, indicate that past negative and present hedonistic are associated with more problematic or risky behaviors (McKay, Andretta, Magee, & Worrell, 2014). Thus, the aim of this research is to investigate the relationship between the time perspective (past, present, and future) and the tendency to substance abuse among girl adolescents.

2. Methods

2.1. Participant and procedure

Statistical society was all high school girls in Tehran. Participants were 405 students, 135 girls from each grades (first, second and third), with average age of 16.8, selected through multistage sampling processes. The participants were selected from four parts of the city (North, South, East, West and Central) and answered Zimbardo Time Perspective Inventory and Addiction Potential Scale Questionnaire.

2.2. Measures

2.2.1. Time Perspective Inventory (ZTPI -56). Zimbardo Time Perspective Inventory, a self-report questionnaire including 56 items and five subscale, measures attitudes and behaviors related to time. Five subscales including past negative, past positive, present hedonistic, present fatalistic and future, measures how responses to the questionnaire is consistent with the views of the participants.

2.2.2. Addiction Potential Scale (APS). Addiction Potential Scale measures people’s readiness to addiction as an indicator of personality factors correlated to addiction disorder by Weed, Butcher, McKenna & Ben-Porath (1992) and includes 39 questions.

3. Result

Table 1. Correlation between time perspective and substance abuse

Variable	1	2	3	4	5	6
1 tendency substance abuse	1					
2 past negative	.46**	1				
3 Present Hedonistic	.55**	.48**	1			
4 Future	-.22**	-.12*	-.15**	1		
5 past positive	-.03	-.13**	.07	.29**	1	
6 Present fatalistic	.44**	.52**	.50**	-.24**	-.04	1

0.005* P<0.01**

Table 1 indicates the correlation results between variables. As the table shows, there is a significant positive correlation between past negative , present hedonistic, present fatalistic and the tendency to abuse substances (r = .46, r = .55, r = .44). There is also a significant negative correlation between future time perspective and the tendency to abuse substances (r = -.22).

Using stepwise regression analysis, a model was significant: $p>0005$, $f = (4.39) = 66.6$. The Model explains 37.6% of the variance (Adjusted R2=0/376). Standardized and standard regression coefficients of variables to the model are presented in Table 2.

Table 2. Standardized and non-standard regression coefficients

variable	B	Std.Error	Beta
Present Hedonistic	.17	.02	.38*
Past negative	.11	.02	.21*
future	-.06	.02	-.11**
Present fatalistic	.06	.03	.10***

p>0/0005* 0/005** 0/03*

4. Discussion

This Research was conducted to study relationship between the time perspective and the tendency to abuse substances among female high school students. Our findings of the study revealed a significant positive correlation between Past negative, Present Hedonistic, and Present fatalistic with the tendency to abuse substances. The results also showed a significant negative correlation between future

time perspective and tendency to abuse substances. In fact, the results indicate that the more tendency to the Past Negative, Present Hedonistic and Present Fatalistic, the more tendency to abuse substances. This finding is consistent with results Zentsova & Leonov (2013) found in their study that suggested addicted people had high scores in past negative, present hedonistic and present fatalistic compared to their scores in future time. The results of this study is also consistent with results of Chavarria & et al (2015) which states present hedonistic and past negative significantly predict alcohol consumption and substances use. Results of study by McKee & et al., (2014) indicated that past negative and present hedonistic are associated with more problematic consumption. In conclusion it can be said that the distress and stress associated with increased past negative time perspective (Stolarski, Matthews, Postek, Zimbardo, Bitner, 2013; Van Beek, Berghuis, Kerkhof & Beekman, 2011) could lead a person to use substances (Kushner & et al., 1996; Rutledge& Sher, 2001). People with past negative time perspective, focus on bad or harmful personal experiences. In general, past negative time perspective keeps one to remember more the turbulent past and traumatic life events (Boniwell and Zimbardo, 2004). People with present hedonistic time perspective are basically interested in pleasures and enjoyments at the moment of life. Thus they enjoy more risky activities. They are constantly in search of excitement and new stimuli including behaviors such as sexual adventures and/or drug use. These people pay little attention to the consequences of their actions and often act without planning about what they do. In general, this time approach drives people toward immediate pleasures and enjoyment while they pay little attention about its future outcomes (Boniwell and Zimbardo, 2004). Finally, past negative and present hedonistic time perspectives are both associated with factors such as negative emotions, stress and risky behaviors (Chassin, Flora, King, 2004; Cena and Lee, 2007). The findings of this study suggests that by increasing future orientation it is possible to decrease tendency to substance use. This is consistent with the findings of Robbins & Bryan (2004) indicating that people with more positive future orientation are less likely to use marijuana, drugs and alcohol, as well as the frequency and quantity of alcohol consumption and fewer alcohol-related problems. The results of this study are consistent with results of McKee & et al. (2014), Beenstock and et al (2010), which found people with more focus on future drink less alcohol and are healthier. Henson and Carey (2006), also found that future time orientation predict resistance toward substance use. To explain these findings, it could be said, the person with future orientation often considers possible consequences of his/her decisions and actions. She/he works exclusively for the purposes of future rewards and often postpones present pleasures and avoids time wasting. These people in the world of cognitive abstraction and suppression of facts already imagine the reality of an ideal future to live in. In general, future time approach means striving for long-term goals (Boniwell and Zimbardo, 2004) thus can act as a balk to substance use.

5. Conclusions

According to the findings of the study, it is possible to make youth resistance to substance use through training them toward future orientation. The results of the study suggest making educational programs and training packages in order to prevent substance use among adolescents. It should be noted that one limitation of this study was to exclude boys from the study. The future study should include adolescent boys in order to increase the generalization of the results

References

- Armstrong, T.D., Costello, E.J.(2002). Community studies on adolescent substance use, abuse, or dependence and psychiatric *comorbidity*. *J Couns Clin Psycho*,70(6): 1224.
- Boniwell, I., Zimbardo, P. G. (2004) 'Balancing One's Time Perspective in Pursuit of Optimal Functioning', in P. A. Linley and S. Joseph (eds) *Positive Psychology in Practice*, pp. 165–78. Hoboken, NJ: Wiley.
- Beenstock,J.,Adams,J.,& White,M.(2010). The association between time perspective and alcohol consumption in university student: cross-sectional study. *Europen Journal of public Health*, 21(4): 438-443.
- Baheiraei, Hamzehgardeshi, Mohammadi, , Nedjat, Mohammadi.(2013).Alcohol and Drug Use Prevalence and Factors Associated With the Experience of Alcohol Use in Iranian Adolescents. *Iranian Red Crescent Medical Journal*, 15(3), 212-217.
- Crosby, R.A., Santelli, J.S., DiClemente, R.J.(2009). Adolescents at risk: A generation in jeopardy. *Adolesc Heal*, 3-6.

- Chavarria, J., Allan, N.P., Moltisanti, A., Taylor, J. (2015). The effects of Present Hedonistic Time Perspective and Past Negative Time Perspective on substance use consequences. *Drug and Alcohol Dependence*, 152, 39–46.
- Chassin, L., Flora, D.B., King, K.M., (2004). Trajectories of alcohol and drug use and dependence from adolescence to adulthood: the effects of familial alcoholism and personality. *J. Abnorm. Psychol.* 113, 483.
- Henson, J.M., Carey, M.P., Carey, K.B. (2006). Associations among health behaviors and time perspective in young adults: model testing with bootstrapping replication. *J Behav Med*, 29, 127–37.
- Kushner, M.G., Mackenzie, T.B., Fiszdon, J., Valentiner, D.P., Foa, E., Anderson, N., Wangenstein, D. (1996). The effects of alcohol consumption on laboratory- induced panic and state anxiety. *Arch. Gen. Psychiatry* 53, 264.
- McKay, M.T., Andretta, J.R., Magee, J., Worrell, F.C. (2014). What do temporal profiles tell us about adolescent alcohol use? Results from a large sample in the United Kingdom. *Journal of Adolescence*, 37, 1319-1328.
- Rutledge, P.C., Sher, K.J. (2001). Heavy drinking from the freshman year into early young adulthood: the roles of stress, tension-reduction drinking motives, gender and personality. *J. Stud. Alcohol* ,62, 457–466.
- Robbins, R.N., Bryan, A. (2004). Relationships Between Future Orientation, Impulsive Sensation Seeking, and Risk Behavior Among Adjudicated Adolescents. *J Adolesc Res*, 19(4), 428–445.
- Stolarski, M., Matthews, G., Postek, S., Zimbardo, P.G., Bitner, J. (2013). How we feel is a matter of time: relationships between time perspectives and mood. *J. Happiness Stud*, 1–19.
- Tosh, A.K., Simmons, P.S. (2007). Sexual activity and other Risk-Taking behaviors among Asian – American adolescents. *pedia adolesc Gynecol*, 20; 29-34.
- Van Beek, W., Berghuis, H., Kerkhof, A., & Beekman, A. (2011). Time perspective, personality and psychopathology: Zimbardo's time perspective inventory in psychiatry. *Time Soc.* 20, 364–374.
- Zimbardo, P. G. & Boyd, J. N. (1999). Putting time in perspective: A valid, reliable individual-differences metric. *Journal of Personality and Social Psychology*, 77(6): 1271-1288.
- Zambianchi, M., Ricci Bitti, P. E., Paola, G. (2010). Time Perspective, personal agenda, and adoption of risk behaviors in adolescence. *Psicologia Clinica dello Sviluppo*, 2: 397-414
- Zentsova, N.I., Leonov, S.V. (2013). Comparative Characteristics of Time Perspective of Professional Athletes and Drug Addicted People, *Procedia - Social and Behavioral Sciences*, 78, 340 – 344.

THE VALUE OF COMMUNITY GARDENS AN EXPLORATORY RESEARCH IN FLORENCE

Camilla Borsini¹ & Patrizia Meringolo²

¹Intern, Department of Education and Psychology, University of Florence (Italy)

²Professor, Department of Education and Psychology, University of Florence (Italy)

Abstract

Introduction. Community Gardens are plots cultivated and cared by members of a community. Usually people choose public abandoned urban area. In the past the phenomenon developed during wars as it was a good strategy to face famine. Then it increased in the 70's mainly in the U.S.A and Australia due to the environmental movement's growth and a new awareness about ecological problems. Considering the current historical and social condition, the phenomenon increased during the last decade also in Europe becoming also a form of social aggregation.

Purpose. In this study the aim is to explore the growing phenomenon in a town in order to describe it and compare the results with other studies and experiences.

Methods. In order to reach our purpose we decided on a qualitative method.

Participants: 33 people (21 female, 12 male; average age 36) who participate in the activity and in the organization of 3 Community Garden in Florence.

Instruments: we carried out 20 semi-structured interviews and 3 focus groups to gather qualitative data. The main area explored were: the birth, the structure and management of the garden; participation; personal expectations of participants; perceived advantages on an individual and community level.

Results. The qualitative analysis of the content allowed us to explore the emerging phenomenon in the city of Florence, comparing the results with the existing literature, although it is still limited.

It turns out that the phenomenon may have a role in promoting wellness of both individuals and the community. In fact, the participation in the activities of the Community Garden seems to affect: health through diet, contact with nature and physical activity; psychological wellness through the development of feelings as the psychological sense of community, a sense of belonging and responsibility among the community and a sense of self-efficacy; social wellness promoting networking.

Conclusions. We can affirm that the phenomenon can have a larger impact thanks to its influence on wellness and its role in the requalification of degraded areas, promoting in that way the transformation of these areas following a bottom-up process, including the community.

Keywords: *Community Garden, wellness, participation, environment, sense of community.*

1. Introduction

Community Garden are plots cared by people who wants to grow their own vegetables or wants to practice gardening in a shared space.

In the past the phenomenon emerged during periods of crisis to overcome the lack of food, such as during wars or famines. In the 70s, following the rising of the environmental movement, the United States saw the development of the most important movement of the urban Community Garden. It was no longer to solve a food emergency, rather to develop more livable cities, improving neglected suburbs, isolated and insecure (Pasquali, 2008).

Currently in the USA and Europe the phenomenon has gained new motivations, such as environmental sustainability, the development of relationships and the research of new food patterns that can represent an alternative to the dominant industrial model.

In many case the creation of unauthorized Community Garden is part of political bottom-up projects, where citizens play an active role in the definition of public spaces, opposing speculation and the abandonment of certain areas (Nieves López Izquierdo, 2014).

1.1. Community garden and wellness

The scientific literature highlighted the impact of the participation to Community Gardens. In particular researchers focused on the benefits derived from the participation, both from an individual and a social point of view.

At the individual level emerged how Community Gardens promote health, as they encourage the outdoors activities, workout and it also provide access to fresh food. In Toronto, Wakefield et al. (2007) found that “gardeners” perceived many benefits for their health. First they declared to have better access to fresh food, affecting physical health through diet, but also producing economic benefits, as people can save their money. Elder participants showed how participation in the garden is also an opportunity to practice physical and mental activity, living the outdoors. Authors highlight a feeling of wellness that overcome from interviews, and it seems to be linked to gardening. In fact this “hobby” can be considered as a good way to reduce stress. As Relf affirms (cit. in Brown and Jameton, 2000) analyzing various studies, even just looking a plant, people can reduce stress, rage, fear, blood pressure and muscle tension.

One of many functions of a Community Garden is the production of food. According to Lyson (cit. in Saldivar-Tanaka, L. e Krasny, M. E., 2004) urban agriculture represent an alternative for whom who want to support local economy, and replace at least some of the products offered by large multinational companies with fresh and local food. Therefore Community Gardens foster people’s health as agriculture allows people to workout and to eat fresh and controlled food, especially for families with low income (Saldivar-Tanaka 2004).

Considering a broader level, we can affirm that Community Gardens also foster “community’s health”, by establishing relationships, networks and developing a sense of belonging of one’s neighborhood. Wakefield et al. (2007) observed also the role of Community Gardens from a social point of view. In fact they resulted as meeting places, where form networks, find support, develop local relationships and involve the community.

Contrary to parks, Community Gardens are managed by people. So they are designed, organized and maintained by residents thus reflecting traditions and needs of the surrounding neighborhood and people who frequent it (Pasquali , 2006). This represent an alternative to the traditional parks that often are situated in wealthier neighborhoods. Thus, Community Gardens allow people to have access to green spaces and to get involved in the management of a space in their neighborhood, following their needs. Saldivar-Tanaka and Krasny (2004) with their study affirm that in New York, Latin American people generally live in high building, in disadvantaged neighborhoods with lack of green spaces. Therefore for these people Community Gardens represent a real resource. In fact, research shows as well as producing local and ethnic vegetables, gardens host many social, cultural and educational events, promoting community activism and a strong sense of community.

Always in New York, Community Gardens explored by Armstrong (2000), revealed their role in the development of social networks, showing a great organizational ability in those people who lives the community in which Community Gardens were placed, especially in minor and low-income neighborhoods. In some areas gardens were landmarks, fostering a sense of community, pride and maintaining the aesthetic of the neighborhood. Participants affirmed in the interviews that Community Gardens were places where to socialize, where they can join the community and get to know other organizations, activities and issues concerning their neighborhood.

Focusing on the existing literature, we affirm that Community Gardens have a great potential for citizens and for the communities themselves. They support individual wellness, both physical, psychological and social, allowing to improve the wellness of the community where people live.

In conclusion from the literature emerges how Community Gardens foster wellness through the promotion of health, inclusion, mutual aid, security, social relations and support, creating more livable spaces and natural areas often degraded or abandoned, or in neighborhoods where contact with nature is rare.

2. Objective

The aim of this work is to explore the phenomenon, describing it by comparing three different Community Gardens in Florence as well as the existing literature.

3. Method

3.1. Participants

Participants were 33, 13 of which participated in focus groups and 20 were interviewed. 21 participants were female and 12 were male, with an average age of 36 years old.

3.2. Instruments

To achieve the objective of exploration and description of the phenomenon, we choose to implement semi-structured interviews and focus groups to gather qualitative data. In order to carry out the interviews and focus groups, we have identified main areas necessary for the research, creating a track that would take account of macro-areas of interest.

4. Content analysis

Content analysis has been divided according to the three Community Gardens that had been analyzed, in order to allow a final comparison.

- Community Garden 1: from the content analysis of the three focus groups, 31 codes have been emerged. They have been grouped in 7 areas: Motivations, Relationships, Experiences, Well-being, Organization, Ecology, Difficulty.

- Community Garden 2: from the analysis of 10 interviews, it have been emerged 61 codes, that have been grouped in 13 areas: Requalification, Relationships, Nutrition, Knowledge Transmission, Membership, Nature, Contact With The Surrounding, Self-management, Community, Progress, Motivations, Difficulty, Lack of Environmental Education.

- Community Garden 3: from the interviews 90 codes emerged, all grouped in 15 areas: Motivations, Self-management, Will Of Change, Sense Of Community, Action, Contact With The Surrounding, Relationships, Solidarity, Degradation, Networks, Self-efficacy, Problems With External Relationships, Nature and Uncertainty.

From these results we can notice some common areas that characterize the three Community Gardens. First there is a variety of motivations that led participants to approach a Community Garden. In particular, from what we found, we can highlight 5 groups that summarize main motivations: the necessity to have more contact with nature; the need for physical activity; the desire to share personal interests with others, seeking a place that encourages the learning of new knowledge and practices; the necessity to find a place where socialize and become part of a network with which share experiences and ideas and receive support; be part of a group whose actions may have an influence on the surrounding environment.

As for the organization of Community Gardens, all three cases are self-managed, or rather managed with the help of all the members who take part in the activities, whom, at a meeting, take decisions and define the objectives following an horizontal management. Content analysis revealed a type of voluntary participation. Literature talks about voluntary participation as a type of bottom-up participation, when the will to participate comes from the necessity of a person to meet individual needs and expectations. Considering the present survey, self-management and voluntary participation can be interpreted as the necessity to satisfy participants' needs, taking an active part in processes that lead to their satisfaction.

Another common element in the three Community Garden in Florence concerns the socialization aspect, described by the area called "Relationships". From interviews and focus groups, it emerges how the search for relationships is an important motivation for participants, so as to encourage people to get closer to the Community Garden to have the opportunity to socialize. Moreover participants to this study declared to have had the chance to create deep relationships, to create new ones and to be able to expand their local network .

Another common element concerns nature, and the necessity to have more contact with it, as participants declared. It seems to be desirable for these people, to have more contacts with nature.

The common area "Contact With The Surrounding" expresses as all three Community Gardens are rooted in the community thanks to several partnerships with other enterprises in the area, proving the presence of a supporting network.

Finally, the last common element detected, concerns the difficulties revealed by participants. In fact it emerged in all three cases the difficulty to involve new people and therefore the possibility to expand the projects. The lack of new participants developed a feeling of uncertainty between present "gardeners" about the future prospects of their projects.

5. Discussion and conclusion

The literature that has been examined, emphasizes benefits derived from the participation in Community Gardens, in particular pointing out that this phenomenon could positively influence people, nurturing the physical, psychological, social and environmental wellness.

As for the physical well-being, it was highlighted the importance of Community Gardens in health promotion (Relf citato in Brown e Jameton, 2000), (Brogan e James, 1980), (Cooper Marcus,

2000). Considering the present study, it's interesting to underline that some participants have called their participation in the garden as an "anti-stress therapy" demonstrating to perceive a positive implication for their wellness, as argued by the authors mentioned above.

Wakefield et al. (2007) instead point out the role of the Community Gardens in fostering health through access to fresh and healthy food as well as allowing people to be able to save money. In Florence the nutrition's theme results very important. In fact it was found that Community Gardens promote a food culture based on the principles of health, sustainability, fostering local and seasonal products promoting health as well as the local economy. In accordance with Lyson's thought (cit. in Saldivar Tanaka, and L. Krasny, M.E, 2004), urban agriculture is an alternative for those who want to support local economy and replace at least some of the multinational companies' products with fresh and healthy food, locally produced respecting the seasonal cycle.

Still referring to physical health, we sustain that Community Gardens can be an alternative place where to practice physical exercise, thanks to various outdoor leisure activities carried out within them (Wakefield et al., 2007).

As regards social well-being, it results in Florence also that the phenomenon of Community Garden fosters socialization and relationships, supporting the development of an informal network that can hold participants (Wakefield et al., 2007), (Saldivar-Tanaka e Krasny, 2004), (Armstrong, 2000).

The development of networks within the district, in this case supported by meeting in Community Gardens, may increase social capital (Alaimo et al. 2010) thus reinforcing other constructs such as psychological sense of community. Taking part in activities of a Community Garden is also an opportunity to increase the sense of belonging to the community thus promoting respect for the environment and sense of security (Vieno, Santinello, 2006).

Considering the phenomenon by its impact on the environment, it can be said that, as claimed by Henderson and Hartsfield (2009), that in Florence the three Community Gardens explored have an important role in the redevelopment of degraded or abandoned areas, therefore preventing petty crime. Referring to the "broken windows theory" of Wilson and Kelling (1982), we can affirm that neglecting the urban environment, signals of indifference and carelessness are transmitted to citizens, which may result in a spiral of urban and social decay. After all, the mere presence of gardens and vegetable gardens in the neighborhoods has a positive influence on the community (Brogan e James, 1980).

From the analysis of literature and following what emerge from this survey, we can affirm that today Community Gardens are not just green spaces where to grow vegetables or enjoy gardening. The phenomenon seems to derive from the need to create a link with the rural world, allowing people to have contact with nature, in an environment that fosters wellness and a culture based on sustainability, more and more necessary nowadays.

The phenomenon comes from the bottom, and it may represent the importance of citizens's role in the creation of areas following their needs. In this way people create change by their own actions, developing a sense of self-efficacy within an empowering process.

Moreover Community Gardens allow people to increase their network thanks sharing activity, always more necessary during crisis period such as the present one, encouraging support between people, avoiding isolation.

We can also say that Community Gardens, thanks to their characteristics, might represent an opportunity to develop the psychological sense of community among people, involving them in the creation of the gardens themselves, taking care of the neighborhood, fostering the sense of belonging and safety.

From this findings, we can affirm that Community Gardens could have a positive role in supporting well-being in all its aspects, affecting various aspects of people's quality of life (physical, psychological and social wellness), also considering the impact that the phenomenon may have on the community itself and the environment.

The research present some limitations that at the same time may constitute a stimulus for the future. In fact, the scientific literature on this subject is rather poor. It would also be desirable to compare the phenomenon with other realities, to deepen our knowledge about it. It would be interesting to focus on specific characteristics of participants, such as gender, age and ethnicity through the analysis of a larger sample, to have a more detailed picture of the phenomenon and to understand whether this is an activity reserved to specific categories of people, remaining a niche phenomenon.

References

- Armstrong, D. (2000). A survey of community gardens in upstate New York: Implications for health promotion and community development. *Health and Place*, Vol. 6, p. 319-327.
- Brogan, D., and James, D. (1980). Physical Environment Correlates of Psychosocial Health Among Urban Residents. *American Journal of Community Psychology*, Vol. 8, p. 507-22.
- Brown, K. H. e Jameton, A. L. (2000). Public Health Implications of Urban Agriculture, *Journal of Public Health Policy*, Vol. 21 (1), p. 20-39.
- Cooper Marcus, C. (2000). Gardens and health. *Design and Health*.
- Henderson, B. R. e Hartsfield, K. (2009). Is Getting into the Community Garden Business a Good Way to Engage Citizens in Local Government? *National Civic Review*.
- Nieves López Izquierdo. (20.10.14). Agricultura urbana. 21.10.14, from www.archivio.internazionale.it/atlane/agricoltura-urbana
- Pasquali M., (2008). *I giardini di Manhattan: storie di guerrilla gardens*. Bollati Boringhieri.
- Pasquali, M. (2006). *Loisaida. NYC Community Garden*. A+MBookstore.
- Saldivar-Tanaka, L. e Krasny, M. E. (2004) Culturing community development, neighborhood open space, and civic agriculture: The case of Latino community gardens in New York City. *Agriculture and Human Values*, Vol.21, p. 399-412.
- Vieno, A. e Santinello, M. (2006). Il capitale sociale secondo un'ottica di psicologia di comunità. *Giornale italiano di Psicologia*, Vol. 33 (3).
- Wakefield, S. e Yeudall, F. e Taron, C. e Reynolds, J. e Skinner, A. (2007). Growing urban health: Community gardening in South-East Toronto. *Health Promotion International*, Vol. 22 (2), p. 92-101.
- Wilson, J. Q. e Kelling, G. L. (1982). Broken window. *The Atlantic Online*.

ASSESSMENT AND PSYCHO-FORENSIC INTERVENTION IN CUSTODY CASES: CRITICAL CONSIDERATIONS AND A PROPOSAL FOR A GOOD PARENTING

Luisa Puddu¹ & Rosalba Raffagnino²

¹*Department of Science of Education and Psychology, University of Florence (Italy)*

²*Department of Science of Health, University of Florence (Italy)*

Abstract

This paper offers some critical considerations about the forensic psychologist figure operating in custody cases. The arguments lie within the *mild law* frame, that is, neither a prescriptive nor a proscriptive law, but a legal perspective oriented toward desirable actions (Lenti, Pazé & Zagrebelsky, 2015; Puddu & Raffagnino, 2015).

According to the authors, technical consultation in custody cases should not be limited to the evaluation process, as is also the case when the question of the judge requires only assessment of the actual family situation and parenting skills. Referring to the literature and clinical forensic praxis, the authors argue the importance of implementing a "psycho-forensic intervention" to support parenting and to steer the parents toward proper clinical or psychoeducational interventions (Lavadera, Laghi & Malagodi Togliatti, 2011; Macri, Macri, & Zoli, 2012). In particular, the authors suggest some working steps of a dynamic process, methods and techniques to promote awareness, accountability and cooperation skills of the parental couple (co-parenting) (McHale, 1997) to help them to meet the growth, health and well-being needs of their children (Puddu & Raffagnino, 2015). For instance, regarding methodological approach, the psychologist should consider the context of the expert psychological examination as a co-constructive psycho-educative process with short, medium and long-term effects. Besides, the first of the working steps is to facilitate the active motivation of the persons to collaborate and not to have the defensive attitude common arising in the legal context.

In conclusion, this work aims to contribute to the current debate about the relationship between law and psychology, the psychologist's role in the forensic field and the education of the forensic psychologist.

Keywords: *Custody cases, legal psychology, psycho-forensic intervention, assessment.*

1. Introduction

In custody cases, parental cooperation and a positive and frequent relationship between children and their parents is considered a protective factor for their mental health and well-being (Adamsons & Pasley, 2006; Sandler, Miles, Cookston, & Braver, 2008; Yu, Pettit, Lansford, Dodge, & Bates, 2010). Conflictual situations between partners often limit such collaboration, which is a fundamental prerequisite for what we termed a "good divorce" (Puddu & Raffagnino, 2015), aimed to protect the child. In such cases, therefore, it is necessary to promote an effective management of marital crisis and of the possible conflicts between partners (Adamsons & Pasley, 2006; Anderson & Greene, 2011). In order to promote parent cooperation, the forensic and psychological operator should work with shared views and aims. Unfortunately this complicity does not always happen easily because even today the formation and cultural perspective in which these operators move are often distant. As Gulotta (2011) points out, the legal world is typically normative while the psychological world is mainly descriptive; the first requires certainty, the other one is based on interpretative assumptions.

More recently this cultural distance seems to have been reduced by the introduction of a perspective linked to the so-called "mild law" which is neither a prescriptive nor proscriptive law, but a legal perspective oriented toward desirable and commendable actions (Lenti, Pazé & Zagrebelsky, 2015; Puddu & Raffagnino, 2015). In cases of separation, this approach affirms the importance of parental responsibility and of the capacity of both parents to coordinate mutually, and to cooperate and converge in the interest of the child (co-parenting). Hence we place inside the mild law also the proposal to consider psychological expertise a proper clinical or psychoeducational intervention rather than a merely evaluative moment (Lavadera, Laghi & Malagodi Togliatti, 2011; Macri, Macri, & Zoli, 2012).

It is upon this aspect that we focus our attention in this work, proposing some critical considerations, also on the basis of the clinical forensic praxis. Starting from some theoretical assumptions, we will specify goals, objectives, methods and techniques to achieve them.

2. Assessment and intervention in the psychological expertise path: the evolutive complex approach

Viewing psychological expertise not only as an evaluative process, but also as a psycho-educational intervention aimed to promote opportunities for change, more than aimed to photograph a family situation and to pigeonhole it in a diagnostic label, the perspective to assume becomes evolutive. In such cases, in conducting its consultation, the expert psychologist regards as central the trajectory of the story of family life, to put it into a cohesive plot of meanings and to identify the resources of change and growth in the future. This seems to be in tune with those who consider the family a system arising from the construction and integration of personal and relational stories (Fruggeri, 2005; Mazzoni & Tafà, 2007; Taurino & Bastianoni 2008).

Also, if one assumes a complex approach, the family history is integrated with the deepening of interpersonal and subjective dimensions. This panoramic vision allows you to understand the system and its dynamic interrelations in its various facets, surpassing unilateral and deterministic visions, which are likely to focus on individual aspects suggested *a priori* by interpretive schemes associated with the theoretical model of reference.

This is particularly important from our point of view because, in the performance of his function and for a "correct" decision, the court must take a broad and articulated view of the situation. The role of the psychologist is therefore to provide, through cognitive tools and interpretation, this vision to facilitate the task of the judging body.

In fact, unlike lawyers, the judge is called to work *super partes* and a partial view would lead him or her more probably to unbalanced decisions; a panoramic vision allows the judge to better ponder his or her decisions in the interest of the child, which should become the point of convergence of the various operators (consultants, lawyers, social workers, etc.). This would facilitate the overcoming of school barriers and of trial roles, and would more easily allow the various operators to work in a convergent manner towards the superordinate goal of protecting the child. The achievement of this purpose gives prominence to the importance of the dialogue between different cultures – psychological and legal – in which the psychological evolutive complex approach can play a catalytic role, showing the relevance of a view that is broad and integrated rather than fragmented and partial.

Within this theoretical (evolutive complex) framework, the expert's path should pay attention to the presence of certain functional prerequisites for the collaboration between the parties involved, so that they work together in the interest of the child. The interest of the child is not just to have the chance of a positive and balanced relationship with each parent (*co-parenting*), but also to have parents who will coordinate and compare choices concerning him or her (*cooperative parenting*) (McHale & Ortu, 2010). Co-parenting, thus understood, is a prerequisite for psychologically functional parenting, which primarily involves the recognition that the child continues to be a child of both parents even after marital separation. This reduces the risk of pathological relational situations, such as triangulation, disqualifications, the coalition, the claim of one of the parents that the child refuses the other, which jeopardize the psychological co-parenting and the child's welfare (Baker & Ben-Ami, 2011). In many of these cases the children experience a conflict of loyalty if they want to stay close to both parents (Hoffman, 1981) and they may be burdened with expectation and responsibility for the welfare and happiness of their parents, assuming in the end the parental role (*parentification*), and not living an age-appropriate experience (Garber, 2011; Lavadera, Ferracuti & Malagodi Togliatti, 2012). In addition, many studies point out that co-parenting is associated with various functional aspects of the welfare and health of children, such as the quality and frequency of contacts in the nonresident parent-child relationship (Adamsons & Pasley, 2006).

Therefore the construction of a such parenting becomes a priority in investigation paths in which the court requires expert technical consultation about the possibility of a joint custody to parents. To move towards this goal, the expert should therefore assess the type and quality of the relationship between the two partners. During this assessment the expert will delineate the strengths and the weaknesses of the parental couple and identify intermediate steps of the psychoeducational path. For instance, on several occasions our clinical experience has shown that a basic obstacle that the expert has to face in cases of non-consensual separation arises every time the couple fails to separate marital from parental level. This may happen both when the partners are embroiled in a destructive conflict between them, that often tends to occupy all the space of interactions, and when they express a distance and a detachment from each other, as if the separation sanctions the loss of each type of interaction "I do not want to have anything to

do with him/her". In both cases, they prove unable to handle negative emotions and to constructively reformulate attributions of guilt and responsibility for the crisis and the current situation. So the partners imprisoned in the spiral of feelings of anger, guilt, disappointment, and rancor lose sight of their co-parenting functions, which in divorce should instead be safeguarded. Indeed, where the child loses the daily life of the double presence, there is an increase in the child's need to feel a parental convergence, regarding aspects important for the (affective, cognitive, educational, values, social ...) dimensions of his or her development.

In such situations it is therefore limiting if the psychologist simply takes note of the situation of conflict, even when he or she accurately describes its terms, dynamics and effects, and then refers to the judge the dysfunctionality of family communication. In fact, thus restricting his or her role to an exclusively diagnostic-evaluative task, the expert psychologist on one hand contributes to labeling the familial interactive disease, providing a static image of it, and at the same time misses a possibly unique opportunity for a functional change of the familial evolutive cycle after divorce. It is a step aimed not so much at the reconstitution of the marital bond but at the construction of a new parental alliance, able to cooperate in advantage of the child and for a constructive method of conflict management (Guida, 2006; Verde, 2007). Moreover, even high-conflict parents – as Gargano and Lubrano Lavadera (2006) detect – may be able to find a possibility to collaborate.

A further preliminary aspect worthy of attention regards the meaning assigned by the members of the couple to the context expert. It is common in fact that they do not have an entirely clear understanding of the purpose of the meetings with the expert psychologist, which the partners may interpret as being purely judgmental, or as an opportunity for therapeutic help. From our point of view, which takes into account clinical experience, the context is neither strictly judgmental nor psychotherapeutic but *psychoeducational*, that is, a context in which the evaluative aspect functions to promote the growth of the familial system towards a joint and effective undertaking of the respective parental roles in a divorce situation. This is in line with scholars affirming the importance of the expert assessment as a chance to activate constructive work with the parental couple. This work should be oriented more toward understanding the relational dynamics and problem solving than toward the description of these processes (Macrì, Macrì, & Zoli, 2012; Malagodi Togliatti & Lubrano Lavadera, 2011). Besides allowing a change in the family system, this work makes more likely the actual ability of parents to follow and respect the instructions of the judge which are often not sufficient in and of themselves (Gargano & Lubrano Lavadera, 2006).

Moreover, recursively, the forensic technical assessment is enriched by the acquisitions resulting from the psychoeducational path, which gradually develops thanks to and through these acquisitions. For instance we take a couple that presented at the first meeting saying they no longer wanted any kind of communicative exchange with each other. In this case the psychoeducation intervention was primarily aimed at the recognition, by both partner, of the value of serving the parental function in a coordinated manner. After the assessment of the achievement of this awareness by the two partners, the expert proposed an interpersonal exchange to facilitate partners' dialogue about the education of their child.

Another important aspect regards how the partners communicate their divorce to their child, as often this communication is proposed in dysfunctional ways. In fact, sometimes the parents avoid any kind of information, or provide the child insufficient information or inappropriate to the child's age or psychological maturity, ignoring the importance of considering the child an active subject who has rights and specific needs with respect to the situation of separation that involves him or her (van Nijnatten & Jongen, 2011). This is an aspect the expert should consider and use in a psychoeducational path to parenting, helping both parents to implement open and clear communication about what is happening to them. This mode of communication seems important both to the way in which children will face the changes and be able to adapt to the situation after divorce (Neale & Flowerdew, 2007; Smart, 2006), both for their physical and mental health welfare and for the preservation of a secure parent-child bond (Afifi, Schrod, & McManus, 2009).

3. Method of intervention

According to our previous considerations, the method that the expert should follow is complex. In fact, the expert psychologist has to combine the dimensions of the assessment and of the intervention, each of which has its own internal structure. With respect to the *assessment*, the expert must take into account various aspects and levels of familial relationships (psychological characteristics of the actors involved, relational dynamics of the conjugal couple and the parental system, analysis of the family system as a whole), paying attention to personal, relational and systemic resources and vulnerability. In this process the criterion of "access" – i.e., the propensity of a single parent to recognize the other as an important reference figure in the growth and education of the child – is considered central for the assessment of parenting skills, and of the parents' willingness and ability to cooperate (Camerini, De Leo, Sergio & Volpini, 2007).

The *intervention*, the goal of which is to support parenting, seeks to facilitate awareness and personal responsibility, also through attention and recognition of one's experiences, needs, personal weaknesses and resources. However it does not have clinical objectives (to be implemented in appropriate contexts), but is instead a chance to identify obstacles and the need to remove them, in relation to the objectives of the forensic consultation. Intervention should build upon what emerges progressively from the assessment procedure, which in turn helps to define it. For example, regarding the evaluative observation of the family's interactions during the execution of a structured task assigned, Malagoli Togliatti and Mazzoni (2006) argue that this task may facilitate the involvement of parents in a process of change; a path that may occur in the advocated direction when the expert intervenes in a targeted manner with the objective of co-parenting, and if it is anchored in what emerges during the interaction. So for example, two parents who in previous interview affirmed the impossibility of a constructive dialogue between them, playing with their child the joint drawing of the family test they effectively interacted to converge towards a co-built end result. Focusing on what happened during interactive exchange between partners, the expert may promote their awareness about their behavior.

This pathway, aimed at promoting awareness, should not be limited only to times when the expert assigns specific tasks, but it should be a constant in the conduct of the interview. It is indeed important that the consultant catches all opportunities that arise during the interview with couple to draw partners' attention on what permit themselves to developing awareness and mutual openings. This can happen if the expert does not stop at the assessment or if he/she proposes an interpretation of what happened. His/her intervention is a maieutical help to the understanding by partners of what emerges in the interaction. This happens through urging them to dwell on their emotional states, on the meanings attributed, on underlying disappointed expectations and unmet needs. The expert's intervention can also help partners to act, in the here and now of the forensic setting, upon aspects and problems identified. For example, during a couple interview, to a partner that affirmed he didn't want to have anything to do with the ex-partner and therefore not to want to talk, the counselor asked him to tell the other "I do not want to talk to you", in fact re-opening the dialogue between them.

These transformative interventions differ from those pursued in therapeutic contexts, for their aim is not a deep personal change or emotional relationship, but the acquisition of knowledge and parental responsibility with respect to the possibility of joint custody.

4. Conclusions

This reflection starts from the assumption that, for the protection of children, it is fundamental that co-parenting be not only legal, but also psychological, and therefore marked by collaboration. In cases of separation, this assumption entails the necessity of a path undertaken by the expert not limited to the evaluation of the current family dynamics and parenting skills, but extended to psychoeducational intervention, of a complex evolutive nature.

The application of this type of proposal presupposes above all the possibility of spreading the culture of co-parenting geared to cooperation, from professionals who deal with the separation and of custody of children. This culture should then be translated into an effective collaboration between professional worlds with often distant settings (Gulotta, 2011).

At present in Italy there are signs of opening of possible cooperation between the figures pertaining to legal and psychological contexts. An interesting example reported by Mazza Galanti (2006) is that of the Court of Genoa which, in collaboration with the Order of Psychologists of Liguria and the ASL of Genoa, offers parents the opportunity of an assisted path to parenthood, allowing them to reach an agreement on custody and the regulation of relations with the children.

What is important for us is that this intervention occurs even *within* the expert consultation requested by the judge.

References

- Adamsons K. & Pasley K. (2006). Coparenting following divorce and relationship dissolution. In M.A. Fine & J.H. Harvey (eds). *Handbook of divorce and relationship dissolution* (pp. 241-261). Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Afifi T. D., Schrodt P. & McManus T. (2009). The divorce disclosure model (DDM): Why parents disclose negative information about the divorce to their children and its effects. In T.D. Afifi (ed.). *Uncertainty, information management, and disclosure decisions: Theories and applications* (pp. 403-425). New York: Routledge/Taylor & Francis Group

- Anderson E.R. & Greene S.M. (2011). My child and I are a package deal: Balancing adult and child concerns in re-partnering after divorce. *Journal of Family Psychology*, 25(5), 741-750
- Baker A.J.L. & Ben-Ami N. (2011). To turn a child against a parent is to turn a child against himself: The direct and indirect effects of exposure to parental alienation strategies on self-esteem and well-being. *Journal of Divorce & Remarriage*, 52 (7), 472-489.
- Camerini G.B., De Leo G., Sergio G. & Volpini L. (2007). Criteri e strumenti di valutazione delle capacità genitoriali. *MinoriGiustizia*, 3, 46-57.
- Fruggeri L. (2005). *Diverse normalità. Psicologia sociale delle relazioni familiari*. Roma: Carocci.
- Garber, B. D. (2011). Parental alienation and the dynamics of the enmeshed parent-child dyad: Adultification, parentification, and infantilization. *Family Court Review*, 49, 322-335.
- Gargano T. & Lubrano Lavadera A. (2006). Applicazioni del Lausanne Trilogue Play clinico nelle consulenze tecniche d'ufficio. In M. Malagoli Togliatti & S. Mazzoni (a cura di). *Osservare, valutare e sostenere la relazione genitore-figli. Il Lausanne Trilogue Play clinico*. Milano: Raffaello Cortina.
- Guida M.A. (a cura di) (2006). *I figli dei genitori separati. Ricerca e contributi sull'affidamento e la conflittualità*. Milano: Franco Angeli.
- Gulotta G. (2011). *Compendio di psicologia giuridico-forense, criminale e investigativa*. Milano: Giuffrè Editore.
- Hoffman L. (1981). *Foundations of family therapy: A Conceptual framework for systems therapy*. New York: Basic Books. (Trad. it. *Principi di terapia della famiglia*. Roma: Astrolabio, 1984).
- Lavadera A.L., Ferracuti, S. & Malagodi Togliatti, M. (2012). Parental Alienation Syndrome in Italian legal judgments: An exploratory study. *International Journal of Law and Psychiatry*, 35 (4), 334-342.
- Lavadera A.L., Laghi F. & Malagodi Togliatti M. (2011). Assessing family coordination in divorced families. *American Journal of Family Therapy*, 39 (4), 277-291.
- Lenti L., Pazé P. & Zagrebelsky G. (2015). La mitezza del diritto e delle istituzioni negli interventi e nei procedimenti per le persone, la famiglia e i minori. *MinoriGiustizia*, 1, 237-245.
- Macri C., Macri Z. & Zoli B. (2012). *Affido condiviso nella separazione e nel divorzio. Manuale pratico per consulenti tecnici. Cosa fare e cosa non fare*. Milano: Franco Angeli.
- Malagoli Togliatti M. & Mazzoni S. (a cura di) (2006). *Osservare, valutare e sostenere la relazione genitori-figli. Il Lausanne Trilogue Play clinico*. Milano: Raffaello Cortina.
- Malagoli Togliatti M. & Lubrano Lavadera A. (2011). *Bambini in tribunale. L'ascolto dei figli "contesi"*. Milano: Raffaello Cortina.
- Mazza Galanti F. (2006). Un'esperienza in corso presso il Tribunale di Genova. In M.A. Guida (a cura di). *I figli dei genitori separati. Ricerca e contributi sull'affidamento e la conflittualità*. Milano: Franco Angeli.
- Mazzoni S. & Tafà M. (2007). La complessità nello studio delle relazioni familiari. In S. Tafà (a cura di). *L'intersoggettività nella famiglia*. Milano: Franco Angeli.
- McHale J.P. (1997). Overt and covert coparenting processes in the family. *Family Process*, 36, 183-201.
- McHale J.P. & Ortu F. (2010). *La sfida della cogenitorialità*. Milano: Raffaello Cortina.
- Neale B. & Flowerdew J. (2007). New structures, new agency: The dynamics of child-parent relationships after divorce. *International Journal of Children's Rights* 15(1): 25-42.
- Puddu L. & Raffagnino R. (2015). Verso una buona separazione: Gli interventi miti sulle relazioni genitoriali problematiche. *MinoriGiustizia*, 1, 115-123.
- Smart C. (2006). Children's narratives of post-divorce family life: From individual experience to ethical disposition. *The Sociological Review*, 54(1): 155-170.
- Sandler I., Miles J., Cookston J. T. & Braver S. L. (2008). Effects of father and mother parenting on children's mental health in high- and low-conflict divorces. *Family Court Review*, 46, 282-296;
- Taurino A. & Bastianoni P. (2008). Discontinuità, pluralità, differenza come criteri metodologici per lo studio delle famiglie e della genitorialità. In A. Taurino, P. Bastianoni & S. De Donatis (a cura di). *Scenari familiari in trasformazione. Teorie, strumenti e metodi per la ricerca clinico-dinamica e psicosociale sulle famiglie e la genitorialità*. Roma: Aracne.
- van Nijnatten C. & Jongen E. (2011). Professional conversations with children in divorce-related child welfare inquiries. *Childhood*, 18(4), 540-555.
- Verde A. (2007). La battaglia sulla separazione coniugale e la consulenza tecnica sull'affidamento dei figli minori in un'ottica psicosociologica. *Materiali per una storia della cultura giuridica*, 37, 2, 525-542.
- Yu T., Pettit G. S., Lansford J. E., Dodge K.A & Bates J. E. (2010). The interactive effects of marital conflict and divorce on parent-adult children's relationships. *Journal of Marriage and Family*, 72, 282-292.

CAN REWARD REDUCE SUBSEQUENT SEARCH MISSES?

Margit Höfler, Ronja Faßbender & Anja Ischebeck
Department of Psychology, University of Graz (Austria)

Abstract

Visual search, i.e., the search for a target object among distractor objects, is an essential human behavior. Although visual search typically is very fast and effective, it is difficult to find a second target in an environment once a first target was found. In other words, when a target is detected, the probability to miss a further target in the same environment increases. This phenomenon is referred to as ‘satisfaction of search’ or ‘subsequent search misses’ (SSMs). Obviously, SSMs can have serious consequences; for instance, when radiologists miss tumors or airport security staffs miss dangerous objects in the luggage. Here, we were interested in whether it is possible to reduce SSMs by positive reinforcement. To this end, we had our participants search displays that included 18 to 20 (‘L’-shaped) distractor items of different saliency. There could be 0, 1 or 2 (‘T’-shaped) targets in the display. Most of the targets were highly salient targets (i.e. easy to find) and only a minor amount were less salient targets. The task of the participants was to search for all of the targets and mark them by a mouse click. Critically, on half of the trials, participants received a small reward if they found a less salient target whereas on the other half of the trials, no such reward was provided. The results showed that, in general, positive reinforcement led to better search performance: The participants found less salient targets more reliably in the reward condition than in the control condition. However, we still observed an SSM effect: If the salient target was found first, the detection rate for the second (less salient) target decreased. This effect obtained regardless of the reward condition. These findings suggest that, although positive reinforcement can increase search performance in general, it cannot prevent participants from missing relevant objects.

Keywords: *attention, visual search, subsequent search miss, satisfaction of search, positive reinforcement.*

1. Introduction

When we search an environment for a specific object (e.g., our desk for a ruler), we perform a common and essential human behavior: visual search. Visual search is defined as a search for one or more targets within a set of non-targets (distractors). It is a standard method in psychology and neurosciences in order to investigate attentional and cognitive processes. In a typical visual-search experiment, a search display containing a various number of items is presented in each trial and the task of a participant is to search for a predefined target in this display and to indicate its absence or presence. An important question in visual search is why we miss certain targets. Missing targets during a search is, at the very least, inefficient. However, the consequences can be very serious if, for instance, a radiologist misses an abnormality in a scan or an airport security officer misses a dangerous object in a bag. Previous research has already indicated some of the factors that influence the target detection rate. One of these factors is the prevalence of a target (e.g., Wolfe & Van Wert, 2010; Wolfe, Brunelli, Rubinstein, & Horowitz, 2013). If the prevalence of a target increases (i.e., if a target is present on most of the trials), false alarm rates increase such that participants become biased to falsely report the presence of a target and spend more time in a display in order to search for a target. In contrast, if target prevalence decreases (i.e., it is rarely in the display), it is often missed. Another factor that decreases the detection of a potential target is if its presence is unexpected. For instance, Drew, Vö, and Wolfe (2013) had radiologists and novices search for lung nodules in a scan. Their results showed that, although experts were more successful in completing these tasks than the non-experts, 20 out of 24 experts still missed a small picture of a gorilla in the scan – even if the picture was 48 times the size of the lung nodules and the experts even fixated it for several hundred milliseconds.

Finally, a factor that has also been shown to reduce the detection probability of a target is “satisfaction of search” (SOS; Smith, 1967). The idea of SOS was already described by Tuddenham

(1962) who indicated that radiologists regularly missed abnormalities in x-rays and argued that such misses might be (also) caused by the “satisfaction” of a searcher once he or she finds a target and hence has a tendency to stop the search. In other words, radiologists often searched the scans not exhaustively for further possible abnormalities after they had successfully found one. More recently, however, researchers have objected to the term “satisfaction of search” (Cain, Adamo & Mitroff, 2013, for an overview). For instance, there is evidence that targets that are perceptually (or semantically) similar to a successfully tracked target are missed more often than perceptually different targets (e.g., Biggs, Adamo, Dowd, & Mitroff, 2015). Other researchers suggested that finding a target depletes cognitive resources and that this depletion reduces the detection probability of a second target (e.g., Adamo, Cain, & Mitroff, 2013). Because of these different causes for missing a target after a successful first search, the terminology changed from “satisfaction of search” to “subsequent search misses” (SSMs; see Cain et al., 2013).

An important research question is how SSMs can be reduced or even eliminated. It appears that SSMs depend on the emotional state of the searcher. Cain, Dunsmoor, LaBar, and Mitroff (2011) reported more SSMs when they threatened participants with displeasing electric shocks. This suggests that SSMs might be also malleable due to reward. We therefore assumed that the probability for SSMs is reduced if searchers are rewarded when they find a second (and more difficult to find) target in a display. To test this assumption, we had participants search in a display that contained 0, 1, or 2 targets. The target(s) could be highly salient (i.e., easy to find) or less salient (i.e., hard to find). On half of the trials, participants received positive reinforcement in the form of points that could be exchanged for sweets after the experiment when they found a less salient target. On the other half of the trials, no such reinforcement was given. We expected that providing positive reward for finding a less salient target would reduce SSMs.

2. Methods

2.1. Design and material

In order to investigate if the probability of SSMs can be reduced by positive reinforcement we closely followed the design used in previous studies on SSMs (e.g., Fleck et al., 2010; Cain & Mitroff, 2013). That is, we had participants search in different search displays for perfect “Ts” within L-shaped distractors (see Figure 1). Each display consisted of 20 items in total with 0, 1, or 2 targets among the distractors. We also varied the saliency of the targets (highly salient vs. less salient). The combination of target number and target saliency resulted in four search conditions: single target – highly salient; single target – less salient; two targets (one highly and one less salient) and no target. A high-saliency single target was present on approximately half of the trials (51.4 %) and a low-saliency single target was present on only 14.3 % of the trials. Two targets were present in further 14.3 % of the trials, and in the remaining 20 % of the trials, no target was included. This design was already shown to induce SSMs successfully (Fleck et al., 2010). On half of the trials with less salient targets, participants received positive reinforcement when they found and marked a low-saliency target correctly (reward condition, see below); on the other half of the trials, no such reinforcement was given (control condition). As dependent measure, we analyzed the accuracy of target detection.

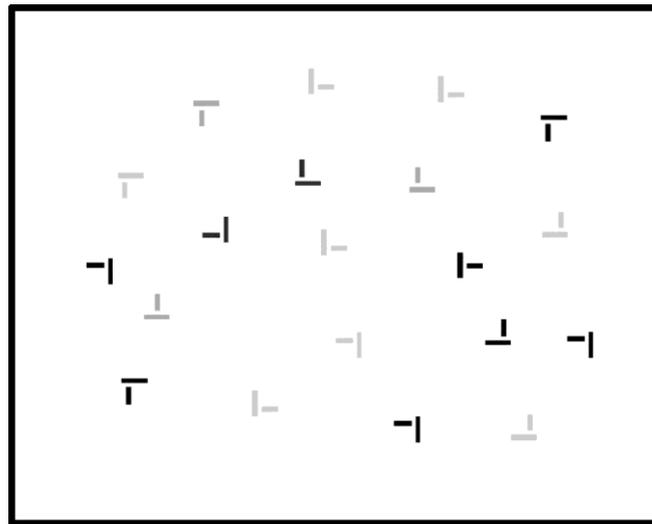
2.2. Participants

Twenty participants (six male, 14 female; mean age: 21.4 years, $SD = 1.90$) took part in this experiment. All participants had normal or corrected-to-normal vision. Most of the participants were students and received class-credit for their participation. All of them gave written informed consent.

2.3. Procedure

At the beginning of a trial, the search display was presented and the participants were instructed to search for all targets in the display and to left-click on each found target using a computer mouse. The selected item became marked by a blue circle. Participants were told that maximally two targets could be present in the display. By pressing the space bar on the key board, participants indicated the search as completed. With this button press, the display was cleared and a new search display was presented. Each participant completed four blocks of 70 trials each. In two of the four blocks (reward condition), participants received points when they correctly found and marked a low-saliency target. That is, when they clicked on the target, the blue circle appeared and simultaneously a brief sound (“ding.wav” from the Windows® standard library) was presented. This sound indicated that participants scored one point. At the end of each block, a visual feedback of the total score for the block was provided. After the end of the experiment, participants could exchange the collected points with sweets. In addition, participants were informed that they would receive a voucher for ice cream worth 10 Euros if they performed best as compared to all other participants.

Figure 1. Example display containing one high-salience target and one low-salience target. Please note that in the actual experiment the stimuli were presented in white on a black background and that the stimuli are not in scale



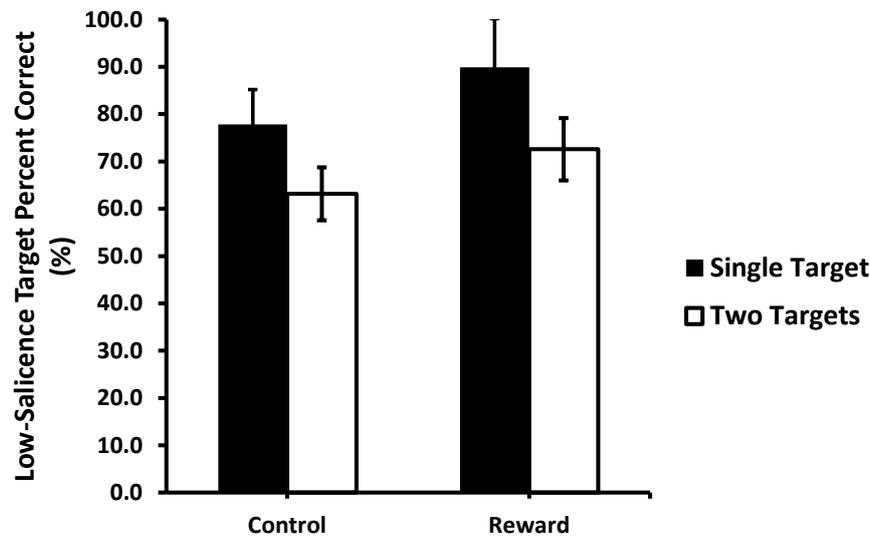
3. Results

We defined a target as found correctly when the mouse click occurred within a ± 20 pixel area around the target center. Because of this restriction, we removed the data of one participant from analysis because targets were not validly marked in about 23 % of the trials.

To investigate the SSMs for the reward and the control condition, we analyzed only those trials, in which at least one low-salience target was present in the display (i.e., single target – low-salience trials and two-target trials). In particular (and in accordance with the previous literature; see Cain & Mitroff, 2013), we compared the probability to find a low-salience target in the single-target condition with the probability to find a low-salience target in the two-target condition (under the precondition, that the high-salience target was found first). In general, participants found more low-salience targets in the single trials ($M = 83.9\%$, $SD = 9.8$) than in the two-target trials ($M = 67.9\%$, $SD = 18.5$). Reward also made a difference. In the reward condition, the low-salience target was found on 81.2 % ($SD = 16.1$ %) of the trials, and in the control condition in 70.5 % ($SD = 17.1$ %) of the trials.

A 2×2 within-subjects ANOVA with target condition (single target vs. two-target condition) and positive reinforcement (reward vs. control condition) revealed a main effect for target condition, $F(1,18) = 28.339$, $p < .01$, $\eta_p^2 = 0.61$, and for positive reinforcement, $F(1,18) = 5.309$, $p < .05$, $\eta_p^2 = 0.23$, but no interaction, $F < 1$, $p = .762$. These findings suggest that the search accuracy was lower for low-salience targets in the two-target condition than in the single-target condition when a high-salience target was found first. In other words, participants found a low-salience target quite accurately when it was the only target in the display but missed a low-salience target more often, when another (high-salience) target was present. This is evidence for an SSM effect. Crucially, this effect was not reduced or eliminated by positive reinforcement. That is, even though participants were rewarded when they found a low-salience target, they still missed a large number of low-salience targets once a high-salience target was in the display. Interestingly, the reward manipulation itself was successful as participants showed an overall increase in search accuracy in the reward condition.

Figure 2. Percentage of found low-salience targets depending on whether one or two targets (one high salience, one low salience) were present in a trial and whether or not participants received a reward when they found a low-salience target



4. Discussion & conclusion

We have a strong and stubborn tendency to miss a second target once another target was found first (subsequent search misses, or SSMs). This can have direct consequences for professional search experts such as in radiology or in air traffic control. It is therefore of great importance to reduce SSMs. Here, we investigated whether positive reinforcement reduced the probability of SSMs. The results showed that, although the overall search accuracy of the participants increased because of the reward manipulation, SSMs did occur. Moreover, the overall probability of SSMs, that is, the difference between the single-target and the two-target condition, was not reduced by positive reinforcement. This indicates that reward alone, although increasing overall search effectiveness, is not successful to reduce the probability of SSMs.

One might argue that our reward manipulation was not perfectly effective. The feedback sound and the expectation of sweets might have been not rewarding enough. However, the results showed an overall effect of positive reinforcement, that is, search accuracy was increased – in general – significantly in the reward condition. This indicates that the positive reinforcement as such was effective. This is also in line with Navalpakkam, Koch, and Perona (2009) who showed that positive reinforcement increased the general search performance when the target prevalence was low (i.e., when the target is only rarely present in the display).

One might also object to the way we analyzed the SSM effect. Typically, the probability to find a (low-salience) target in single-target trials is contrasted with the probability to find a (low-salience) target in trials with two targets (one high-salience, one low-salience) and from these latter trials only those are analyzed in which the high-salience target was fixated first (e.g., Cain & Mitroff, 2013). Usually, high-salience targets are found first because they attract attention. In the present experiment, however, we observed that participants, in the two-target trials, often found the low-salience target first. This left only about half of the two-target trials for the SSM analysis. This specific effect might have been caused by the reward manipulation for low-salience target such that participants preferably searched for such targets first. When we conducted a SSM analysis for trials in which the *high*-salience target was found *after* the low-salience target, we again observed a SSM effect such that a high-salience target was more often missed after a low salience target was found than when only a high-salience target was present in the display. This suggests that not only less salient targets are susceptible for SSMs.

Together, the findings revealed some interesting points for future research on SSMs. Although we could show that reward increased overall search accuracy, the SSM effect was not influenced by reward. This indicates that the SSM effect, that is, the difficulty to find a second target after a first, is very robust. It cannot be excluded, however, that other types of reward (e.g., monetary reward) would be more effective. Furthermore, we used rather artificial stimuli in our experiment. It is possible that in natural settings, in which SSMs can lead to large negative consequences, a searcher might be intrinsically more motivated to decrease such errors.

References

- Biggs, A., Adamo, S.H, Dowd, E.W., & Mitroff, S.R. (2015). Examining perceptual and conceptual in multiple-target visual search. *Attention, Perception, & Psychophysics*, 77 (3), 844-855.
- Adamo, S. H., Cain, M. S., & Mitroff, S. R. (2013). Self-induced attentional blink: A cause of errors in multiple-target search. *Psychological Search*, 24 (12), 2569 – 2574.
- Cain, M. S., & Mitroff, S. R. (2013). Memory for found targets interferes with subsequent performance in multiple-target visual search. *Journal of Experimental Psychology: Human Perception and Performance*, 39(5), 1398-408. doi: 10.1037/a0030726
- Cain, M. S., Adamo, S. H., & Mitroff, S. R. (2013). A taxonomy of errors in multiple-target visual search. *Visual Cognition* 21 (7), 899 – 921.
- Cain, M. S., Dunsmoor, J. E., LaBar, K. S., & Mitroff, S. R. (2011). Anticipatory anxiety hinders detection of a second target in dual-target search. *Psychological Science*, 22(7), 866-871.
- Drew, T., Vö, M. L.-H. & Wolfe, J. M. (2013). The invisible gorilla strikes again. *Psychological Science*, 24 (9). 1848 – 1853.
- Fleck, M. S., Samei, E., & Mitroff, S. R. (2010). Generalized “satisfaction of search”: Adverse influences on dual-target search accuracy. *Journal of Experimental Psychology*, 16 (1), 60 – 71.
- Navalpakkam, V., Koch, C., & Perona, P. (2009). Homo economicus in visual search. *Journal of Vision*, 9 (1), article 31, doi: 10.1167/9.1.31
- Smith, M. J. (1967). *Error and variation in diagnostic radiology*. Springfield, Il: C.C. Thomas.
- Tuddenham, W. J. (1962). Visual search, image organization, and reader error in roentgen diagnosis: Studies of the psychophysiology of roentgen image perception memorial fund lecture 1. *Radiology*, 78 (5), 694 – 704.
- Wolfe, J. M., Brunelli, D. N., Rubinstein, J., & Horowitz, T. S. (2013). Prevalence effects in newly trained airport checkpoint screeners: Trained observers miss rare targets, too. *Journal of Vision*, 13 (33), 1 – 9. doi:10.1167/13.3.33
- Wolfe, J. M., & Van Wert, M. J. (2010). Varying target prevalence reveals two dissociable decision criteria in visual search. *Current Biology*, 20 (2), 121 – 124.

MOOD AND EMOTIONAL STATES PREDICTION BY TIME SERIES METHODS

Mani Mehraei & Nimet Ilke Akcay

*Department of Applied Mathematics and Computer Science, Eastern Mediterranean University,
North Cyprus (Turkey)*

Abstract

Mood and emotion prediction plays an important role in diverse topics such as emotion variety impacts on behavior and decision making, bipolar manic depression disorder in psychology, and virtual character development in artificial intelligence and artificial psychology. In this paper, we present a model to predict emotional states for the seventh day and the mood state at end of the same day based on brief information related to personality and emotion history. The emotional states were recorded hourwise for twelve times a day in the previous six days for three distinct individuals without knowing about their emotional states in the seventh day. The model is constructed by integrating current known appraisal theories and exploiting mood history probability distribution and statistical forecasting methods such as time series, seasonal time series, and Holt-Winter's additive model. The experience has applied on only three individuals and the model was designed the way to anticipate mood and emotional states based on the lowest input information possible.

Keywords: mood prediction, emotion forecasting, time series, decision making.

1. Introduction

There has been many models to describe and predict mood and emotions in various fields and topics such as mood disorders, artificial intelligence, and artificial psychology. Researchers in psychology major were mostly interested to model mood and emotions in the favor of mood disorders. For example, cycle oscillators were exploited for modeling mood states name depression and mania in case of bipolar type II (Daugherty *et al.*, 2009), and also nonlinear dynamics of mood regulation was one of the most recent studies in bipolar mood disorder (Ortiz *et al.*, 2015).

There has been variety of studies related to mood and emotion modeling and prediction in artificial intelligence and artificial psychology. The most prominent branch of such studies are related to develop a believable virtual character (Egges *et al.*, 2003; Kazemifard *et al.*, 2006; Gebhard, 2005; Kasap *et al.*, 2009)

For either each one of these purposes, different modeling methods have been used so far. OCC (Ortony *et al.*, 1990), which stands for the initials of the developers of this method Ortony, Clore, and Collins is one of the most basic one of such modeling methods which indicates how events, agents, and objects appraised based on individual's personality (Egges *et al.*, 2003; Ortony *et al.*, 1990). On the other hand, Mehrabian suggested Pleasure-Arousal-Dominance (PAD) model based on these three almost independent traits to describe emotional states (Mehrabian, 1996), and ALMA offered one which is the mixture of the two previous mentioned methods (Gebhard, 2005).

When it comes to OCC model, we may partition it into three branches: first branch is related to appraisal of events to be pleasant or not based on agent's aims. Second branch is related to approval of the action of the agents. And the last branch is about appraisal of liking objects or not with respect to behavior of the agent (Kazemifard *et al.*, 2006; Ortony *et al.*, 1990).

In our method, we update and predict mood states based on OCC, PAD, and Alma models by applying time series forecasting methods on emotional states, updating mood states by exploiting information regarding to personality and approximated emotional states, and probability distribution of mood history.

2. Methods

2.1. Assigning default mood

The initial mood can be defined for each individual by mapping OCEAN big five personality traits which are Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism to Pleasure-Arousal-Dominance (PAD) space (Gebhard, 2005; Mehrabian, 1996).

In order to calculate OCEAN personality traits we have applied on each individual OCEAN Big-five personality test which is based on the International Personality Item Pool, introduced by Goldberg (Goldberg, 1992). The obtained values regarding to this test are provided in Table 1. Note that in this table, O, C, E, A, N, PT, AT, and DT stand for Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism, Pleasure Trait, Arousal Trait, and Dominance Trait, respectively.

Table 1. OCEAN personality test result for the three volunteers

Individuals	O	C	E	A	N	PT	AT	DT
Individual 1	0.65	0.97	0.35	0.60	0.45	0.51	0.02	0.34
Individual 2	0.60	0.15	0.35	0.10	0.75	0.28	-0.31	0.36
Individual 3	0.53	0.79	0.27	0.74	0.43	0.58	0.06	0.19

2.2. Data Collection

We have collected the data based on three volunteers with different personalities. Indeed it is more significant to have at least thirty number of data in order to conclude more meaningful results, but our budget was limited to find more volunteers who would give their time for this study. The data collected from these three volunteers are related to their personalities and their recorded emotions per hour from 10:00 to 22:00 for seven days. Each recorded emotion state is considered to be the most significant feeling in each hour.

2.3. Emotinal States in terms of PAD

While recording emotinal states we use OCC model to distinguish between emotional traits. The emotions which we took under consideration are Admiration, Anger, Disliking, Disappointment, Distress, Fear, Gloating, Gratification, Gratitude, Happy-For, Hate, Hope, Joy, Liking, Love, Pity, Pride, Relief, Remorse, Reproach, Resentment, Satisfaction, Shame. In order to map these OCC emotions into PAD, we have considered ALMA's approach. The details of this mapping is already well-explained (Gebhard, 2005).

2.4. Updating mood

Mood differs from emotion in the sense that mood is more stable and less sensitive to time comparing to emotion which changes dramatically. Thus, in our model, we update mood after each day which contains twelve hours in the case we have considered. So, after recording each twelve emotional states, it is the time to update mood. We can consider updated mood as a function of previous mood state and emotional traits:

$$M_{12t} = W_1 M_{12t-12} + W_2 \Phi_{(e)} \quad (1), \text{ where } \Phi_{(e)} = \frac{e_{12t} + e_{12t-1} + \dots + e_{12t-11}}{12}, \text{ and } t = 1, 2, 3, \dots$$

In this formula, t shows the day number, and M_{12t-12} is the previous mood, $\Phi_{(e)}$ is history of previous emotional states, and coefficients as weights are W_1 and W_2 . Since the number of days to record our data were limited, we have arbitrarily considered W_1 and W_2 to be 0.1 and 0.9 respectively so that we can test our model in sense of high influence of previous emotional states on updating mood. These coefficients are fixed for this study but for other research studies, it is possible to change these values based on level of mood swings of an individual. For example, W_1 for a patient who is suffering from psychological disorders such as bipolar and panic disorders should have bigger value than a normal case since those patients experience mood swings more than usual (Bowen *et al.*, 1994). As emotional states history factor $\Phi_{(e)}$, we have considered the average of emotional states for the last twelve states which has been recorded in a particular day.

2.5. Stating a problem based on our goal

Our goal is to predict mood state of an individual at the end of seventh day if we only have data related to previous emotional states for the previous six days and individual's personality.

2.6. Emotional States Forecasting by time series

Time series is a data set which is collected over time, and time series forecasting is a method to predict unseen future data by using previous observed data. Since data related to emotional states are

recorded over time and each emotional state is related to its previous ones, time series seems to be an appropriate method to apply for this case. We have used time series for each traits of PAD separately for each individual because they have been considered to be independent (Mehrabian, 1996). We have exploited time series forecasting in Statistical Package for Social Sciences (SPSS) in order to obtain outputs for each individual. (see Figure 1)

By applying proper time series forecasting method for each traits of individuals, we have obtained estimated emotional states for the seventh day. Since we had the real values for the seventh day already from our recorded data, it was also possible to accurately calculate the error of our estimation. 25%, 45%, and 25% of the emotions for each individual respectively were predicted correctly from their corresponding PAD groups given in Table 2. However, our goal is to predict the updated mood at the end of seventh day without using actual emotional states data of seventh day.

Table 2. Mood groups based on PAD traits

+P +A +D	Exuberant	-P +A +D	Hostile
+P +A -D	Dependent	-P +A -D	Anxious
+P -A +D	Relaxed	-P -A +D	Disdainful
+P -A -D	Docile	-P -A -D	Bored

2.7. Mood state prediction based on previous emotional states

In order to select the best approximation for the mood state at the end of seventh day, we have predicted it for distinct individuals based on their previous estimated emotional states at the day seven and previous mood states probability distribution.

2.7.1. Initial mood state prediction based on previous emotional states. For individual 1, Moving Average (1) (MA (1)) time series model has been suggested by SPSS to predict Pleasure trait of emotional states. Arousal trait for this individual seemed to be totally random. For Dominance trait, Simple Seasonal forecasting model has been suggested with parameter Alpha equaling to 0.1. Stationary R-Squared for these data was approximately 0.8 which shows Dominance trait for this individual can be considered to be time-dependent and time series model applies properly for this trait. Thus, it is possible to predict initial new mood state for this individual only for Pleasure and Dominance trait by using formula (1) where emotional states are considered to be our estimated values for the seventh day. We have obtained (-.01, +.099, -.005) but since Pleasure and Dominance trait were the only significant components for this individual, we may consider (-, ?, -) as the initial prediction for this particular individual.

For individual 2, Moving Average (10) (MA (10)) and Simple Seasonal has been suggested for Pleasure and Dominance traits, respectively. For Arousal trait, Winter Additive was suggested. It was also visible by the trend of emotional states for this trait that it is increasing as time passes. By using formula (1) we have obtained (+.16, +.2, -.07). Thus, initial mood prediction for this individual is assigned to be (+, +, -). Notice that, even it was possible to consider Arousal trait directly positive without using formula (1) since the trend for this trait is increasing over time for this individual.

For individual 3, Simple Seasonal models with Alpha equal to 0.2 and 0.1 for Pleasure and Arousal traits, respectively. However, Dominance trait seemed to have totally random trait. By using formula (1) we have calculated (+0.115, -0.031, +0.081). Since Dominance trait is random, we may consider initial mood prediction for this individual to be (+, -, ?).

Calculated p-values for all of these mentioned suggested models were less than 0.05 which makes the prediction significant enough for the next step. The trends of these time series are illustrated for individual 1 (I1), individual 2 (I2), and individual 3 (I3) based on Pleasure, Arousal, and Dominance in Figure 1. In Figure 1, X-axis shows the number of days, and y-axis represents the value of mood trait. In Pleasure trait, from one individual to another, the trend of the time series observed to have different behavior. However, all of them followed a predictable trend. In Arousal trait for individual 1, it seems it follows a random trend and it is hard to predict its behavior. However, for individual 2 and 3, the trend is either increasing or decreasing which makes it feasible to easily predict Arousal trend for even long term predictions. In Dominance trait, two out of three trends seem to be predictable. Both of predictable ones follow simple seasonal time series type of trend. It suggests that Dominance trait might have common behavior in different individuals.

2.7.2. Mood state prediction by previous mood probability distribution. As seen in section 2.7.1., for two individuals one of the prediction trait was unknown. To estimate that specific trait for each individual, we may refer to mood history and its probability distribution. Table 3 is related to probability distribution of mood traits in previous days for all individuals. In Table 3, frequencies (Freq.),

Probabilities (Prob.), and individuals (I1, I2, and I3) are illustrated. In order to avoid zero values for the probabilities, we give 20% weight to those moods which were not appeared before, for that particular individual.

The final step is to choose one of these mood traits by random for each individual. Clearly, those with higher probabilities have more chance to be selected. For example, assume that for individual 1, “Anxious” is selected. Based on Table 2, Anxious has (-, +, -) PAD trait. For this individual, we were interested only to find Arousal trait since other traits are already estimated in section 2.7.1. for this individual. So “+” is selected for Arousal trait and by comparing to (-, ?, -) from section 2.7.1., the final prediction for this individual is (-, +, -) which corresponds to “Anxious”. Note that, if a mood trait such as “Relaxed” was selected by random, then it could effect the final answer.

For individual 2, (+, +, -) which corresponds to “Dependent” mood is already predicted in section 2.7.1. and there is no need for further investigation.

For individual 3, assume that “Exuberant” is selected by random from Table 3. Since for this individual the only trait which could not be predicted was Dominance trait, we are only interested in the third component of PAD. “Exuberant” has equilvant (+, +, +) trait. So “+” is predicted for the Dominance trait. Thus, the predcited mood is considered to have (+, -, +) which is equivalent to “Relaxed”.

Figure 1. Time series prediction of emotional states based on independent PAD traits

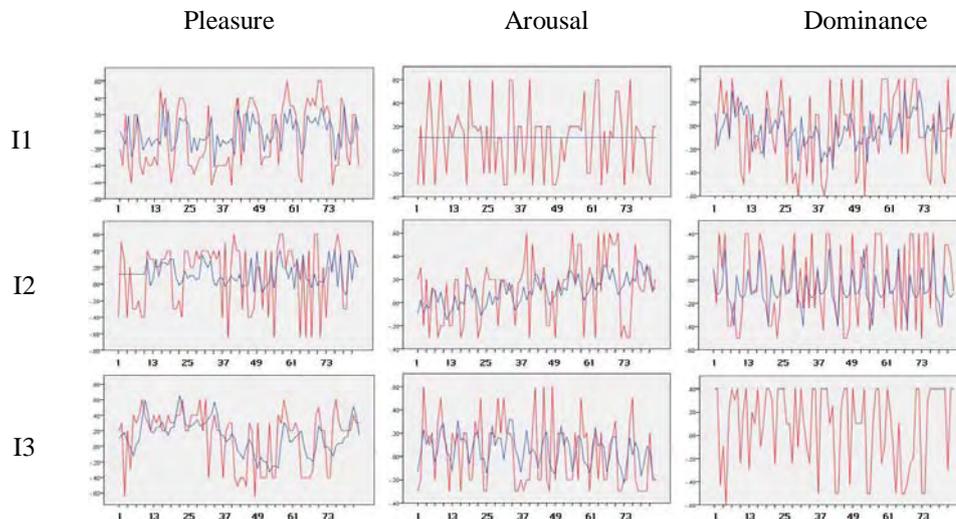


Table 3. Mood history probability distribution for all three individuals

mood traits	Freq. (I1)	Prob. (I1)	Freq. (I2)	Prob. (I2)	Freq. (I3)	Prob. (I3)
Exuberant	1	0.11	4	0.46	5	0.57
Dependent	2	0.23	2	0.23	0	0.04
Relaxed	1	0.11	0	0.04	0	0.04
Docile	0	0.07	0	0.04	1	0.115
Hostile	1	0.11	0	0.04	1	0.115
Anxious	2	0.23	0	0.04	0	0.04
Disdainful	0	0.07	0	0.04	0	0.04
Bored	0	0.07	1	0.11	0	0.04

3. Conclusion and disscussions

The method was applied on three individuals. The information related to their personality for once, and previous emotional states, hour by hour for twelve times a day in six days were recorded. All twelve emotional states for the seventh day were predicted by using time series forecasting modeling on emtional states of the previous six days for all individuals. Sixty number of data for each individual’s emotional states were good enough to have significant forecasting on the possible emotional states of the day seven. And finally, mood state of the eighth day was predicted by using updated mood history and predicted emotional state values of the seventh day.

The aim of this study was to shed light on the possible methods we may use to predict mood states with brief recorded data. Surprisingly, for these three individuals, without knowing any information of seventh day, the mood predictions at the end of seventh day was exactly the same as their actual mood states at the end of that day. Therefore this model might be considered as an alternative to predict mood state even in the long future. Although the prediction worked accidentally 100% accurate for this study, it doesn't mean it can predict it with no errors for other individuals since the number of individuals was too low and we considered randomness in selecting from mood history probability distribution. So, in order to have better understanding of effectiveness of such methods, some might consider taking much larger sample size to repeat these procedures once more. Taking larger sample size was out of scope of this study since there was not enough budget and volunteers to run this test on. Thus, it might be considered for the future research.

Beside suggesting a model to predict mood state with least possible number of data, interesting observations were made while predicting emotional states componentwise based on Mehrabian's PAD model. Pleasure component for all three individuals followed different but predictable trends. Arousal component for one individual was unpredictable while for other two individuals it either had decreasing or increasing manner in long term, suggesting that arousal trait might easily be predicted for long term in some individuals. Dominance component for all individuals was hard to predict in long terms but it was possible to find trends in two out of three individuals in order to predict this trait for the near future. To sum up, we have observed that Pleasure trait is predictable, Arousal trait can be predicted even for long terms, and Dominance trait can be predicted only for the near future. It should be also mentioned that there was not a global trend in emotional states for all individuals and each person should be studied separately since personalities, environment factors, values and goals for each person differs to another. In this research though, we have tried to generalize a model to predict mood state in the future by considering such differences in emotional states of individuals in order to find an input component as an influencing factor on decision making process in the future studies.

References

- Bowen, R. C., South, M. & Hawkes, J. (1994). Mood swings in patients with panic disorder. *The Canadian Journal of Psychiatry*, 39(2), 91-4.
- Daugherty, D., Roque-Urrea, T., Urrea-Roque, J., Troyer, J., Wirkus, S. & Porter, M. A. (2009). Mathematical models of bipolar disorder. *Communications in Nonlinear Science and Numerical Simulation*, 14(7), 2897-908.
- Egges, A., Kshirsagar, S. & Thalmann, N. M. (2003). A Model for personality and Emotion Simulation. *Knowledge-Based Intelligent Information and Engineering Systems*, 2773, 453-61.
- Gebhard, P. (2005). Alma: a layered model of affect. *In Proceedings of the fourth international joint conference on Autonomous agents and multiagent system*, 29-36.
- Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological assessment*, 4(1), 26-42.
- Kasap, Z., Ben Moussa, M., Chaudhuri, P., & Magnenat-Thalmann, N. (2009). Making them remember—Emotional virtual characters with memory. *Computer Graphics and Applications, IEEE*, 29(2), 20-29.
- Kazemifard, M., Ghasem-Aghaee, N., & Oren, T. I. (2006). An event-based implementation of emotional agents. *SIMULATION SERIES*, 38(4), 63.
- Mehrabian, A. (1996). Analysis of the big-five personality factors in terms of the pad temperament model. *Australian Journal of Psychology*, 48(2), 86-92.
- Mehrabian, A. (1996). Pleasure-arousal-dominance: A general framework for describing and measuring individual differences in Temperament, *Current Psychology*, 14(4), 261-292.
- Ortiz, A., Bradler, K., Garnham, J., Slaney, C. & Alda, M. (2015). Nonlinear dynamics of mood regulation in bipolar disorder, *Bipolar disorders*, 17(2), 139-49.
- Ortony, A., Clore, G. L. & Collins, A. (1990). *The cognitive structure of emotions*. Cambridge university press.



WORKSHOPS

AN INTEGRATED MINDFULNESS APPROACH TO DISORDERED EATING

Charlotte Thaarup-Owen
The Mindfulness Clinic (Australia)

Abstract

This research paper aims to fill a gap in the literature by reporting on the effects of an integrated, mindful eating program. The program 'The Dear Body - Loving the Body and Freeing the Mind' (The Dear Body), is currently offered in Australia and Bali as retreat programs. As Mindfulness becomes more accepted in the West, targeted applications are becoming more common. With obesity, stress and depression increasing in most Western cultures, Mindfulness offers a sound and comprehensive process for addressing these issues and generating positive change. This paper makes an important contribution to the exploration of the topic and its effectiveness.

Keywords: mindful eating, body-awareness, obesity, mindfulness, stress management.

1. Introduction

This paper investigates the effectiveness of a mindful eating intervention. Starting with the overview of relevant literature and the rationale for why such an intervention is considered important. The method and results are reported, followed by conclusions, implications and suggestions for further research. Obesity and related diseases are rising in most western societies. (WHO 2015). In Australia, it is reported that almost two in three Australian adults are overweight or obese (Australian Government 2016). Commonly, the obesity epidemic is seen as a result of 'individuals consuming more energy than they are expending' (Lowe, Butryn, Didie et al (2009) p. 114). This is being challenged by the likes of David Ludwig (2016), who has argued that the state of the body (whether it relaxed or stressed) when we eat, has influence over whether we gain weight nor not (Ludwig 2016).

1.1. Mindfulness and mindful eating

Mindfulness has been defined as a quality of consciousness, an awareness practice; more specifically defined as "paying attention in a particular way, on purpose, in the present moment, nonjudgmentally" (Kabat-Zinn, 2005). Mindfulness practice has been shown to enhance the activation within the pre-frontal cortex, leading to improved body regulation (heart rate, digestion), emotional balance, response flexibility, fear modulation, empathy and insight (perspectives) (Siegel 2013). On the other hand stress reduces the activation of the pre-frontal cortex. (Hanson 2013)

Mindful eating has always been part of general mindfulness programs. Recently however, work undertaken by in particular Kristeller (2014) and Chozen (2009) has elevated mindful eating to a stand-alone program, with the specific focus of reducing binge eating and weight, through increasing the awareness of eating, enabling a healthier relationship between one's body, weight and food.

1.2 Mindful eating program, 'Dear Body'

Gaps were identified in other mindful eating programs. First the lack of compassion embedded body focus, and the need for exercises to be tailored to the relationship with the body and food. Another gap was Positive Neuroscience; 'Taking In the Good' (Hanson 2103); a practice of enhancing and embedding positive experiences into the brain. The objective of this paper is to investigate the preliminary explorative outcomes of the program. The aim was to measure the effectiveness of the program in relation to participants changing their relationship with their body, food and eating towards a healthier one and to allow the program to be further developed based on these findings.

2. Method

2.1 Participants

Twenty-three participants answered the pre-course questionnaire and sixteen the follow-up questionnaire. There were twenty women and three men; the highest age was 67 years, the lowest 27 and the mean 44. The objective for participants attending the program was; 'wanting to lose weight'.

Participants were recruited through self-referral, advertising and word of mouth. There were no particular selection criteria for attending the program. All participants paid for the program and all completed it.

2.2. Methodology

2.2.1. Measures. The study was conducted through a combination of quantitative and qualitative research. The quantitative research was conducted through a pre and post questionnaire, using a series of standardized measures to measure stress levels, general psychological wellbeing, body appreciation, restraint ability, food cravings and self-compassion. Specifically the tools used were: Revised Restraint Scale (Herman & Mack, 1975), Mindful Eating Questionnaire (Fairburn, Beglin, 2008), Food Craving Inventory (White, Whisenhunt, Williamson et al 2012), Body Appreciation Scale (BAS) (Avalos, Tylka, Wood-Barcalow, 2005) Depression, Anxiety and Stress Scale (DASS21), and a Self Compassion Questionnaire (Neff, 2003). The DASS21 is a 21 item self-report questionnaire designed to measure the severity of a range of symptoms common to both Depression and Anxiety (Lovibond & Lovibond, 1995), this was included to determine any undiagnosed psychological illness. The qualitative research was a mix of conversations, emails, written feedback immediately after the program and closed group Facebook Mindful Eating community posts during and after the program.

2.2.2. Program. Overall The Dear Body program adheres to the basics of the Mindfulness Based Stress Reduction (MBSR), enhancing it with further insights from neuroscience, Cognitive Behavioural Therapy and Transactional Analysis. Basic information about a healthy diet, exercise, is also included. All practices and exercises are adjusted to suit the relationship with food, eating, and the body, and imbued with compassion. Included in the program is a handbook and audio mind training exercises. The program has six elements: 1. Attention training; which enhances ability to notice thoughts and is instrumental in impulse management (Goleman 2013). 2. Mindfulness of the Body; which shifts the attention from the externally defined relationship with the body to an increasing compassionate internal experience of the body. 3. Stress Management; essential when wanting to make changes (Siegel 2013). 4. Mindfulness of feelings; learning to be with emotions and knowing them as temporary visitors. 5. The binge/diet cycle; uses Transactional Analysis to understand the dance of the diet/binge cycle. 6. Taking in the Good. (Hanson 2013). (More on the program and a longer paper is available on request).

2.3. Procedure

Four different group programs were held, covering the same modules however the programs took place in different locations at different times. Participants filled in the questionnaire prior to commencing the program and then completed the questionnaires between 2 and 4.5 months after the program. Enrolment was online, followed by an email with the pre-course material. The questionnaire was completed during the first day of the program. After completion of the program participants are part of an email group as well as part of a private Facebook group.

3. Results

3.1. Quantitative data

The Perceived Stress Scale and the DASS21 showed no underlying psychological issues. Participants were high functioning as shown across all questionnaires, but had insecurities and negative evaluations of their bodies. The largest general deviation from the norm was the Body Appreciation Scale (BAS). To the question: 'I feel love for my body' only 23.1% initially said they seldom loved their bodies; at the end of the program more than 76% said they loved their bodies and felt comfortable in their bodies. According to the Food Craving Inventory (2002), 80% of participants reported awareness of what they are eating after the program.

3.2. Qualitative data

Consistent qualitative comments from participants during and post program formed four distinct themes, supported by the quantitative data. The first theme was the power of using the term 'dear body' when addressing the body. This was described as 'bringing me to a new relationship with the body'. The second theme was how much more mindfulness was practiced when integrated into a daily activity like eating. The third theme was that weight loss was considered a side effect to all the other benefits of mindfulness. The fourth theme was that after the program there was an increased inclination towards healthier food options. Emailed comments posted during The Dear Body Program included: 'I realized while filling in the mindful eating follow up survey, how much kinder I am being to myself?' 'I am finding that practicing mindful eating is enabling mindfulness practice frequently throughout the day'.

4. Discussion

The aim of the study was to explore if the program could result in participants having a healthier relationship with body, food and eating. Both quantitative and the qualitative data suggest this to be so. Participants have a better relationship with their bodies and food after the program. The deep and compassionate body focus brings about a more caring relationship with the body. Taking in the Good (TIG) bring into experience a state that is larger than the self, where new perspectives are possible and there is a sense of awe while mindful eating leads to more mindfulness practice.

4.1. Limitation of design and exploration

It is a limitation that participants attended programs of different duration, with no recognition of that fact in the design methodology. The same facilitator presented to all groups, so it is not known if the outcome is directly related to the program, the therapeutic relationship with the facilitator or a combination of these.

4.2. Importance of study and areas for further study

The importance of this study is to add to the explorations and dialogue of mindfulness, and in particular, mindful eating in relation to dealing with obesity and the overall relationship with food, eating and the body. Specifically, it is useful to have identified a group of people who are well functioning, but are not satisfied with their bodies. This provides guidance for future programs for this particular target group. Overall, it seems that there is a large potential for positively affecting the eating habits of people with obesity.

One option for further studies is comparing a program run over 7 weeks with these findings. Another would be to incorporate the online version in an evaluation process. And of course more longitudinal studies would offer a broader perspective on the effects.

5. Conclusion

It is an exciting time to be exploring and researching Mindful Eating, as this research is still in its infancy and has enormous potential. Based on this early study, mindfulness based interventions deliver results when it comes to changing the relationship between body, food and eating; but more data is required that is longitudinal and far reaching to support these results. Considering increases in obesity, stress levels and depression and the reported effectiveness of mindfulness practice to deliver antidotes for these problems, there is no doubt there will be an increased focus on what mindfulness programs can offer, in relation to the relationship with our bodies, weight, food and eating.

References

- Australian Government (2016) Overweight and obesity. *Australian Authoritative Information and Statistics to promote better Health and Wellbeing* (AIHW). Retrieved (February 6, 2016) from, <http://www.aihw.gov.au/overweight-and-obesity/>
- Chozen Bays, J. (2009) *Mindful Eating: A Guide to Rediscovering a healthy and Joyful Relationship with Food*. USA: Shambala Publications.
- Goleman, D. (2013) *Focus, The Hidden Driver of Excellence*. USA: HarperCollins.
- Hanson, R. (2013). *Hardwiring Happiness*. UK: Random House Group
- Herman, C.P., Mack D. (1975). Restrained and unrestrained eating. *Journal of Personality*. 43:647–60.
- Kabat-Zinn (2005). *Wherever You Go, There You Are: Mindfulness Meditation in Everyday Life*. New York: Random House
- Kristeller, J. (2014). MB-EAT training. Belgium.
- Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for Depression Anxiety and Stress Scales*. (2nd. Ed.) Sydney: Psychology Foundation
- Lowe, M., Butryn, M., & Didie, E. (2007) Appetite; The Power of food scale of the psychological influence of the food environment. *Physiology & Behavior*. 91 (2007) 432–439
- Ludwig, D. (2016). *Always Hungry*. Australia: Orion Publishing Group
- Siegel, D. (2013) *Mindsight, Change Your Brain and Your Life*, Australia: Griffin Press.
- Tylka, L., Wood-Barcalow, T., & Nichole, L. (2014) The Body Appreciation Scale-2: Item refinement and psychometric evaluation. *Elsevier, Body Image* 12 (2015) 53-67

MEANINGFULNESS OF LIFE AND ITS IMPACT ON QUALITY OF LIFE

Shulamith Kreitler

School of Psychological Sciences, Tel-Aviv University (Israel)

Abstract

The purpose was to study the impact of meaningfulness of life (MOL) on one's quality of life (QOL) in middle-aged individuals. After introducing the construct of MOL and the common scales used for its assessment, the suggestion is made to broaden the grounding of MOL from the context of personality to cognition. The hypotheses were that MOL would be related positively to QOL both on the general level and in the specific domains of emotional state and functional state but not with those referring to physical state. The sample consisted of 75 individuals, in the age range 30 to 55, of both genders. They were administered the meaning-based scale of MOL (Kreitler, in press) assessing the degree to which different domains contribute to one's MOL and The Multidimensional Quality of Life Inventory for Adults (Kreitler & Kreitler, 2006). The results showed that MMOL was correlated positively with QOL total score and the scores referring to emotional state, functional state and physical state. The size of the correlations was highest in regard to emotional state and lowest in regard to physical state. The findings suggest that the impact of OL on QOL depends to some extent on the degree to which the individuals feels he or she has control over the specific domain, i.e., more on emotions than physical state. Enhancing one's state of efficacy and self-control may extend the impact of MOL on QOL.

Keywords: *meaningfulness of life, quality of life, meaning.*

1. Introduction

In recent years there has been a surge of interest in the concept of meaningfulness of life (MOL), which has often been considered as a resource for overcoming hardship, moderating the effects of traumata, facilitating coping and enhancing the ability to enjoy life (Crumbaugh & Maholick, 1964; Ryff, 1989). The most commonly used instruments for assessing MOL are the Life Regard Index (Battista & Almond, 1973), the Life Attitude Profile-Revised (Reker, 1992), Meaning in Life Questionnaire (Steger et al., 2006), Sense of Coherence scale (Antonovsky, 1987), Purpose in Life test (Crumbaugh & Maholick, 1964), Purpose in Life Scale (Ryff, 1989) and Meaning in Life Questionnaire (Schnell, 2006). Notably, many of the mentioned scales require the respondents to provide overall evaluations of their life's meaningfulness by means of items referring to qualities such as the authenticity, richness, self-actualization and overall meaningfulness of one's life. Most of the MOL scales are based on the conception of MOL as a basically positive construct, reflecting a rich, interesting, authentic, creative, energetic, goal-directed, adventurous, or satisfying life. This conception is supported by the underlying assumption that MOL fulfills a basic human need, grounded in the search for meaning. Its fulfillment leads to a good quality of life, mental health and happiness whereas its non-fulfillment brings about crisis of meaning, depression, low quality of life, dissatisfaction, despair and often existential void (Frankl, 1963). The conceptual framework in which MOL has been commonly investigated up to now is that of personality, positive psychology, and self-actualization with an emphasis on coping with adversity and well-being. Thus, Frankl (1963) anchored meaningfulness in finding value – by acts of creativity, by sensory experiences or novel attitudes; Snyder (Feldman & Snyder, 2005) emphasized the pivotal role of self-control which allows individuals to feel that they can effectively manage their life so as to attain their goals; Becker (1962) highlighted the role of MOL in overcoming death anxiety; and Baumeister and Wilson (1996) claimed that meaningfulness is rooted in the four basic needs for meaning: sense of purpose, efficacy, value and a sense of positive self-worth. In the present study this approach to MOL is complemented by a cognitively-based approach to the conceptualization and assessment of MOL. The new scale - Meaning-based scale for the Meaningfulness of Life (MMOL) – is grounded in the system of meaning (Kreitler & Kreitler, 1990), and enables assessing the specific domains and actions on which one's MOL is based, such as actions, emotions, functions, thinking, or possessions. A previous study (in press) showed that the number of domains checked as existing in one's MOL correlated positively with

the overall rating of meaningfulness in one's life as well as with the overall QOL. Further, the majority of the domains checked as contributing to MOL corresponded to those existing in one's MOL and to those reflecting the individual's general meaning assignment tendencies. Thus, MOL is a tool with validity, providing both a general evaluation of meaningfulness in one's life and a specification of the domains of content that constitute one's MOL.

2. Objectives

The purpose of the study was to explore the relations between MMOL and QOL. A previous study (Kreitler, in press) showed that in a sample of students MOL was related to QOL assessed only in terms of a total score. In the present study we used a sample of middle-aged individuals and assessed QOL in terms of a full scale with specification of 15 domains. The hypotheses were that the number of domains checked by the person as constituting one's MOL would be correlated with one's QOL, both the overall score and specific domains. Positive correlations were expected for the overall score and the domains reflecting one's emotional state (e.g., positive feelings, low negative feelings, fun, motivation), and one's functional state (e.g., sense of mastery and independence, work, social functioning, cognitive functioning, self esteem). No correlations were expected for the domains of one's physical state (e.g. body image, basic needs, physical state, low stress).

3. Design

The design of the study corresponded to a correlational cross-sectional paradigm.

4. Methods

4.1. Participants

The subjects were 75 individuals, in the age range of 30 to 50, including 45 women and 30 men.

4.2. Tools

Three tools were used: 1. The meaning-based scale of the MOL (MMOL). It included 38 items, each of which corresponded to one domain of contents (called meaning dimension). The subjects were asked to check in regard to each item how much it contributed to their MOL: a lot, moderately, a little, not at all. Examples of items: Being active, doing things, performing things; Feeling that I belong to something or someone; Developing, being in a state of development, feeling that I develop, that my life develops. The score was based on counting the number of domains marked as contributing to one's MOL a lot or moderately. The reliability is Cronbach's alpha $r=.76$. 2. The Multidimensional Quality of Life Inventory for Adults (Kreitler & Kreitler, 2006). The questionnaire included 63 items referring to different domains, such as positive emotions, negative emotions, stress, basic needs, mastery and independence, social functioning, and cognitive functioning. The Cronbach alpha reliability coefficient was .87. The subject was required to check the frequency of occurrence of each item (very often, often, sometimes, rarely). The responses were summed across all items, coded in the direction oriented toward a good QOL, as well as for each of the different domains. 3. A background information questionnaire in which the subject was asked to state one's gender, age, country of birth, occupation and marital status.

4.3. Procedure

The tools were presented to the participants together, in random order, with the background information questionnaire at the end.

5. Results

The results were calculated for the whole sample together because control analyses showed no significant results for the relations between the major variables of the study with the demographic ones.

Table 1 presents the means and Sds for the major variables in the study as well as the Pearson correlations between MMOL and the QOL scores. The major findings refer to Pearson correlations. The number of domains checked as contributing a lot or moderately to one's MOL was correlated positively with the overall score of QOL as well as with the scores for the three clusters of QOL scales: those denoting the subject's emotional state, functional state and physical state. The highest correlation was obtained for MMOL with the emotional state scales, the lowest with the physical state scales. Checking the results for the single scales composing the scales of the physical state showed that only the scale of low stress was correlated significantly with MMOL ($r=.31, p<.01$).

Table 1. Means and standard deviations of the main variables in the study: MOL, QOL total score, emotional state scales, functional state scales, physical state

Statistics	MMOL (contribution to MOL)	QOL total score	Emotional state scales	Functional state scales	Physical state scales
Mean	13.4	2.5	2.1	2.3	1.9
Standard deviation	2.5	0.9	0.6	0.3	0.6
Correlations of MMOL	----	.59***	.62***	.41***	.25*

***p<.001 *p<.05

6. Discussion

The findings provide support for a part of the hypothesis. As expected, they show that the number of domains checked as contributing to one's MOL is correlated with the total score of one's QOL as well as with the scores representing the scales of one's emotional state and one's functional state. However, contrary to the expected, the findings show that also the scales denoting one's physical state were correlated positively with MMOL. Thus, the results support the conclusion that the breadth and richness of one's MOL are related positively to one's overall QOL as well as to all major aspects that constitute one's QOL – the emotional, functional and physical. Additional information is provided by the relative size of the correlations. The highest relation is between MOL and the emotional state, lower with the functional state and lowest with the physical state. Since it is likely that an individual experiences consciously more control and self-regulation in regard to one's emotional state than in regard to one's behavior and least control over one's physical state, it appears that the impact of MOL on one's QOL is to some extent a function of the degree to which one evaluates having control over the specific domains. This conclusion does not imply that the individual actually has more control over one's emotions than over one's behavior or physical state. But it probably indicates that in order to enhance the beneficial impact of MOL on QOL it is advisable to strengthen one's sense of control over one's emotions, behavior and physical health. In other words, when a person feels that he or she can control themselves, their MOL is enhanced as well as its positive impact on QOL. Notably, this conclusion supports the claims made by Snyder (Feldman & Snyder, 2005) and by Baumeister (Baumeister & Vohs, 2002) in regard to MOL.

The findings of the study provide further support also for the validity of the MMOL scale in a sample of middle-aged individuals and for its contribution to assessing MOL on the more general and more specific levels.

References

- Antonovsky, A. (1987). *Unraveling the mystery of health: How people manage stress and stay well*. San Francisco: Jossey-Bass.
- Battista, J., & Almond, R. (1973). The development of meaning in life. *Psychiatry*, 36, 409–427.
- Baumeister, R.F., & Wilson, B. (1996). Life stories and the four needs for meaning. *Psychological Inquiry*, 7, 322–325.
- Becker, E. (1962). *The birth and death of meaning*. New York: Free Press.
- Crumbaugh, J. C., & Maholick, L. T. (1964). An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. *Journal of Clinical Psychology*, 20, 200–207.
- Feldman, D.B., & Snyder, C.R. (2005). Hope and the meaningful life: Theoretical and empirical associations between goal-directed thinking and life meaning. *Journal of Social and Clinical Psychology*, 24 (3), 401–421.
- Frankl, V. E. (1963). *Man's search for meaning: An introduction to logotherapy*. New York: Washington Square Press.
- Kreitler, S. (in press). Meanings of meaningfulness of life. In A. Batthyany (Ed.), *Yearbook of logotherapy*. Vienna, Austria.
- Kreitler, S., & Kreitler, H. (1990). *Cognitive foundations of personality traits*. New York: Plenum.
- Kreitler, S., & Kreitler, M.M. (2006). Multidimensional quality of life: A new measure of quality of life in adults. *Social Indicators Research*, 76, 5–33.
- Reker, G. T. (1992). *Life Attitude Profile – Revised*. Peterborough, Canada: Student Psychologists Press.
- Ryff, C. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069–1081.
- Schnell, T. (2009). The Sources of Meaning and Meaning in Life Questionnaire (SoMe): Relations to demographics and well-being. *Journal of Positive Psychology*, 4, 483 – 499.

WORKSHOP: COGNITIVE BEHAVIORAL THERAPY FOR OBSESSIVE COMPULSIVE DISORDER

Omar Rahman & Adam Lewin

University of South Florida (USA)

Abstract

Purpose: Cognitive behavioral therapy (CBT) has demonstrated very good effectiveness for the treatment of obsessive compulsive disorder (OCD). In many cases, it is recommended as the first line of treatment for OCD (e.g. mild or moderate OCD, children). The reasons for this are several: expertise in providing CBT specifically for OCD is often lacking amongst mental health professionals. There is also a lack of awareness of research finding about the effectiveness of CBT vs. pharmacological treatment. This workshop will help mental health professionals develop skills in providing CBT specifically for OCD in children and adults.

Background: OCD is an anxiety disorder characterized by obsessive thoughts or feelings that are intrusive and cause significant distress, as well as compulsions that can be physical or mental. For many patients, these symptoms may be chronic. Impairment related to OCD can range from mild interference in daily functioning to profound disability. Pharmacological treatment for OCD is often effective, but typically provides a partial response and rarely leads to remission. Moreover, it can come with significant side effects. CBT, alone or in conjunction with OCD, has been demonstrated to be an essential component of effective OCD treatment.

CBT for OCD is considered a specialized form of CBT that requires specific expertise. Some typical CBT techniques (e.g., cognitive reappraisal) can be counter-indicated for treatment of OCD. Effective CBT for OCD employs Exposure and Response Prevention, which often provides a strong and rapid response. This technique should be used as the primary intervention for OCD.

Key points: This workshop will cover implementation of evidence-based CBT for OCD in adults and children. Strategies will include Exposure and Response Prevention, effective cognitive strategies, identification of OCD behaviors, and relapse prevention. We will also briefly discuss pharmacological evidence for treatment of OCD. We will also briefly discuss related ongoing research in this area currently being conducted in our center. This workshop will be delivered by an expert in the treatment of OCD, with several years of specialized training and experience in treating OCD, as well as in conducting original empirical research in OCD and related disorders.

Description of the participants: Participants will be mental health professionals (psychologists, psychiatrists, therapists, counselors, etc.) who wish to develop skills in providing effective cognitive behavioral therapy for OCD. Maximum number will be 60.

Keywords: *obsessive compulsive disorder, cognitive behavioral therapy, exposure and response prevention, anxiety.*

AUTHOR INDEX

Abiog, L.	248	Dória, A.	16
Adamczyk, K.	341, 360	Dufresne-Tassé, C.	70
Akcay, N.	382	Erdener, D.	137
Alegre, J.	248	Eremina, D.	148
Almeida, L.	239	Eric, M.	355
Álvarez, A.	293	Faßbender, R.	377
Amado, C.	290	Faustova, A.	300
Argun, A.	157	Fehling, K.	315
Bagherian, F.	363	Ferrer-Cheng, P.	152, 306
Bahtiyar, B.	183	Fışiloğlu, H.	178
Ballon, N.	207	Flood, K.	55
Balsam, K.	318	Fontaine, A.	245
Baria, E.	226	Fontaine, R.	110
Barrault, S.	207	Fouquereau, E.	3
Baumann, M.	26, 65	Fowler, S.	188
Belotti, R.	287	Freeman, E.	212
Berinšterová, M.	254	Fuentes-Rojas, M.	241, 303, 309
Bernardi, M.	336	Fukukawa, Y.	312
Best, L.	55, 143, 296	Gabora, L.	251
Bitsch, J.	152, 306	Gago, N.	85
Bochaver, A.	276, 333	Galan, C.	207
Boone, M.	296	Gašević, G.	221
Boroughs, M.	324	Gaudet, D.	55, 296
Borsini, C.	367	Geisser, S.	315
Bosco, N.	36, 216	Gençöz, T.	183
Both, L.	188	Giaccherini, S.	36
Braginets, E.	276, 333	Gillet, N.	3
Brandão, C.	10, 16	Goggin, C.	296
Brutovská, M.	321	Gopher, D.	132
Buhay, D.	296	Gozhaya, E.	279
Byrne, S.	244	Grall-Bronnec, M.	207
Caissie, L.	296	Grotheer, M.	290
Carbonneau, N.	273	Guazzini, A.	36, 216
Čarija, M.	221	Guidi, E.	36, 216
Carlsson, I.	122	Hermann, P.	290
Carneiro, C.	231	Höfler, M.	377
Carnelli, L.	336	Hoskovcová, S.	105
Cassoni, C.	245	Huyghebaert, T.	3
Castel, P.	226	Ilagan, G.	198
Chen, Q.	117	Ischebeck, A.	377
Chérif, L.	299	Jokić, T.	355
Colombat, P.	3	Joly, C.	226
Cornelius, C.	193	Jonas, S.	152, 306
Corradini, I.	282	Joung, Y.	330
Correia-Zanini, M.	245	Jusoh, S.	90
Costa, J.	239	Karathanasi, C.	26, 65
Courtois, R.	207	Khan, A.	202
Davidson, P.	122	Kim, K.	330
Davis, L.	143	Kim, M.	330
Deyneka, O.	50	Kobzev, D.	5
Di Mattei, V.	336	Konshina, T.	40
Dias-da-Costa, C.	31	Kosnin, H.	202
Dimitrijević, B.	355	Kotlyarova, L.	5
Dmitrieva, N.	276, 333	Kovács, G.	290
Domjan, A.	167	Kovács, P.	290

Kozhukhar, G.	279	Petrović, D.	355
Kranzler, A.	315	Pezzica, E.	287
Kreitler, S.	172, 392	Pflum, S.	318
Krejčová, L.	105	Polias, S.	100
Kulanová, M.	267	Proctor, C.	143
Kuroishi, N.	261, 284	Puddu, L.	372
Labonté, K.	299	Raffagnino, R.	372
Lacassagne, M.	226	Rahman, O.	177, 395
Lahiani, F.	3	Ramos, E.	10
Lepeltier, S.	110	Ramos, R.	152, 306
Leutwyler, B.	355	Reznichenko, S.	276, 333
Lewin, A.	177, 395	Roberts, P.	80
Lilly, S.	143	Rodrigo, M.	85, 244, 257
Lukács, A.	267	Rodríguez, J.	257
MacDonald, E.	315	Rodríguez-González, L.	293
Macedo, L.	75	Sadovnikova, T.	45
Machado, T.	21, 31	Sakmar, E.	178
Madeddu, F.	336	Salvano-Pardieu, V.	110
Maintenant, C.	136	Samuelsson, J.	122
Makarova, O.	351	Sano, Y.	261, 284
Makino, K.	258	Santos, A.	162
Mandelbaum, B.	216	Santos, L.	309
Mangili, G.	336	Santos, M.	309
Marano, A.	282	Santos, S.	85
Marois, A.	299	Segrin, C.	341
Martinelli, C.	226	Selby, E.	315
Martinent, G.	127	Severy, N.	60
Marturano, E.	245	Shafikhani, M.	363
Mazzetti, M.	336	Shenoy, V.	95
McMurray, I.	80	Shokri, O.	363
Medyanik, O.	270	Shroufi, A.	60
Mehraei, M.	382	Silva, J.	21, 31
Meneses, A.	303, 309	Silva, S.	75
Meringolo, P.	36, 216, 367	Spitalewitz, C.	318
Mičič, S.	112	Sta. Maria, M.	100
Miguel, J.	21	Stevens, D.	15
Mikolajczyk, R.	267	Suárez, A.	85, 244, 257
Milyavskaya, M.	273	Sysoeva, E.	5
Miovsky, M.	267	Tan, M.	117
Miyamoto, T.	327	Testa, R.	318
Mordacci, R.	287	Thaarup-Owen, C.	389
Moutsinas, G.	346	Tiamzon, E.	248
Nachiappan, S.	90	Tran, U.	142
Nakamura, M.	312	Tricard, E.	136
Nartova-Bochaver, S.	276, 333	Vachon, F.	299
Nogueira, A.	239	Van Cutsem, G.	60
Nogueira, S.	239	Velandia-Coustol, C.	226
Novo, R.	162	Verma, V.	95
O'Cleirigh, C.	324	Verneau, Q.	127
Odero, A.	26, 65	Vidnyánszky, Z.	290
Ogliari, A.	287	Voracek, M.	142
Oh, Y.	330	Vukman, K.	112
Ohtaka, M.	264	Wang, Y.	117
Onoguchi, W.	312	Womersley, G.	60
Orosová, O.	254, 267, 321	Yordamli, A.	137
Pennequin, V.	127, 136	Zhao, J.	117
Pereira, P.	21	Ziegelbaum, B.	318
Petkeviciene, J.	267	Zlatković, B.	355