

Generativity and life satisfaction of active older people: Advances (keys) in educational perspective

Jose-Manuel Muñoz-Rodríguez
Sara Serrate-González
Ana-Belén Navarro

University of Salamanca

Through the theoretical framework of pedagogy and education as an instrument of social and personal development, this study addresses two key issues for the construction of a mature-older person's identity, namely, generativity and life satisfaction. The main aim here is to explore the generative interest and life satisfaction of a group of mature-older university students and verify whether the years linked to the program and the rate of participation in other types of social agencies and institutions have a positive impact on both constructs. The sample comprised 347 subjects, who were administered the Loyola Generativity Scale – LGS and the Satisfaction with Life Scale – SWLS. The results show that level of education and rate of participation have a positive influence on generative interest, while health, marital status and time linked to the higher education program have a positive effect on life satisfaction.

Keywords: generativity, quality of life, adult education, ageing, university programs for seniors

Introduction

There are currently different approaches to coping with the ageing process in the best and most appropriate way. Those initiatives involving a return to university for older individuals today encompass programs of scientific, cultural, technological and social education, constituting an effective way of improving active ageing, a better quality of life, and avoidance of dependence (Ortiz-Colon, 2015).

This research is informed by the notion that university programs for seniors, such as the one that has been held at Salamanca University for more than twenty years, are an educational and instructional strategy designed to respond to a series of social, cultural, educational and personal objectives. They include the following highlights (Lorenzo, 2003; Serdio, 2015): favouring personal development from the perspective of lifelong training; furthering a better understanding of one's own environment to make the most of society's options in education, culture and leisure, and improving the quality of life of older people through the knowledge and relationships forthcoming within the university setting and driving the development of interpersonal and intergenerational relationships, facilitating the sharing and transfer of knowledge, experiences and values.

Specifically, the Inter-University Program for Seniors is a project involving scientific, cultural and social development designed to provide a university education for people over the age of 55. It is a regional initiative that pursues the same goals and applies the same academic structure across the universities in the autonomous community of Castilla y León (Spain). Each student enrolling in the program, which extends over three academic years and involves a total of 240 hours, studies a series of subjects taught by university lecturers in the different branches of knowledge, encompassing humanities, science, history and arts, in all cases adopting a dynamic and topical perspective. At the end of the three years, students may remain in the program over the subsequent years through academic itineraries lasting around 40 hours per course.

The theoretical approaches and perspectives reflected in the text, supported by the empirical results found in the study, seek to explore the effect that university programs have on the life satisfaction of older people in the development of generative attitudes understood to be the

interest in guiding and ensuring the well-being of future generations (González-Celis, & Mendoza, 2016; Villar, López, & Celdrán, 2013).

Theoretical and conceptual underpinnings

Older people today, their profile, and their personal and social characteristics have all changed in recent years, insofar as developed countries are concerned. This change has gone together with an increase in numbers, a higher quality of life in developed countries and, therefore, longer life expectancy, with the enjoyment of better and more robust health. We are therefore witnessing a higher life expectancy and quality of life among older people, with the ensuing increase in the number of active older people (IMSERSO, 2012).

In view of this, for some time now educational actions and thinking linked to adulthood and old age have been reappraising their lines of interest, initiatives, studies and educational practices (Azofeifa, 2017; Díez, 2016; Serdio, 2015; Sianes-Bautista, 2015). What were once aspects associated with leisure, such as free time, care and entertainment have now made way for approaches that, although may admittedly not have greater educational purpose, do have a broader scope and complexity for the development of an adult's identity. The so-called knowledge society and learning and instructional models associated with the principle of lifelong education, which allow access to knowledge at any age and within any scenario (and even the possibility of building and handling knowledge), enable older individuals to take part in the educational processes; building their own personal and collective identity, whereby we may refer to a new culture of adulthood that, in turn, requires identifying and studying new ambits of knowledge, whose educational drift is heading in directions of great pedagogical interest.

These are the different active ageing or successful ageing programs, targeting older people, which have been reviewing their approaches and rationale (Fernández, García, & Pérez, 2016). Indeed, these programs pursue objectives that seek a student's active, critical and even transformative involvement, and not simply the assimilation of content. Therefore, the contents are conceptual, procedural and attitudinal, including current research topics such as learning content. In methodological terms, approaches such as service-based learning

and problem-based learning have become part of the fabric of these programs through active, participative and collaborative learning strategies, with these and other active learning initiatives being appraised through the specific norms for assessing any system of teaching and learning.

These principles associated with objectives, content and methodologies are preceded by a rationale linked to spheres of knowledge that although not pedagogical per se, but instead pertaining to the field of Psychology, from different areas of development, gerontology, social, etc. – open pertinent perspectives and theoretical frameworks for Pedagogy, permitting an understanding of older people through their possibilities of change and learning. One of them is generativity, understood not only as an older person's contribution to the common good and social development, but also involving a component of personal satisfaction and development (Hofer, Holger, Au, Polácková Solcová, Tavel, & Wong 2014).

There are three moments that we can single out in the development and study of generativity. In first place, the original elements that began to give shape to generativity were described by Erikson (1970; 2000), who linked it to maturity, whose practice provides support for dealing with the stage of old age in adulthood, encompassing aspects such as care, procreativity and productivity. It refers to a mature person's need to feel wanted, and how maturity requires the backing of everything life has produced and should be safeguarded. The idea is to nurture it through care and attention in relation to others.

More recent studies approach the concept by addressing not only biological or family-related aspects, but also technical issues related to skills, as well as procedural and cultural features, considering the collective's potentialities and cultural manifestations, which Kotre has referred to as collective meaning systems (Kotre, 1984). Along with Kotre, McAdams (McAdams, Hart, & Maruna, 1998) adds generativity as a key element in the process of identity building, proposing a multifaceted model of generativity. In turn, Bradley (1997) refers to the generativity status model, including the concept of the vital involvement of the self in relation to others, and of inclusiveness, extending the concept to those people on the fringes of society.

Finally, the current discussion, closer to empirical studies on adult development, situates the debate around particularly relevant aspects,

opening research perspectives and possibilities for other fields of knowledge, as in our case involving Pedagogy. The interaction between stagnation and generativity (Van Hiel, Mervielde, & De Fruyt, 2006), studies on adult rejection and the vital need for generative practice (Peterson, & Duncan 2007), developmental studies on generativity (Stewart, & Vandewater 1998), their connection with psychological well-being and the performance of certain roles (Evans, 2009); studies on the intergenerational and transgenerational aspects associated with generativity (Ochoa de Alda, 2004), or basic research studies on the theoretical maturity of the concept itself, mark out the path for conducting research from other scientific fields, proposing 'the construct of generativity as one of the more suitable candidates for the conceptual integration of studies on adult development' (Zacarés, & Serra 2011, p. 85).

Understanding generativity or a generative action from an educational perspective requires returning to the inevitable primary processes of education in which we encounter the human, biological and social roots of an older person that needs culture to live. We therefore understand education to be a component of identity and as an event in their network of interactions, for their empowerment (Gonçalves Barbosa, & García del Dujo, 2016). It is that same need that contains certain concepts that are essential for understanding the generative action from a pedagogic viewpoint. The first of these is the concept of identity, which is linked to an older person through the always unfinished business of their education. To speak of an older person's identity is to refer to identities in plural, an adult self that has been moulded by its adjustment to the different settings and people in which and with which they have coexisted, where the older person seeks to respond to those personal and social contributions to which generativity refers (Miralles, & Alfageme, 2015).

Throughout their lives and in a shared journey with the process of identity building, adults have experienced a double process: an original, almost inalterable one of building an idea of oneself; the other, changing, discontinuous, in that becoming a person is not something that is set in stone, inalterable, but instead requires minor processes of identity rebuilding, where the generative aspect in older people lies at the core of understanding their existence and, in short, their life.

That is where the concept of bonding, with the other and with other things, acquires its central role. Not only about the concern of the people

with whom they coexist and for whom they wish to bequeath worthy futures, but also understood in relation to older people's social processes of participation, interaction and activation. Speaking of generativity and older people means doing so not so much as a simple problem, of purely time management on the older person's part. It is a complex human and social issue, of conflicts of interest in the adult and decision-making, whose responses are not considered in terms of mere relationships, but instead in complex binding narratives, based on attachment, between adults and different times and places, events and social life processes. They are all elements that, from an educational point of view, explain generativity in older people and lay the foundations for it (Ruiz, Calderón, & Torres 2011). This allows overcoming the negative view of the final stages of adulthood, insofar as a resource to be managed, and becomes understood as an active, productive agent that is personally and socially involved.

We would be unable to make sense of the above if we did not interpret an adult's primary education processes from a necessary psychosomatic, biological-cultural unity, broken down from its different manifestations and dynamisms. Some scholars (Kotre, & Kotre 1998; González-Celis, & Mendoza, 2016) differentiate between four types of generativity: biological, family-related, technical and cultural. According to our own view and interest, namely, an educational perspective, it is precisely the interconnection between the biological, technical and cultural that enables us to perceive the scope that generativity may have in an adult for educational purposes. 'Culturally speaking, generativity involves both tradition and innovation, both retaining what seems valuable and transforming what needs to be improved, with the common goal of fostering the well-being and development of future generations' (Zacarés, & Serra, 2011, p. 86). Studies in adulthood call for approaches from multidimensional perspectives of human life, accepting the indissolubility of the biologically determined and culturally demanded adult to truly imbue the generative activity with meaning. The cultural demand associated with age transforms the adult into a capable, responsible, mature and proactive individual.

This requires reconsidering the adult's generative practice with a view to understanding it through its mediating role in social and educational practices, in short, in cultural practices and not only personal ones, associated with the merely biological side of oneself and the other.

This convergence enables us, in turn, to overcome an objective view of culture, as a framework for understanding generativity, and locating it in terms of an adult person's primary development process, encompassing the possibility and process of cultural incorporation, which in a mature stage of adult development and evolution are linked to quality of life (Villar, 2012).

The convergence of generativity, autonomy and responsibility is endorsed insofar as everything that implies generative action by the older person is determined by their capacity for autonomy and their level of responsibilities as basic, core concepts in any process of individual personal construction. Because adults are autonomous, capable of adjusting their own behaviour, they may be responsible, free, and conscious of the personal and social consequences their actions may have (Ruiz, Bernal-Guerrero, Gil, & Escámez, 2012). Based, therefore, on autonomy, responsibility is a value to be found in an adult's consciousness, enabling them to think, manage, value and guide any action or practice in terms of generativity.

Prior studies conducted along these lines have reported that more generative individuals have a higher level of education and academic attainment (McAdams et al., 1998), and this usually involves caring people that take part in social and community institutions (González-Celis, & Mendoza, 2016). It is also important to mention studies that have shown that adaptive mechanisms on health and generativity have a positive impact on social ties (Arias, & Iglesias, 2015; Lang, Staudinger, & Carstensen, 1998). It would be interesting to explore the effect that taking part in an educational program has on both generative interest and on satisfaction with life.

We present a study whose purpose is to explore the generative interest and life satisfaction of a group of mature-older university students and verify whether the years the students have been linked to the university program and the rate of involvement in other kinds of social agencies and institutions have a positive effect on both constructs. From our perspective, we stress the need to discover the extent to which these types of educational initiatives help develop generative attitudes and develop the mature-older person's personal and social identity, and how all these impact upon people's satisfaction and improve their quality of life.

Accordingly, there are two specific objectives underpinning this study:

- To verify the nature of the generative interest and life satisfaction of a group of mature-older university students and whether they differ depending on gender, level of education, marital status and subjective health.
- To discover whether involvement in the program, depending on the years linked to it and the degree of participation in other kinds of institutions, signals more or less generative interest and life satisfaction.

Method

The chosen design for the research is of a quantitative nature using a non-experimental method (Kerlinger, & Lee, 2002), resorting to the descriptive-correlational method through the study of surveys (Berends, 2006). The descriptive parameters were based on an analysis of frequencies. Analyses of variance (ANOVAs) were conducted to identify the differences in generativity and life satisfaction according to gender, level of education, marital status and subjective health. Finally, ANOVAs were also used to discover whether taking part in the program indicates more or less generative interest and satisfaction with life. All the statistical analyses were conducted using the SPSS 22.0 program, accepting a 95% level of significance.

Participants

The people taking part in these university programs for mature-older people generally share a common interest in keeping their minds active as a way of preventing cognitive impairment and responding to the everyday need to occupy the free time provided by their present socioeconomic and cultural circumstances (e.g., early or pre-retirement, unemployment, etc.) (Serrate, Navarro, & Muñoz 2017). Although these kinds of programs initially catered for people over the age of 65, who had mostly passed the age of retirement, those currently taking part in the program are increasingly younger adults that are still of working age and combine these types of activities with others of a diverse nature, such as working for voluntary associations. The participants' profile in terms of sex reveals a prevalence of women over men, and about

education there are both those people with no higher education that are attending university for the first time and those that already have occupational training or further education.

The cohort consisted of 347 mature persons (aged 55–65) and older ones (over 65) enrolled on the courses for those aged 55 and over, called Inter-University Program for Seniors, at Salamanca University, selected by non-probabilistic casual or incidental sampling. This program started 25 years ago. Their ages ranged between 55 and 89, with an average age of 68.03 ($SD = 6.57$); 66% were women (230 participants) and 34% men.

In terms of marital status, there was a prevalence of married persons (57%), widows/widowers (22%), and a lower percentage of single people (13%) or those separated or divorced (8%). In terms of level of education, 39.7% had secondary studies, 30.5% had primary studies, and a similar percentage had higher education (29.8%). Most of the participants lived with their families (65.5%), and 33.2% lived alone.

Regarding the time spent in the program, over half the sample has been involved for less than five years (60.1%), which means that 39.8% have been linked to this university program for more than five years. The participation rate shows that 45.1% of the sample tends to carry out activities at least once a month, 25.1% takes part once or twice a week, while 24.3% state that they never participate in an institution or association. There are, nonetheless, 5.5% that take part daily (22%). Neighbourhood associations and senior day centres (19%) are the focus, and to a lesser extent, 4.6%, political associations and labour organisations.

Instruments

Generativity was measured through the Loyola Generativity Scale – LGS (McAdams, & St. Aubin, 1993 validated by Villar, López, & Celdrán, 2013) with a view to studying generative interest in the adult population. It comprises 20 items with a four-point Likert-type answer scale (where 0 = never and 3 = almost always). The overall score ranges from 0 to 60 points, and the higher the score, the greater the generative interest. The LGS's internal consistency was 0.81.

Degree of well-being was assessed through the Satisfaction with Life Scale – SWLS developed by Diener, Emmons, Larsen and Griffin (1985). It consists of five items related to major aspects of life with which

respondents should express their degree of agreement or disagreement. The five items constitute a single factor. The participants answered using a Likert-type scale graded from 1 to 4 (where 1 = fully disagree and 4 = fully agree). The scores range from minimum satisfaction with life (5) to very high (20). The SWLS's internal consistency was 0.68.

Data were gathered on gender, marital status (with four options: single, married, separated/divorced, and widowed), level of education (with three levels: primary, secondary, and higher) and time enrolled on the program (with two options: less than five years and more than five years). Besides the questions on these sociodemographic variables, information was gathered on health, specifically on subjective health. The participants were asked to rate their state of health on a Likert-type scale graded from 0 to 4 (where 0 = very poor health and 4 = very good health). Five items were also included to score social participation in institutions and associations (neighbourhood, religious, senior day centres, voluntary institutions, or political association and labour organisations); the rate at which they attended was scored with a three-point format (occasionally during the month, once or twice per week, and daily).

Procedure

The data were gathered through individual self-administration among individuals over the age of 55 in Salamanca enrolled on the University Programs for Seniors. Out of the 397 questionnaires distributed during class-time, only 347 were completed. The sample had previously been informed of the purpose of the study, and they were guaranteed anonymity and confidentiality of their answers. They all had to provide written acceptance of their willingness to take part in the study.

Results

Generative interest and life satisfaction

With a view to responding to the proposed objective, an analysis was made of the generative interest (measured according to the LGS scores) and life satisfaction of the cohort taking part in the study. The mean score obtained was 33.66 (SD = 6.71) in generative interest, ranging from the lowest score of 20 to the highest of 53. In turn, the life satisfaction of this group of mature university students was fairly high (M = 10.33; SD = 2.66). In addition, a correlation analysis was conducted to verify whether

generative interest correlates with life satisfaction among these mature students, whereby it was found that generativity is positively associated with life satisfaction ($r = 0.23$; $p = 0.01$).

To check for differences in the generativity variable depending on the level of education, an analysis of variance (ANOVA) was conducted that revealed significant differences ($F_{1,319} = 3.69$; $p = 0.01$), with people with a higher level of education showing higher scores than those with primary studies (35.03 vs. 31.90). The same statistical test was used to compare the means in the scores for generative interest depending on marital status, with no significant differences found between those that were married and those that were not ($F_{1,332} = 0.43$; $p = 0.50$). No differences were found either between men and women ($F_{1,345} = 0.22$; $p = 0.88$) or between those who perceived their health to be fair or poor and those who considered it to be good ($F_{1,340} = 0.03$; $p = 0.85$).

Table 1: Sociodemographic variables, subjective health, generativity and life satisfaction

VARIABLES	Factor						
	Generativity			Life Satisfaction			
	N	M	SD	N	M	SD	
Gender	Male	117	33.63	5.81	117	10.31	2.85
	Female	230	33.52	7.01	225	10.34	2.56
Marital status	Married	190	33.85	6.20	189	10.71	2.57
	Not married	144	33.36	7.19	140	9.82	2.69
Subjective health	Poor/Fair	73	33.76	6.70	73	9.40	2.67
	Good/Very good	269	33.60	6.59	269	10.58	2.61
Level of Education	Primary	99	31.90	5.47	98	10.31	3.08
	Secondary	130	33.56	6.97	127	10.41	2.53
	Higher	94	35.03	6.99	94	10.06	2.41

Further ANOVAs were conducted to verify the existence of differences in the level of satisfaction of life considering the different sociodemographic variables. No statistically significant differences were found between men and women ($F_{1,340} = 0.10$; $p = 0.92$), or across levels of education ($F_{2,316} = 0.46$; $p = 0.63$). However, significant differences have indeed been found in terms of subjective health ($F_{1,340} = 11.66$; $p < 0.01$), and marital status ($F_{1,340} = 9.31$; $p < 0.01$). Those people that perceive their health as good or very good feel more satisfied with their lives than those that consider their health to be fair or poor (10.58 vs. 9.40). In turn, married people show higher levels of satisfaction than those are not married (10.71 vs. 9.82).

Generative interest, life satisfaction and participation

The second objective proposed seeks to discover whether taking part in this university program, depending on the years of enrolment and the degree of social participation in other kinds of institutions and association, is indicative of greater or lesser generative interest and life satisfaction. The results of the ANOVAs did not reveal any significant differences in generative interest according to the time enrolled on the program ($F_{1,342} = 1.26$; $p = 0.28$). Nevertheless, a comparison between the means for generative interest and the rate of participation in different associations revealed significant differences ($F_{1,234} = 6.80$; $p = 0.01$), with those people taking part in associations on a weekly or daily basis recording higher scores than those that do so only once a month or that have never been involved in community activities (35.58; 34.57; 31.39).

Neither were there any statistically significant differences in life satisfaction depending on the rate of participation in social institutions or associations ($F_{2,229} = 0.85$; $p = 0.42$), but there were differences in terms of the time enrolled on the university program ($F_{1,336} = 3.88$; $p = 0.05$), with greater satisfaction among those students that had been linked to the program for more than five years.

Table 2. Participation, generativity and life satisfaction

VARIABLES	Factor						
	Generativity			Life Satisfaction			
	N	M	SD	N	M	SD	
Rate of participation	Occasionally during the month	57	31.39	6.19	57	10.09	2.57
	1 or 2 per week	106	34.57	6.72	103	10.49	2.38
	Daily	72	35.58	6.85	72	10.67	2.71
Years in the programme	Less than 5 years	208	33.11	6.48	203	10.08	2.28
	More than 5 years	135	34.25	6.85	135	10.67	3.15

Discussion, conclusions and future research

The results obtained suggest that the mature students taking part in the study, or at least a significant number of them, have a high generative interest, which shows they constitute a populational group that is committed to contributing to the common good and social development. The scores recorded for this construct are comparable to those reported in previous studies (Cheng, 2009; Villar, 2012). Specifically, those students with studies in higher education prior to joining the program for mature people have a higher generative interest than all the others, which is consistent with previous studies (McAdams et al., 1998), although it has not been confirmed in other more recent studies along these same lines (Villar et al., 2013). This finding may be explained because people have a sense of having acquired greater knowledge through higher education that imbues them with the necessary competence to pass on their experience and knowledge to future generations.

In relation to similar studies (Grossbaum, & Bates, 2002; Hofer et al., 2014; McAdams, de St. Aubin, & Logan 1993; Villar, 2012; Villar et al., 2013), it is noted that generativity is positively correlated with well-being, specifically with life satisfaction. Mature older students record

high satisfaction with life, and this is particularly expressed by those with a better subjective perception of their own health and those that are married, with these results being consistent with previous studies on the effect that adaptive mechanisms have on health and the impact that generativity has on social ties (Arias, & Iglesias, 2015; Fernández-Ballesteros, García, Abarca, Blanc, Efkliides, Moraitou, Kornfeld, Lerma, Mendoza-Numez, Mendoza-Ruvalcaba, Orosa, Paul, & Patricia 2010; Lang, Staudinger, & Carstensen, 1998), and is an advance on other studies, such as the one by Villar et al. (2013) in which, with a similar cohort, no significant differences were found either in terms of the perception of health or according to marital status. In turn, not finding differences in terms of the level of education suggests that life satisfaction does not depend on having more or fewer qualifications in the participating sample of mature older people.

It has also been found that the more generative people are those who take part on a regular basis in social and community organisations, as reported in prior research (González-Celis, & Mendoza, 2016). Nevertheless, there is no evidence to show that time linked to the program for mature students is indicative of a greater generative interest. The length of time enrolled on the program does not appear to have an influence on the interest in contributing to the social contexts, whether family or community, in which they participate. This aspect, nonetheless, has indeed been shown to increase the life satisfaction of mature older students. Accordingly, the longer the students have been enrolled on an educational program such as the one being currently organised by universities, the greater the life satisfaction. This finding explains the ever-higher percentage of students that remain linked to university programs for older people after five or ten years following their initial enrolment (Valle, 2014).

In this sense, we propose that, if older individuals with higher generative interest are those that participate more frequently in institutions and social and community organisations, and that continuous long-term participation in university programs for seniors increases satisfaction with life, we need to keep in mind both findings when it comes to developing curricular plans that complement both constructs. That is, where the study makes sense by evidencing the need to integrate complementarily generative and intergenerational activities and initiatives to benefit the community, from university programs with

seniors in collaboration with social organisations and institutions. Findings of this study allow us to think about the need to design university programs for senior linked to the social framework, where there is a chance for older adults to feel an active part of society, increase their attitude of contributing to the program after a series of years and achieve positive levels of satisfaction with life – an issue that has been proved as one of the main benefits obtained by students engaged in this program in the long term. Therein lies the importance of highlighting the need to conduct longitudinal rather than transversal studies, that will enable us to more effectively decide if the same group of students increase their generative interest over the years.

Nevertheless, older people involved in educational programs today want to continue learning, enjoy good health, and adopt an enterprising approach to new projects that will give them a more prominent role in society and help them to ensure a better future for the next generations (Abarca, Chino, Llacho, González, Vázquez, Cárdenas, & Soto, 2008; González-Celis, & Mendoza, 2016).

This series of conclusions, together with our results, opens another line of research that, in our opinion, may and should have a place in educational theory and practice involving older people. Generativity is linked mainly to our socio-relational nature. Others inform the generative behaviour of older people. Nonetheless, this relational narrative cannot forgo its continuity with all other living beings, as we would be adopting a limited and inconclusive educational approach to generativity. The cultural condition we referred to earlier requires accepting the necessary responsibility toward the other, toward biodiversity, to truly ensure the sustainability of the quality of life of future generations, seeking to develop a sense of responsibility and active participation among older people for resolving environmental issues. This implies a dialectical approach that enables older people to contextualise their generative action, understanding all nature of thinking through the principles of responsibility and justice.

Nothing of what has already been described or concluded has any meaning from a human approach of breaking with all expressions of life surrounding a human being, in a sense of pertaining to the living world. Explaining generativity through the relationship between education, culture and life involves delving into the inevitable fabric of existing

biodiversity, to establish schema of interconnection, of ties, between one, the other and the other. In other words, responsibility as the educational platform for generative action acquires full meaning when it identifies the webs of interdependence of a human being, in the case of an adult, and their living environment, as key elements. This ultimately involves modifying the dominant paradigm of interpreting human action and relationships as the sole elements of communication, creating a paradigm of communication that is binding and interdependent of all those aspects that are part of the living world, contributing to a new arena for moral deliberation and responsibility, based on our being living species more closely belonging to the fabric of life. An example of this involves the programs of voluntary environmental work that are organised in some of the university courses for older people.

Limitations of the study

The scope and generalisation of this paper's results and conclusions are constrained by certain issues. Firstly, the sample's representativeness is one of them, as the selection method means that the results cannot be considered representative of the mature-older population. Furthermore, given that it is a correlational study, the direction of the relationships cannot be accurately determined. Considering all the variables from a longitudinal perspective and enlarging the study sample would lead to a more in-depth analysis of the value of the mature-older people's characteristics together with the degree of participation as the factors driving satisfactory ageing.

Disclosure statement

No potential conflict of interest was reported by the authors.

References

- Arias, A. & Iglesias, S. (2015). La generatividad como una forma de envejecimiento exitoso. Estudio del efecto mediacional de los vínculos sociales [Generativity as a successful way of ageing. Study of the mediating effect of social ties]. *European Journal of Investigation in Health, Psychology and Education*, 5(1), 109–120.

- Abarca, J., Chino, B., Llacho, M. González, K., Vázquez, R., Cárdenas, C., & Soto, M. (2008). Relación entre educación, envejecimiento y deterioro cognitivo en una muestra de adultos mayores de Arequipa [Relationship between education, ageing and cognitive impairment in a sample of older adults in Arequipa]. *Revista Chilena de Neuropsicología*, 3, 7–14.
- Azofeifa, J. B. (2017). Evolución conceptual e importancia de la andragogía para la optimización del alcance de los programas y proyectos académicos universitarios de desarrollo rural [Conceptual development and importance of andragogy for optimising the scope of academic university programs and projects in rural development]. *Revista Electrónica Educare*, 21(1), 1–6.
- Berends, M. (2006). Survey methods in educational research. In: Green, J. L., Camila, G., & Elmore, P. B. (ed.). *Handbook of complementary methods in education research*. Washington: American Educational Research Association, p. 623–640.
- Bradley, C. L. (1997). Generativity-Stagnation: Development of a status model. *Developmental Review*, 17, 252–290.
- Cheng, S.T. (2009). Generativity in later life: Perceived respect from younger generations as a determinant of goal disengagement and psychological well-being. *Journal of Gerontology: Psychological Sciences*, 64B, 45–54.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 71–75.
- Díez, A. (2016). La actual educación de la población adulta en España [Current education of the adult population in Spain]. *Educación(nos)*, 75, 5–8.
- Erikson, E. H. (1970). *Infancia y sociedad* [Early childhood and society]. Buenos Aires, Horné.
- Erikson, E. H. (2000). *El ciclo vital completado* [The completed life cycle]. Barcelona, Paidós.
- Evans, E. (2009). Percepción docente de generatividad y factores de liderazgo escolar en directores de instituciones educativas [Teaching perception of generativity and school leadership factors among school principals]. Unpublished research paper. Lima: Universidad de Valencia-Instituto de Educación Superior CREA.
- Fernández, A., García, J. L., & Pérez, G. (2016). Grado de Satisfacción de los adultos con los Programas Universitarios [Adults' Degree of Satisfaction with University Programs]. *Revista Complutense de Educación*, 27(3), 1021–1040.
- Fernández-Ballesteros, R., García, L. F., Abarca, D., Blanc, E., Efklides, A., Moraitou, D., Kornfeld, R., Lerma, A. J., Mendoza-Numez, V.M., Mendoza-Ruvalcaba, N. M., Orosa, R., Paul, C., & Patricia, S. (2010). The concept of 'ageing well' in ten Latin American and European countries. *Ageing & Society*, 30(1), 41–56.

- Gonçalves Barbosa, M & García del Dujo, Á. (2016). Education and struggles for recognition. The strategic role of empowerment. *Revista Española de Pedagogía*, 264, 283-296.
- González-Celis, A. L. & Mendoza, V. A. (2016). Comportamiento generativo y su efecto en la calidad de vida en adultos mayores [Generative behaviour and its effect on quality of life among older adults]. *Revista Electrónica de Psicología*. 19(1), 171-193.
- Grossbaum, M. F. & Bates, G. W. (2002). Correlates of psychological wellbeing at midlife: The role of generativity, agency and communion, and narrative themes. *International Journal of Behavioral Development*, 26, 120–127.
- Hofer, J., Holger, B., Au, A., Polácková Solcová, I., Tavel, P., & Wong, T. T. (2014). For the benefit of others: generativity and meaning in life in the elderly in four cultures. *Psychology and Ageing*, 29, 764–775. <http://dx.doi.org/10.1037/a0037762>
- IMERSO (2012) Informe 2012: Las personas mayores en España. Datos estadísticos estatales y por Comunidades Autónomas [2012 Report. The Elderly in Spain. Statistical data nationwide and by Autonomous Communities. Madrid, Ministry of Health, Social Services and Equality.
- Kerlinger, F. & Lee, H. (2002). Investigación del comportamiento, métodos de investigación en ciencias de la educación [Behavioural research, research methods in the education sciences]. Mexico: McGraw-Hill.
- Kotre, J. (1984). *Outliving the self: Generativity and the interpretation of lives*. Baltimore, MD: John Hopkins University Press.
- Kotre, J. & Kotre, K. B. (1998). *Intergenerational buffers: “the damage stops here”*. In D. P. McAdams & E. de St. Aubin (Eds.), *Generativity and adult development* (pp. 367-389). Washington, DC: APA.
- Lang, F., Staudinger, U. M., & Carstensen, L.L. (1998). Perspectives on socioemotional selectivity in late life: How personality and social context do (and do not) make a difference. *Journal of Gerontology: Psychological Science*, 53b, 21–30.
- Lorenzo, J. A. (2003). El marco educativo de la formación universitaria de las personas mayores: La necesidad de una política educativa [The educational framework for the higher education of elderly people]. Seventh National Symposium on University Programs for Seniors: Social, educational and financing policies in the higher education of older people and their social projection. Madrid: Ministry of Labour and Social Affairs.
- McAdams, D. P., de St. Aubin, E., & Logan, R. L. (1993). Generativity among young, midlife, and older adults. *Psychology and Aging*, 8, 221–230
- McAdams, D. P., Hart, H. M., & Maruna, S. (1998). The anatomy of generativity. In D. P. McAdams & E. de St. Aubin (Eds.), *Generativity and adult development* (pp. 7–43). Washington, DC: APA.

- McAdams, D. & de St. Aubin, E. (1992). A theory of generativity and its assessment through self-report, behavioral acts, and narrative themes in autobiography. *Journal of Personality and Social Psychology*, 62, 1003–1015.
- Miralles, P. & Alfageme, M. B. (2015). Educación, identidad y ciudadanía en un mundo globalizado y posmoderno [Education, identity and citizenship in a globalised post-modern world]. *Educatio siglo XXI: Revista de la Facultad de Educación*, 31, 1, 11–24.
- Ochoa de Alda, I. (2004). *Enfoques en terapia familiar sistémica* [Approaches in systemic family therapy]. Barcelona: Herder.
- Ortiz-Colón, A. (2015). Los Programas Universitarios de Mayores y el Envejecimiento Activo [University Programs for the Elderly and Active Ageing]. *Formación Universitaria*, 8(4), 55–62.
- Peterson, B. E. & Duncan, L. E. (2007). Midlife women's generativity and authoritarianism: marriage, motherhood, and 10 years of aging. *Psychology and Aging*, 22, 411–419.
- Ruiz, C., Calderón, I., & Torres, F. J. (2011). Construir la identidad en los márgenes de la globalización: educación, participación y aprendizaje [Building identity on the side-lines of globalisation: education, participation and learning]. *Cultura y Educación: Revista de teoría, investigación y práctica*, 23(4), 589–600.
- Ruiz, M. Bernal-Guerrero, A., Gil, F., & Escámez, J. (2012). Ser uno mismo. Repensando la autonomía y la responsabilidad como coordenadas de la educación actual [Being oneself. Rethinking autonomy and responsibility as coordinates of today's education]. *Teoría de la Educación. Revista Interuniversitaria*, 24(2), 59–81.
- Serdio, C. (2015). Educación y envejecimiento: una relación dinámica y en constante transformación [Education and ageing: a dynamic relationship in constant transformation]. *Educación XXI*, 18/2, 237–255.
- Serrate, S., Navarro, A. B., Muñoz, J. M. (2017). Perfil, motivaciones e intereses de los aprendices mayores hacia los Programas Universitarios [Profile, motivations and interests of older learners toward University Programs]. *Educación y Desarrollo Social*, Vol. 11(1), 156-171. <https://doi.org/10.18359/reds.1863>
- Sianes-Bautista, A. (2015). Aprendizaje a lo largo de la vida y educación superior de adultos en el ámbito universitario en Alemania: Origen y evolución histórica hasta la actualidad [Life-long learning and higher education of adults at universities in Germany: Origen and historical evolution to the present day]. *Revista de la Facultad de Ciencias de la Educación*, 17, 89–112.
- Stewart, A. J. & Vandewater, E. A. (1998). The course of generativity. In D. P. McAdams & E. de St. Aubin (Eds.), *Generativity and adult development* (pp. 75–100). Washington, DC: APA.

- Valle, J. E. (2014). Educación permanente: los programas universitarios para mayores en España como respuesta a una nueva realidad social [Permanent education: university programs for seniors in Spain as a response to a new social reality]. *Revista de la Educación Superior*, 43(171), 117–138.
- Van Hiel, A., Mervielde, I., & De Fruyt, F. (2006). Stagnation and generativity: structure, validity, and differential relationships with adaptive and maladaptive personality. *Journal of Personality*, 74, 543–573.
- Villar, F. (2012). Successful ageing and development: the contribution of generativity in older age. *Ageing and Society*, 32, 1087–1105.
- Villar, F., López, O., & Celdrán, M. (2013). La generatividad en la vejez y su relación con el bienestar. ¿Quién más contribuye es quien más se beneficia? [Generativity in old age and its relationship with well-being. Does the one contributing the most benefit the most?]. *Anales de Psicología*, 29(3), 897–906.
- Zacarés, J. J. & Serra, E. (2011). Explorando el territorio del desarrollo adulto: la clave de la generatividad [Exploring the territory of adult development: the key to generativity]. *Cultura y educación*, 23(1), 75–88.

About the authors

José Manuel Muñoz-Rodríguez. Pedagogy PhD by the University of Salamanca. Research lines: theory of education, analysis of education processes, pedagogy of time and space, and training processes in virtual environments; from social pedagogy, environmental education for sustainable development.

Sara Serrate-González. Psychopedagogy PhD by the University of Salamanca, Expert in Education and Prevention of Domestic Violence by the same University. Research lines (mainly related with socioeducational intervention): citizenship, families, underaged, older people, education and training processes in virtual environments, sustainable development.

Ana Belén Navarro-Prados. Psychology Ph.D by the University of Salamanca, with a Masters' Degree in Gerontology by the same University. Postgraduate studies in Neuropsychology and Dementias by the Miguel de Cervantes European University. Research lines: Psychological Resilience; advanced age; emotional wellbeing in older individuals and their caregivers; education and learning at old age.

Contact details

*Jose Manuel Muñoz-Rodríguez
Faculty of Education
Facultad de Educación
Paseo de Canalejas, 169. 37008 Salamanca (Spain).*

Email: pepema@usal.es