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AUTHOR Vernick, Stacie H.  
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## ABSTRACT

The purpose of this document is to provide an up-to-date analysis of what has been learned about the Career Thoughts Inventory (CTI) through the findings of various research studies. The studies looked at the negative career thoughts of a variety of populations and identified several correlates to dysfunctional career thoughts. Such correlations add both to an understanding of the career and mental health constructs that are associated with dysfunctional career thoughts and to the convergent validity of the CTI. This paper contains a summary of CTI research to date (correlates to dysfunctional career thoughts and further evidence of the CTI's convergent validity). A research summary table is included which contains key points about research samples, variables, measures, designs, analyses, findings, and implications. Also provided is a detailed description of CTI research, including information about research questions, findings, discussion, implications for practice and for studies employing CTI. (Contains 27 references.) (JDM)

# The Career Thought Inventory (CTI) in Research and Practice

Stacie H. Vernick

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# The Career Thoughts Inventory (CTI) in Research and Practice

Vernick, Stacie H.

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Center for the Study of Technology in Counseling and Career Development

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The purpose of this document is to provide an up-to-date analysis of what we have learned about the Career Thoughts Inventory through the findings of various research studies. The negative career thoughts of a variety of populations have been studied, and several correlates to dysfunctional career thoughts have been identified. This document includes the following:

- Overall Summary of CTI Research to Date  
Learn about correlations to dysfunctional career thoughts and obtain further evidence of the convergent validity of the CTI.
- CTI Research Study Summary Table  
Learn key points about research samples, variables, measures, designs, analyses, findings, and implications of studies employing the CTI.
- Detailed Description of CTI Research  
Learn detailed information about research questions, findings, discussion, implications for practice and implications for studies employing the CTI.
- References  
Identify citations used in this document.

There is undoubtedly a great deal of research that remains to be conducted on both the construct of dysfunctional career thoughts and the CTI. The future will hopefully bring additional studies on the topic, and perhaps a clearer overall picture of the nature of dysfunctional career thoughts.

## Overall Summary of CTI Research to Date

A variety of research studies to date have evaluated the use of the Career Thoughts Inventory with different populations in an effort to determine correlations between dysfunctional career thoughts and various psychological constructs. Such correlations add to both an understanding of the career and mental health constructs that are associated with dysfunctional career thoughts and to the convergent validity of the CTI.

*Initial Research*

In the development of the CTI, Pearson Product Moment correlation coefficients were calculated between this measure and other assessments of related constructs for adult, college student, and high school student normative groups (Sampson, Peterson, Lenz, Reardon, & Saunders, 1996). All correlations were in the hypothesized direction, and ranged from minimal associations to high correlations. On the one hand, vocational identity, lack of information needs, lack of barriers, certainty, decidedness, comfort with choice, self-clarity, knowledge about occupations and training, and decisiveness were inversely correlated with CTI measures of dysfunctional career thoughts (CTI Total), decision-making confusion, commitment anxiety, and external conflict. On the other hand, indecision, neuroticism, anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability, were directly correlated with dysfunctional career thoughts, decision-making confusion, commitment anxiety, and external conflict as measured by the CTI (Sampson, et al., 1996).

### *Subsequent Research*

A number of research studies have subsequently been conducted with the CTI that contribute to our understanding of vocational behavior as well as providing further evidence of the instrument's convergent validity. Dysfunctional career thoughts have been found to be positively correlated with the **inability to choose a major field of study for undecided college students** (Kilk, 1997), **self-appraised problem-solving ability for substance abusers** (Slatten, 1999), **perfectionism and career indecision** (Osborn, 1998), **state anger** (as measured by the total score on the CTI only) (Strausberger, 1998), **ego identity** (Voight, 1999), and **depression and career indecision** (Saunders, 1997). Dysfunctional career thoughts have been found to be negatively correlated with **having a learning disability and positive adjustment to disability** by college students (Dipeolu, 1997). No significant correlations were found between **offender status** and the overall construct of dysfunctional career thoughts, as measured by CTI total scores (Railey, 1997). Interested readers may see individual studies for correlations between sub-scales of the CTI (Decision-Making Confusion, Commitment Anxiety, and External Conflict) and the psychological constructs described above. Descriptions of the research sample, variables, measures, design, analyses, findings, discussion, and implications for each study can be found in the [CTI Research Summary Table](#) and the [Detailed Description of CTI Research](#).

**CTI Research Summary Table**

Researcher	Sample	Variables	Measures
Dipeolu, A. O.	<ul style="list-style-type: none"> <li>153 college students with learning disabilities</li> <li>Registered with the Student Disability Resource Center at Florida State University</li> </ul>	<ul style="list-style-type: none"> <li>Dysfunctional career thoughts (decision-making confusion, commitment anxiety, external conflict)</li> <li>Adjustment to disability</li> </ul>	<ul style="list-style-type: none"> <li>Career Thoughts Inventory (CTI)</li> <li>Reaction to Impaired Disability Inventory (revised)</li> </ul>
Kilk, K. L.	<ul style="list-style-type: none"> <li>346 freshman and sophomore students at the University of Northern Colorado</li> <li>Enrolled in general education and elective</li> </ul>	<ul style="list-style-type: none"> <li>Field of study status</li> <li>Class level</li> <li>Career course participation status</li> </ul>	<ul style="list-style-type: none"> <li>Career Thoughts Inventory (CTI)</li> </ul>

	lower division courses		
Osborn, D. S.	<ul style="list-style-type: none"> <li>123 undergraduates at Appalachian State University</li> <li>Students enrolled in various sections of Introduction to Psychology, Introduction to Sociology, or beginning Communications classes</li> </ul>	<ul style="list-style-type: none"> <li>Perfectionism</li> <li>Dysfunctional career thoughts</li> <li>Career indecision</li> </ul>	<ul style="list-style-type: none"> <li>Occupational Alternatives Question (OAQ)</li> <li>Career Thoughts Inventory (CTI)</li> <li>Career Decision Scale</li> <li>Frost Multidimensional Perfectionism Scale</li> <li>State-Trait Inventory</li> </ul>
Railey, M. G.	<ul style="list-style-type: none"> <li>92 female felons</li> <li>Ages 18-54</li> <li>Incarcerated in Florida's correctional system</li> </ul>	<ul style="list-style-type: none"> <li>Dysfunctional career thoughts (decision-making confusion, commitment anxiety, external conflict)</li> <li>Career interest structure (congruence, commonness, differentiation, consistency, coherence)</li> <li>Offender status (first-time offender, probationer, repeat offender)</li> </ul>	<ul style="list-style-type: none"> <li>Self-Directed Search Form R (SDS)</li> <li>Career Thoughts Inventory (CTI)</li> </ul>

Researcher	Sample	Variables	Measures
Saunders, D. E.	<ul style="list-style-type: none"> <li>215 beginning college students</li> <li>Enrolled in Introduction to Psychology</li> </ul>	<ul style="list-style-type: none"> <li>Career indecision</li> <li>Depression</li> <li>Dysfunctional Career Thoughts</li> <li>Secondary variables:                             <ul style="list-style-type: none"> <li>Vocational identity</li> <li>Locus of control</li> <li>State anxiety</li> <li>Trait anxiety</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Career Decision Scale (CDS)</li> <li>Occupational Alternatives Questionnaire (OAQ)</li> <li>Beck Depression Inventory (BDI)</li> <li>Career Thoughts Inventory (CTI)</li> <li>My Vocational Interest Scale (MVIS)</li> <li>State-Trait Anger Inventory (STAI)</li> <li>Rotter's I-E Scale</li> </ul>
Slatten, M. L.	<ul style="list-style-type: none"> <li>100 individuals</li> <li>Ages 17-52</li> <li>80% treated in an inpatient residential substance abuse treatment program</li> <li>20% in an intensive outpatient substance abuse setting</li> </ul>	<ul style="list-style-type: none"> <li>Dysfunctional career thoughts (decision-making confusion, commitment anxiety, external conflict)</li> <li>Age</li> <li>Self-appraised problem-solving ability (problem-solving confidence, approach-avoidance, personal control)</li> </ul>	<ul style="list-style-type: none"> <li>Career Thoughts Inventory (CTI)</li> <li>Problem-Solving Inventory (PSI)</li> <li>Shipley Institute of Unemployment Scale (Shipley)</li> </ul>
Strausberger, S. J.	<ul style="list-style-type: none"> <li>123 beginning Florida</li> </ul>	<ul style="list-style-type: none"> <li>State and trait anger</li> </ul>	<ul style="list-style-type: none"> <li>State-Trait Anger Inventory</li> </ul>

	<p>State University students</p> <ul style="list-style-type: none"> <li>Enrolled in the course SDS 3340: Introduction to Career Development</li> </ul>	<ul style="list-style-type: none"> <li>Dysfunctional career thoughts</li> <li>Vocational identity</li> </ul>	<p>Inventory (STAXI)</p> <ul style="list-style-type: none"> <li>Career Thoughts Inventory (CTI)</li> <li>My Vocational Situations Inventory (MVI)</li> </ul>
Voight, L.	<ul style="list-style-type: none"> <li>131 university students</li> <li>Enrolled in undergraduate psychology courses</li> </ul>	<ul style="list-style-type: none"> <li>Parental attachment</li> <li>Ego identity status</li> <li>Career identity</li> </ul>	<ul style="list-style-type: none"> <li>Parental Bonding Instrument (PBI)</li> <li>Extended Objective Structured Clinical Interview of Ego Identity (EOSCI)</li> <li>Career Thoughts Inventory (CTI)</li> <li>Career Confidence Scale (CCS)</li> </ul>

### Detailed Description of CTI Research

**Dipeolu, A. O. (1997). A study of the relationship between learning disabilities, dysfunctional career thoughts, and adjustment to disability (Decision-making confusion, commitment, conflict, anxiety, career thoughts inventory) (Doctoral dissertation, Florida State University, 1997). *Dissertation Abstracts International*, 58 (07), 3938B.**

#### Research Questions

- Do students with a learning disability report more dysfunctional career thoughts than college students in general?
- What is the relationship between dysfunctional career thoughts and adjustment to learning disabilities?

#### Findings (Significant/Not Significant)

- SIGNIFICANTLY lower mean total scores on the CTI, and lower scores on the DMC and CA sub-scales of the CTI for college students with disabilities than for students in the normative sample
- SIGNIFICANTLY higher mean scores on the EC sub-scale of the CTI for college students with disabilities than the normative group
- SIGNIFICANT relationship between CTI scores and scores on the adjRIDI for students with a learning disability
- SIGNIFICANT relationship between scores on the DMC sub-scale of the CTI and scores on the Adjustment Scale of the RIDI for college students with a learning disability
- SIGNIFICANT correlation between scores on the CA sub-scale of the CTI and the Adjustment Scale of the RIDI for college students with a learning disability
- SIGNIFICANT correlation between scores on the EC sub-scale of the CTI and the Adjustment Scale of the RIDI for college students with disabilities

#### Discussion

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- College students with learning disabilities experience fewer dysfunctional career thoughts in general, less career decision-making confusion, and less commitment anxiety than the general population of college students
- As the prevalence of dysfunctional career thoughts decreases, positive adjustment to disability increases
- Students who have accepted and adjusted to their learning disabilities are experiencing fewer dysfunctional career thoughts in general, less decision-making confusion, and less commitment anxiety than the general population of college students
- College students with learning disabilities score higher than the normative sample on the EC sub-scale of the CTI, indicating higher levels of external conflict in career thoughts
- Students who are more adjusted to their learning disabilities have fewer dysfunctional career thoughts
- Males had higher CTI total scores than females
- Students with written language disabilities scored higher on the Commitment Anxiety sub-scale of the CTI
- Students with learning disabilities who were receiving assistance in note-taking scored lower on the CTI total score, DMC sub-scale, and CA sub-scale
- Younger students (age 18-22) had higher CTI total scores, as well as higher DMC and CA sub-scale scores
- Older students might have developed decision-making strategies and skills to cope with their learning disabilities, thus decreasing the negative effects of their learning disability

### *Implications for Practice*

- Practitioners can assist students in gaining self-knowledge by working towards understanding themselves and their decision-making styles
- Practitioners may anticipate that students with learning disabilities will have high external conflict, and may probe these students to determine the extent to which career decisions are a reflection of their own choice or that of others in their lives
- This knowledge may assist practitioners in the development of interventions designed to address dysfunctional career thoughts with this population, in an effort to assist students in reaching a healthy balance between individual responsibility for their decisions and consideration of the input of significant others
- Practitioners may explore coping skills developed by students with learning disabilities that may apply in the career planning process
- Practitioners may hypothesize that students with disabilities who have fewer dysfunctional career thoughts have adjusted more effectively to their learning disability than students with more dysfunctional career thoughts
- Practitioners may utilize scores on the Adjustment scale of the RIDI to determine if cognitive constraints may be impacting the process of career decision-making

### *Implications for Research*

- An analysis of the dysfunctional career thoughts of high school students with similar diagnoses to the college students in this study is an area for further research
- Research to develop useful interventions targeting adjustment to disabilities is warranted, as is an assessment of the techniques that aid practitioners in assisting these students in adjusting to a disability

- Qualitative research on the characteristics of highly functioning college students with learning disabilities is an important direction for future research, in addition to an examination of the effects of race, gender, age, adequacy of support services, and other variables on dysfunctional career thoughts and/or adjustment to learning disabilities
- Research to distinguish various and specific dysfunctional career thoughts that may be unique to this population and interventions to address these dysfunctional career thoughts would be extremely useful
- Research on why students who receive note-taking assistance scored higher on CTI total, DMC, and CA sub-scales would be enlightening in analyzing the dysfunctional career thoughts of this population
- Additional research might target the determination of an acceptable and functional level of external conflict for this population, in addition to an analysis of the relationship between adjustment to disability and openness towards the exploration of career development among college students with disabilities

**Kilk, K. L. (1997). The relationship between dysfunctional career thoughts and choosing an academic major. (Doctoral dissertation, University of Northern Colorado, 1997). *Dissertation Abstracts International*, 58(08), 3038A.**

#### *Research Questions*

- Are there differences in career thoughts between students who have selected a field of study and students who have not?
- Are there any differences in career thoughts between freshman and sophomore students who have selected a field of study and students who have not?
- Do career thoughts differ between students who have selected a field of study and those students who have not selected a field of study and those who have participated in a career exploration course?

#### *Findings (Significant/Not Significant)*

- SIGNIFICANT difference between field of study status groups (those who had not selected a field of study and those who had selected) in all constructs of dysfunctional career thoughts
- SIGNIFICANT difference for the decision-making confusion construct of the CTI between students who had completed or were enrolled in a college career course and those who had not completed a college career course between the field of study status groups
- SIGNIFICANT difference in scores on the Decision-Making Confusion sub-scale of the CTI between students in the study sample and those of the published college normative sample for the instrument
- SIGNIFICANT difference in scores on the External Conflict sub-scale of the CTI between students in the study sample and those of the published college normative sample of the instrument
- NO SIGNIFICANT difference between those with no idea and those who selected a field of study on the CTI sub-scale of External Conflict
- NO SIGNIFICANT differences between freshman and sophomores between any field of study status groups
- NO SIGNIFICANT difference for the Commitment Anxiety, External Conflict, and CTI Total scores between students who had completed or were enrolled in a college

career course and those who had not completed a college career course between field of study status groups

- NO SIGNIFICANT differences in dysfunctional career thoughts between students with no idea of what to select and students who were relatively sure and students deciding between two or three options in regards to field of study
- NO SIGNIFICANT differences between the dysfunctional career thoughts of the sample currently participating in the career course and the "client" norm

### *Discussion*

- College students who have not selected a field of study have more dysfunctional career thoughts than those who have chosen a field of study
- Focused attention on dysfunctional career thoughts might simplify the process of choosing a field of study
- Regardless of whether a field of study has been chosen, the career thoughts of freshmen and sophomore students are similar
- The adoption of rational career thoughts that augment students' ability to select a field of study might require additional time
- Inability to select a major may be explained by students' inattention to dysfunctional career thoughts
- Regardless of field of study decision-making status, participating in a career course did not impact dysfunctional career thoughts
- The CTI and accompanying workbook are useful tools for advisors to use in assessing undecided students and helping them to identify, challenge, and alter dysfunctional career thoughts preventing them from choosing a field of study
- The CTI is useful in assessing the dysfunctional career thoughts of college students

### *Implications for Practice*

- If students focus attention on their dysfunctional career thoughts, academic advisors, counselors, and faculty might be more helpful in working with them to choose a major field of study
- The CTI may be used as a needs assessment to clarify the nature of dysfunctional career thoughts, while the CTI workbook may be used as a screening measure for students with dysfunctional career thoughts
- Through working with students to target dysfunctional career thoughts and thereby better enabling them to choose a major field of study, advisors indirectly increase student retention
- Colleges that require students to declare a major early in their academic program must make available support and counseling services to assist students in choosing a field of study
- Career courses must directly address cognitive information processing in order to effectively impact dysfunctional career thoughts

### *Implications for Research*

- Qualitative research must be conducted to more clearly describe and distinguish between undecided and indecisive students
- A replication of the current study with a large sample of undecided students (perhaps involving students from several colleges and universities), involving students representative of a larger age span and all academic levels (beginning with first

semester freshmen) would be useful to further investigate dysfunctional career thoughts and their impact on the ability to choose a major. A useful approach would be a longitudinal study to determine the changes in dysfunctional career thoughts as a function of age

- Research on the relationship between dysfunctional career thoughts and specific academic majors would clarify further the nature of dysfunctional career thoughts
- Further research assessing the effectiveness of career development courses targeting cognitive information processing would be enlightening
- Studying the relationship of the CTI to learning styles, interests, personality styles, and motivation factors related to major and career choice is another direction for future research

**Osborn, D. S. (1998). The relationships among perfectionism, dysfunctional career thoughts, and career indecision. (Doctoral dissertation, Florida State University, 1998). *Dissertation Abstracts International*, 59(10), 3746A.**

#### *Research Question*

- What is the relationship among career indecision, perfectionism, and dysfunctional career thinking?

#### *Findings (Significant/Not Significant)*

- SIGNIFICANT relationship between perfectionism and dysfunctional career thoughts, while partitioning variance attributed to anxiety
- SIGNIFICANT relationship between perfectionism and dysfunctional career thoughts
- NO SIGNIFICANT relationship between perfectionism and career indecision, while partitioning variance attributed to anxiety

#### *Discussion*

- Perfectionism is not an indicator of career indecision, and is only slightly related to the construct of career indecision (as measured by the FMPS)
- High levels of anxiety and the tendency to doubt one's actions are associated with indecisiveness. These proclivities may be evident in both cognitive and affective ways in career decision-making
- Dysfunctional career thoughts (as assessed with the CTI) have a strong relationship with, and may predict, career indecision, when trait anxiety is controlled for
- There is a small correlation between perfectionism and dysfunctional career thoughts
- Fear of failing, obsessive-compulsive tendencies, and a desire to make the "right" choice are cognitive and emotional precursors of commitment anxiety
- Critical parents influence the career decision-making of their children by causing additional emotional struggle regarding potential options that are not in line with the parent's preferences

#### *Implications for Practice*

- Counselors should become aware of clients' dysfunctional career thoughts that might be impeding effective decision-making
- Practitioners should help clients to identify and focus upon these negative thoughts in

- an objective manner to help reduce the impact of these thoughts
- Practitioners should help clients learn how these thoughts influence their emotions, and help clients to recognize common themes among their negative thoughts
  - Clients should be taught to evaluate negative thoughts, working to distinguish between facts and ideas. This will assist clients in recognizing their cognitions and cognitive distortions, and determining when cognitions are incorrect. Through this process, clients are able to develop alternate cognitions that might be more accurate and effective
  - Practitioners should ask questions associated with issues of fear of failing, self-critical depression, or obsessive-compulsive thoughts and/or behavior, all associated with perfectionism
  - Practitioners should discuss the client's relationship with his/her parents if the client has a high EC score or discusses conflict with parents in regards to career choice. Harshness of parenting style and the history of criticism/perfectionism in the family are important areas upon which to focus
  - It would be useful to teach stress management techniques to help clients decrease anxiety levels, as anxiety is correlated with indecisiveness

### *Implications for Research*

- It is important to replicate the current study to confirm the findings. Employing a sample comprised of students who are undecided or indecisive, along with a control group, would be an effective means of measuring this concept, particularly with a more racially diverse sample
- It would be useful to measure the correlation between perfectionism and career indecision using different multidimensional measures of perfectionism or combinations of sub-scales of the FMPS, and multidimensional measures of career indecision
- Research on the direct impact of dysfunctional career thoughts on career indecision would be enlightening
- An analysis of interventions focusing upon the recognition and reduction of dysfunctional career thoughts would be useful. A measure of the impact of interventions such as cognitive restructuring, worksheets/readings on the effects of dysfunctional career thoughts, group counseling, thought-stopping techniques, and "acting as if" exercises would provide useful information on the essence of negative career thoughts. Examining the effect of reinforcement of these negative thoughts would shed light on the role of negative thinking in career indecision
- Research on the relationship between dysfunctional career thoughts and self-esteem is an additional area of future research

**Railey, M. G. (1997). The relationship between dysfunctional career thoughts and career interests with respect to offender status of female inmates and probationers. (Doctoral dissertation, Florida State University, 1997). *Dissertation Abstracts International*, 58(06), 3325B.**

### *Research Questions*

- Is there a difference between offender status, i.e., first-time offender, probationer, and repeat offender, and dysfunctional career thoughts?
- Is there a difference between offender status, i.e., first-time offender, probationer, and repeat offender, and career interest structure?

*Findings (Significant/Not Significant)*

- SIGNIFICANT difference among the three inmate groups in commitment anxiety
- SIGNIFICANT difference among the three inmate groups in coherence of interest structure
- NO SIGNIFICANT difference among the three inmate groups in congruence of interest structure
- NO SIGNIFICANT difference among the three inmate groups in differentiation of interest structure
- NO SIGNIFICANT difference among the three inmate groups in consistency of interest structure
- NO SIGNIFICANT difference among the three inmate groups in commonness of career interests

*Discussion*

- Commitment anxiety is significantly related to offender status.
- Coherence of career interest structure is significantly related to offender status
- Very few of the offenders in all three groups (first-time offender, probationer, repeat offender) identified at least three occupational daydreams whose first letter belonged to the same Holland category
- The repeat offender group had significantly less anxiety regarding their choice of career and acting on that choice than either the first-time offender group or the probationer group

*Implications for Practice*

- For first-time offenders, interventions should focus on the acquisition of knowledge about the self and the workplace, enhancing decision-making skills, and examining perceptions about one's current style of decision-making. A more realistic, in-depth examination of career interests and vocational training are appropriate interventions for this subgroup of offenders
- Probationers should be exposed to activities which facilitate the examination of perceptions about how they make decisions and activities which foster the development of effective decision-making skills. Support groups focusing on assistance with the transition to society, networking, emotional support, and advocacy for employability development and employment are all appropriate interventions for this subgroup of offenders
- For repeat offenders, interventions should emphasize values clarification, skills training, and relapse prevention. More activities requiring a higher level of involvement, such as cognitive-behavioral therapy, are needed for this population. Interventions which focus upon moral development and training are also appropriate for this subgroup of offenders

*Implications for Research*

- Further investigation of the observed differences in commitment anxiety and coherence of career interests among the three groups (first-time offenders, probationers, and repeat offenders), using larger samples, is warranted
- Investigation of the extent to which more comprehensive values clarification and

relapse prevention interventions serve to modify dysfunctional career thoughts and career interest structure is an additional area of study to pursue

- The relationship between drug abuse and dysfunctional career thoughts and career interest structure, as well as the relationship between childhood abuse and the development of career interests and thought patterns, would be interesting areas of further research
- Finally, the impact of the development of more socially appropriate values on proneness to relapse and career thoughts and interest structure with this population are additional directions for further research

**Saunders, D. E. (1997). The contribution of depression and dysfunctional career thinking to career indecision. (Doctoral dissertation, Florida State University, 1997). *Dissertation Abstracts International*, 58(07), 3953B.**

### *Research Questions*

- What is the contribution of depression and dysfunctional career thinking to the variability in career indecision?
- What is the relationship between depression and dysfunctional career thinking?

### *Findings (Significant/Not Significant)*

- SIGNIFICANT positive relationship between depression and dysfunctional career thoughts
- SIGNIFICANT relationship between dysfunctional career thoughts and career indecision
- SIGNIFICANT relationship between depression/dysfunctional career thoughts and career indecision
- SIGNIFICANT relationship between dysfunctional career thoughts and career indecision while partitioning variation attributed to vocational identity, state anxiety, trait anxiety, and locus of control
- SIGNIFICANT relationship between depression and dysfunctional career thoughts while partitioning variation attributed to vocational identity, state anxiety, trait anxiety, and locus of control
- NO SIGNIFICANT relationship between depression and career indecision, while partitioning variation attributed to vocational identity, state anxiety, trait anxiety, and locus of control

### *Discussion*

- While depression may be correlated to career indecision, symptoms of depression do not necessarily indicate career indecision
- The OAQ may not be the most effective measure for assessing career indecision in spite of its appearance as a measure for this purpose
- Dysfunctional career thoughts prevent individuals from becoming fully involved in the career decision-making process, and as such, are a factor contributing to career indecision
- When present along with dysfunctional career thoughts, depression does not contribute any additional elements of career indecision
- The BDI focuses more upon the behavior and affect associated with career indecision

- as opposed to cognitive factors
- There is a positive relationship between dysfunctional career thoughts and depression, and both tendencies have a cognitive element
- Life events are interpreted in an ineffectual way due to a negative schema for organizing information, which results in depression and dysfunctional thoughts, which, in turn, cause increased difficulty in the career problem-solving and decision-making process
- Vocational identity is responsible for a significant level of variance in career decision
- While both anxiety and locus of control are associated with career decision, neither factor accounts for a significant proportion of variance in career indecision

### *Implications for Practice*

- Counselors must pay particular attention to the underlying thoughts and emotions that might be preventing clients' effective problem-solving and decision-making
- Practitioners must use information focusing upon the cognitive dimension of career indecision to assist clients in career exploration and decision-making
- Cognitive restructuring activities in which the client receives assistance in identifying, challenging, and altering career thoughts are effective means to reduce or possibly eliminate the negative impact of dysfunctional thinking
- It might be useful to focus upon the negative patterns or schemata of clients before attempting to work through individual dysfunctional thoughts related to career development or other life issues
- Policies for client referral must be clearly established and followed, as many settings emphasizing career advising might not be adequately equipped to deal with the multiple issues of career indecision
- Competent practitioners trained in mental health/personal counseling as well as career-related counseling must be employed in settings where career counseling services are provided

### *Implications for Research*

- Research efforts to replicate the current study, particularly with a sample of upper division college students, would be useful to confirm findings
- Research on both the affective and cognitive dimensions of career indecision would be helpful in learning more about career indecision and potentially effective interventions
- It would be useful to study the role of depression in career decision-making by using measures of the construct depression other than the BDI. Measures such as the D-scale of the MMPI, the Depression scale of the NEO, or the Hamilton Rating Scale might be useful in learning more about the role of depression in career decision-making
- An additional area for further research is an analysis of the roles of vocational identity, state anxiety, trait anxiety, and locus of control in individual variation in career decision-making
- Finally, research studying the outcomes of various interventions focusing upon cognitions in the career decision-making process would be useful

**Slatten, M. L. (1999). *Dysfunctional career thoughts and self-appraised problem-solving ability among substance abusers*. Unpublished doctoral dissertation, Florida State University.**

*Research Question*

- What is the relationship among dysfunctional career thoughts, age, and self-appraised problem-solving ability in a substance abuse population?

*Findings (Significant/Not Significant)*

- SIGNIFICANT relationship between the CTI construct of decision-making confusion and years of education
- SIGNIFICANT relationship between self-appraised problem-solving ability and the PSI construct of approach avoidance and years of education
- SIGNIFICANT relationship between the CTI construct of decision-making confusion and self-appraised problem-solving ability and its construct of approach avoidance
- NO SIGNIFICANT relationship between all CTI constructs, age, PSI scores, and constructs of problem-solving confidence
- NO SIGNIFICANT relationship between approach-avoidance and number of substance-abuse treatments
- NO SIGNIFICANT relationship between dysfunctional career thoughts, age, and personal control
- NO SIGNIFICANT relationship between dysfunctional career thoughts, age, and problem-solving confidence
- NO SIGNIFICANT relationship between number of substance abuse treatments and any construct (except personal control)

*Discussion*

- The dysfunctional career thoughts of substance abusers are most similar to that of high school students; the substance abuser's cognitive development seems to have been halted at the concrete operational stage
- The perceived problem-solving abilities of substance abusers are most similar to those of clients in counseling
- Substance abusers tend to perceive themselves as lacking the necessary coping skills for approaching life issues
- Substance abusers demonstrate a correlation between dysfunctional career thoughts and self-appraised problem-solving ability
- There is dysfunctional thinking in the psychological concerns of substance abusers which may be paralleled in their career concerns
- By cognitively restructuring dysfunctional career thoughts, substance abusers may be simultaneously changing dysfunctional beliefs and thoughts in the psychological arena
- Substance abusers with higher levels of decision-making confusion are more likely to avoid problem-solving
- A cognitive model such as CIP may assist substance abusers in staying sober through the provision of knowledge regarding the processes of career problem-solving and decision-making and potential solutions to employment problems, as well as assisting the career counselor in working with the substance abusing client to develop a career goal
- Through acquiring knowledge about career problem-solving and decision-making, substance abusers may view themselves as more effective problem-solvers able to handle life's difficulties and problems in the working world
- There is no correlation between the age of substance abusers and their level of

- dysfunctional career thoughts or self-appraised problem-solving ability
- Working through career problems might result in substance abusers feeling better able to work through all other life problems
  - Through the completion of a career problem-solving intervention, substance abusers may develop improved problem-solving and decision-making skills, diminished dysfunctional thinking, and the confidence that they will be able to handle life's difficulties, including a potential substance abuse relapse

### *Implications for Practice*

- As substance abusers are in the concrete stage of cognitive development, it might be necessary for them to engage in direct experiences to learn to integrate self knowledge and occupational knowledge
- To increase occupational knowledge, potential interventions include shadowing individuals in positions in which they are interested, and/or making use of written materials describing careers (such as hand-outs)
- In order to augment self-knowledge, substance abusers might benefit from tasks focusing upon their hobbies and past work experiences (positive and negative), in an effort to integrate their interests, values, and skills
- Interventions emphasizing coping skills should be delivered at a cognitive level that substance abusers can both understand and apply to their individual situations
- An important intervention for this population is instruction in problem-solving and decision-making skills to augment self-appraised problem-solving effectiveness, using the CIP model of career counseling as a framework to teach these skills
- This study has brought to light the importance of career counseling in substance abuse programs and the current lack of programs recognizing this connection
- The CIP model can be used to help substance abusers not only find employment, but maintain that employment. In addition, the CASVE cycle may be used to help substance abusing clients recognize the decision to be made, apply self-knowledge and occupational-knowledge to make the decision, explore options, and choose an occupation
- Finally, counselors should provide training in interviewing skills as well as assertiveness training to help this population both obtain and maintain employment

### *Implications for Research*

- It is important to replicate the current study to garner further support for the findings
- It would be fruitful to do additional research on using the CIP model with a substance abusing population
- It would be interesting to assess whether there are gender differences in dysfunctional career thoughts and self-appraised problem-solving among a substance abusing population, which might lead to the provision of more personalized career counseling interventions for these clients
- It would be important to study the correlation between dysfunctional career thoughts, self-appraised problem-solving ability and substance abuse relapse. The existence of such a correlation would be enlightening in developing interventions for relapse prevention
- An additional relationship of research interest would be that among dysfunctional career thoughts, self-appraised problem-solving ability, and the successful outcomes of vocational rehabilitation. If there is a correlation among these variables, interventions for re-entry into the work-force could be tailored to emphasize these

issues

- Finally, research on the relationships among dysfunctional career thoughts, self-appraised problem-solving ability, and negative emotions (i.e., depression and anxiety) would lend additional support to the use of a cognitive career counseling model in both career counseling and psychotherapy

**Strausberger, S. J. (1998). The relationship of state-trait anger to dysfunctional career thinking and vocational identity (Doctoral dissertation, Florida State University, 1998). *Dissertation Abstracts International*, 59(10), 3747A.**

### *Research Questions*

- What is the relationship between anger and dysfunctional career thoughts?
- What is the relationship between anger and vocational identity?

### *Findings (Significant/Not Significant)*

- SIGNIFICANT relationship between dysfunctional career thoughts and gender and anger expression
- SIGNIFICANT relationship between state and trait anger and gender
- NO SIGNIFICANT relationship between state anger and dysfunctional career thoughts (SIGNIFICANT RELATIONSHIP between state anger and CTI total score only)
- NO SIGNIFICANT relationship between trait anger and dysfunctional career thoughts
- NO SIGNIFICANT relationship between state anger and vocational identity
- NO SIGNIFICANT relationship between trait anger and vocational identity

### *Discussion*

- Participants with increased feelings of anger also expressed higher levels of dysfunctional career thoughts
- Those subjects who often suppress, express, or control anger exhibited higher levels of dysfunctional career thoughts
- Males are more likely to experience anger in the absence of provocation than are females
- Those who experience transitory emotional-psychological reactions to anger are characterized by increased dysfunctional career thoughts and increased difficulty in making career decisions
- State anger is positively correlated to dysfunctional career thoughts (as measured by the CTI total score ONLY)
- Dysfunctional career thoughts are negatively correlated with age and career-related experiences
- Students with relatively strong vocational identities may experience anxiety and confusion related to the career decision-making process

### *Implications for Practice*

- As emotional states can negatively impact career decision-making and problem-solving, practitioners should be aware of students' affect in addition to their

presenting issues

- The needs of angry students may be best met if their anger is addressed initially
- Even students with reasonable anger might be assisted in understanding its role in their career decision-making ability before presenting issues may be addressed
- Cognitive-behavioral interventions might be effective in working through the anger of students with career decision-making problems

### *Implications for Research*

- Future research should focus on the nature of anger and dysfunctional career thoughts in order to assist practitioners in developing interventions that are helpful for clients characterized by state and trait anger
- More research needs to be done on both the affective and cognitive dimensions of career decision-making and problem-solving. Research targeting the specific role of different affective states on dysfunctional career thoughts, as well as an investigation of the role of these affective states on different portions of the CASVE cycle of decision-making would be useful
- Utilizing other assessments of anger, such as case studies, mapping, or an experimental situation manipulating state anger prior to the administration of an assessment, might shed light on the role of anger in cognitive processing
- Studying individuals with more extreme state and trait anger might further clarify the relationship between anger and dysfunctional career thoughts
- Future research to replicate the findings of this study, employing a sample that is more gender balanced, includes older students, and those not seeking career assistance, would provide additional information on the relationship between anger and dysfunctional career thoughts

**Voight, L. (1999). *Parental attachment and ego identity as antecedents of career identity*. Unpublished doctoral dissertation, Florida State University.**

### *Research Question*

- What are the relationships among parental attachment, ego identity, and career identity?

### *Findings (Significant/Not Significant)*

- SIGNIFICANT positive relationship between ego identity status and career identity
- NO SIGNIFICANT relationship between parental attachment and ego identity status
- NO SIGNIFICANT relationship between parental attachment and career identity

### *Discussion*

- Among the four different statuses of ego identity, the diffusion status is associated with the lowest level of career identity and the achievement status is associated with the highest level of career identity
- The results of this study lend support to the integration of psychosocial and developmental perspectives into Holland's definition of career identity
- Individuals must develop a sense of personal identity before developing a sense of career identity

- Individuals in the stage of late adolescence are continuing to establish a sense of their personal identity through career related experiences
- There is a positive correlation between ego identity and career identity
- The development of a highly integrated personal identity leads to the development of a functional career identity
- Career identity is comprised of both overall personal development variables and career-related variables

### *Implications for Practice*

- The EOMEIS could be utilized by counselors to determine the developmental level of clients as a foundation for the exploration of career identity
- The findings of this study lend support for the use of Erickson's theory and Marcia's identity statuses as the framework for a model of career counseling
- If counselors understand the developmental issues and identity statuses of clients, they might be better equipped to make referrals and provide useful interventions. Specific interventions and career identity issues might be identified in relation to identity statuses
- Clients in the diffused identity status may need to become involved in psychological counseling before career counseling will be useful for them. Throughout counseling, counselors should emphasize manageable tasks likely to augment self-efficacy and development with such clients
- Clients in the moratorium ego identity status need encouragement, support, and the facilitation of exploration. Counselors should identify the source of ambivalence, ambiguity, and anxiety in these clients' lives, and support both identity development and anxiety reduction
- Clients characterized by a foreclosed identity status would benefit from a safe environment in which to rethink their decisions and discuss the importance of balancing one's own perceptions with the input of significant others (i.e., parents), as well as the relation of this lack of balance to their career ambivalence
- Finally, clients in the achieved identity status would benefit from assistance in setting goals and planning the steps of the career search process. Self-directed activities, including the use of computers, are appropriate for such clients, as is assistance in locating resources on potential career options. Clients characterized by this ego identity status will need help choosing an option for implementation, and will benefit from both logical and emotional support for making a commitment to this occupational choice. Counselors working with such clients should help them both anticipate and work to prevent problems in the transition from school to work

### *Implications for Research*

- Future research should focus on parenting techniques and parent-child relationship factors that are related to identity and career development, with particular emphasis on conflict (such as conflict between adolescents and parents in regards to career choice)
- The current research study should be replicated, using a larger sample that is representative of the general population in terms of gender, age, ethnicity, socioeconomic status, and family structure
- Studies of the resolution of career identity and ego identity issues during college and potentially over a longer time span would be helpful, particularly if they are conducted with a cross-sectional or longitudinal approach

CTI Research Summary Table**References**

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1979). *Beck Depression Inventory*. Palo Alto, CA: Psychological Corporation.

Bennion, L. D., & Adams, G. R. (1986). A revision of the Extended Version of the Objective Measure of Ego Identity Status: An identity instrument for use with late adolescents. *Journal of Adolescent Research, 1*, 183-198.

Dipeolu, A. O. (1997). A study of the relationship between learning disabilities, dysfunctional career thoughts, and adjustment to disability (Decision-making confusion, commitment, conflict, anxiety, career thoughts inventory) (Doctoral dissertation, Florida State University, 1997). *Dissertation Abstracts International, 58*(07), 3938B.

Fassinger, R. E. (1990). Causal models of career choice in two samples of college women. *Journal of Vocational Behavior, 36*, 225-248.

Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). *Frost Multidimensional Perfectionism Scale*. Smith College, Northhampton, MA: Author.

Heppner, P. P. (1988). *The Problem Solving Inventory*. Palo Alto, CA: Consulting Psychologists Press.

Holland, J. (1994). *Self-Directed Search: Form R* (4th ed.). Odessa, FL: Psychological Assessment Resources.

Holland, J. L., Daiger, D. C., & Power, P. G. (1980). *My Vocational Situation*. Palo Alto, CA: Consulting Psychologists Press, Inc.

Kilk, K. L. (1997). The relationship between dysfunctional career thoughts and choosing an academic major. (Doctoral dissertation, University of Northern Colorado, 1997). *Dissertation Abstracts International, 58*(08), 3038A.

Livneh, H., & Antonak, R. F. (1990). Reactions to disability: An empirical investigation of their nature and structure. *Journal of Applied Rehabilitation Counseling, 21*(4), 13-21.

O'Brien, K. M., & Fassinger, R. E. (1993). A causal model of the career orientation and career choice of adolescent women. *Journal of Counseling Psychology, 40*, 456-469.

Osborn, D. S. (1998). The relationships among perfectionism, dysfunctional career thoughts, and career indecision. (Doctoral dissertation, Florida State University, 1998). *Dissertation Abstracts International, 59*(10), 3746A.

Osipow, S. H., Carney, C. G., Winer, J. L., Yanico, B. J., & Koschir, M. (1987). *Career Decision Scale* (3rd Rev.). Odessa, FL: Psychological Assessment Resources, Inc.

Parker, G., Tupling, H., & Brown, L. B. (1979). A parental bonding instrument. *British Journal of Medical Psychology, 52*, 1-10.

Railey, M. G. (1997). The relationship between dysfunctional career thoughts and career interests with respect to offender status of female inmates and probationers. (Doctoral dissertation, Florida State University, 1997). *Dissertation Abstracts International*, 58(06), 3325B.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80, 1-28.

Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., Reardon, R. C., & Saunders, D. E. (1996). *Career Thoughts Inventory: Professional manual*. Odessa, FL: Psychological Assessment Resources, Inc.

Saunders, D. E. (1997). The contribution of depression and dysfunctional career thinking to career indecision. (Doctoral dissertation, Florida State University, 1997). *Dissertation Abstracts International*, 58(07), 3953B.

Shipley, W. C. (1940). A self-administering scale for measuring intellectual impairment and deterioration. *Journal of Psychology*, 9, 371-377.

Slaney, R. B. (1980). Expressed vocational choice and vocational indecision. *Journal of Counseling Psychology*, 27, 122-129.

Slatten, M. L. (1999). *Dysfunctional career thoughts and self-appraised problem-solving ability among substance abusers*. Unpublished doctoral dissertation, Florida State University.

Spielberger, C. D. (1977). *State-Trait Anxiety Inventory--Form Y*. Redwood City, CA: Mind Garden, Inc.

Spielberger, C. D. (1991). *Manual for the State-Trait Anger Expression Inventory*. Odessa, FL: Psychological Assessment Resources.

Spielberger, C. D., Gorsuch, R. L., & Lushene, P. R. (1970). *State-Trait Anxiety Inventory*. Palo Alto, CA: Mind Garden.

Strausberger, S. J. (1998). The relationship of state-trait anger to dysfunctional career thinking and vocational identity (Doctoral dissertation, Florida State University, 1998). *Dissertation Abstracts International*, 59(10), 3747A.

Voight, L. (1999). *Parental attachment and ego identity as antecedents of career identity*. Unpublished doctoral dissertation, Florida State University.

Zener, T. B., & Schuelle, L. (1976). Effects of the Self-Directed Search on high school students. *Journal of Counseling Psychology*, 23, 353-359.

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**Center for the Study of Technology in Counseling and Career Development**  
The Career Center, University Center, Suite A4100  
Florida State University, Tallahassee, FL, 32306-2490

(850) 644-6431 (voice) 644-3273 (FAX)  
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