

2014

# Incongruence and attitudes toward career counseling

Sara Schwatken  
*Iowa State University*

Follow this and additional works at: <http://lib.dr.iastate.edu/etd>

 Part of the [Psychology Commons](#)

---

## Recommended Citation

Schwatken, Sara, "Incongruence and attitudes toward career counseling" (2014). *Graduate Theses and Dissertations*. 13701.  
<http://lib.dr.iastate.edu/etd/13701>

This Dissertation is brought to you for free and open access by the Graduate College at Iowa State University Digital Repository. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Iowa State University Digital Repository. For more information, please contact [digirep@iastate.edu](mailto:digirep@iastate.edu).

**Incongruence and attitudes toward career counseling**

by

**Sara Schwatken**

A dissertation submitted to the graduate faculty in  
partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Major: Psychology (Counseling Psychology)

Program of Study Committee  
Patrick Armstrong, Co-Major Professor  
David Vogel, Co-Major Professor  
Fred Lorenz  
Nathanial Wade  
Meifen Wei

Iowa State University

Ames, Iowa

2014

**TABLE OF CONTENTS**

LIST OF FIGURES	iii
LIST OF TABLES	iv
ABSTRACT	v
CHAPTER 1. OVERVIEW	1
CHAPTER 2. REVIEW OF LITERATURE	15
CHAPTER 3. METHOD	64
CHAPTER 4. RESULTS	71
CHAPTER 5. DISCUSSION	93
REFERENCES	117
APPENDIX	145
ACKNOWLEDGEMENTS	153

**LIST OF FIGURES**

Figure 1.	The Predictive Moderating Relationship of Major Satisfaction on the Congruence-Attitudes Relationship	60
Figure 2.	The Predictive Moderating Relationship of Career Decision Making Self-Efficacy on the Congruence-Attitudes Relationship	61
Figure 3.	The Predictive Moderating Relationship of Public Stigma on the Congruence-Attitudes Relationship	62
Figure 4.	The Predictive Moderating Relationship of Self-Stigma on the Congruence-Attitudes Relationship for Men	63
Figure 5.	The Predictive Moderating Relationship of Self-Stigma on the Congruence Attitudes Relationship for Women	63
Figure 6.	The Moderating Effects of Career Decision Making Self-Efficacy on the Congruence-Attitudes Relationship	86
Figure 7.	The Moderating Effects of Self-Stigma on the Congruence-Attitudes Relationship for Men.	88

## LIST OF TABLES

Table 1.	Scale Means and Standard Deviations for the Alternative Forms Public Domain Measure	73
Table 2.	Number and Percentage of Participants per Holland Code Type	79
Table 3.	Scale Means, Standard Deviations and Ranges for the Congruence Indices	80
Table 4.	Correlations among Congruence Indices	80
Table 5.	Stepwise Congruence Hierarchical Linear Regressions Predicting Attitudes Toward Career Counseling	82
Table 6.	Scale Means, Standard Deviations and Ranges for all Study Scales	83
Table 7.	Correlations amongst Study Variables	83
Table 8.	Prediction of Main and Interactive Effects for Attitudes Toward Career Counseling	85
Table 9.	Results for Female Participants for the Congruence-Stigma Interaction	87
Table 10.	Results for Male Participants for the Congruence-Stigma Interaction	88
Table 11.	Major Satisfaction as a Mediator in the Congruence and Attitudes Relationship	90
Table 12.	Self-Efficacy as a Mediator in the Congruence and Attitudes Relationship	90
Table 13.	Public Stigma as a Mediator in the Congruence and Attitudes Relationship	91
Table 14.	Self-Stigma as a Mediator in the Congruence and Attitudes Relationship	92

**ABSTRACT**

Career distress has a negative effect on college retention rates (Sharkin, 2004), psychological well-being (Hartman & Fuqua, 1983) and future career choices (Turner & Berry, 2000). While career indecision and the related distress it causes can be reduced with appropriate sources of help, many students do not seek these services. Few studies have examined the factors that lead to avoidance of the use of career service on college campuses. Therefore, to address this omission in the literature, the current investigation explored the links between indices related to career/major distress (i.e., congruence/incongruence) and help-seeking attitudes among a sample of college undergraduates (N = 741). Results of regression analyses suggest that incongruence, as measured by Occupational Euclidean Distance, uniquely predicted 2.7% of the variance in attitudes towards seeking professional help. Furthermore, this link was moderated by one unique career-related factor (i.e., career decision-making self-efficacy) and by the interaction of gender and self-stigma associated with seeking counseling. Specifically, the addition of the interaction terms added an additional 1.7 percent to the variance of the regression model including all study variables. Implications for researchers and clinicians interested in understanding incongruence and enhancing career service utilization are discussed.

## **Incongruence and attitudes toward career counseling**

### **CHAPTER 1: OVERVIEW**

Career distress and career indecision are highly prevalent among college students. For example, over 50% of students change majors at least once during college (Orndorff & Herr, 1996), indicating the presence of uncertainty and in many cases, distress, related to making career decisions. Career distress has also been linked to college retention rates (Sharkin, 2004; Turner & Berry, 2000), intent to continue in college (Chartrand, 1992) and overall career indecision (Hannah & Robinson, 1990). Additionally, researchers have also found that between 19% (Bauman & Lenox, 2000) and 25% (Benton, Robertson, Tseng, Newton & Benton, 2003) of students presenting for help at a college counseling center did so to address academic and vocational concerns. Furthermore, the number of students that actually need career services may even higher. In one epidemiological study, only 10% of individuals with *non-clinical level symptoms* (such as individuals struggling with career concerns) sought some form of counseling (Andrews, Issakidis & Carter, 2001). In addition, in a sample of students who were directly identified as in need of career counseling services, almost half were unaware of available counseling services on campus (Fouad et al., 2006) and of those students, only 6.1% utilized services. These alarming statistics highlight the need to better understand the factors that facilitate or hinder college students' decisions to seek career counseling.

More information is currently available than ever before regarding the decision to seek professional mental health services and barriers (e.g., concerns about stigmatization) which may prevent an individual from receiving help. This is especially true for a college population. However, the majority of this research has focused on help seeking for personal concerns and less research has specifically focused on examining help seeking for academic and career-related

concerns. There is a significant need for research to explore potential variables that may be uniquely linked to students' decisions to seek career counseling, as research to this point is limited. In the general help-seeking literature, researchers have shown a strong relationship between the presence of psychological distress and more positive attitudes towards seeking professional help (e.g., Constaintaine, Wilton, & Caldwell, 2003; Cramer, 1999; Cooper-Patrick, Gallo, Powe, Steinwachs, Eaton & Ford, 1999). Specific to career counseling, Holland's Theory of Vocational Personality and Choice (1997) established that when individuals are in environments (i.e., majors, careers) that do not match their personality and/or interests they will experience distress. This mismatch is termed incongruence. As such, individuals who are experiencing greater incongruence between their environment and their interests are more likely to be in greater career distress and would be the most likely to perceive benefits from therapeutic services. As such, specific to career counseling, participants who are incongruent should have more positive attitudes about seeking career concerns.

**Incongruence.** While career concerns share many of the same elements as personal counseling (i.e., sharing personal information with a counseling), career-related concerns also share some unique elements. The most significant variable is the construct of congruence as described in Holland's Theory of Vocational Personality and Choice (1997). Holland's (1997) model predicts that individuals are motivated to find environments that are a good match for their interests, skills, personality traits, abilities and other characteristics. The goodness of fit between individuals and their environments can be evaluated by Holland's notion of congruence (or incongruence), that is, by comparing the interest type of the individual with that of the environment. Holland's model predicts that individuals will tend to choose congruent environments and that successful career-related outcomes are facilitated by congruence.

Conversely, when individuals and environments are incongruent, Holland predicts that some form of remediation will occur. Incongruence may lead individuals to be removed or withdraw from the environment, or individuals will adapt to their environment by changing their behaviors and expectations. Incongruence may be particularly impactful for college students as it can impact both immediate concerns (such as career indecision) and subsequently more global mental health symptoms (e.g. lowered self-esteem and anxiety; Smith & Betz, 2002; Hartman & Fuqua, 1983; Fuqua, Newman & Seaworth, 1988). Researchers have documented the frequent and pervasive difficulty with career indecision (Hannah & Robinson, 1990) which often leads to the students' desire to switch their current major (Orndorff & Herr, 1996) or seek help for their concerns (Wollman, Johnson & Bottoms, 1975). Thus, incongruence appears to be a highly relevant construct to consider in the prediction of help-seeking attitudes in light of the potential need for counseling for these students.

The majority of research examining the links between congruence-incongruence and work-related behaviors and outcomes has focused on workplace satisfaction (e.g., Gottfredson, 1994; Oleski & Subich, 1996). Although there has some debate regarding the importance of congruence as a measure of workplace outcomes (Tinsley, 2000), it is generally agreed that individuals are more likely to be satisfied with career choices that are a good fit for their vocational identity (Spokane, Meir & Catalano, 2000). In addition to satisfaction, congruence has been found to relate to self-knowledge (Raphael, 1986), completion of academic programs (Martin & Bartol, 1996), persistence in a career (Meir, Esformes & Friedland, 1994); whereas incongruence has been linked to mental health symptoms (e.g. depression and anxiety; Celeste, Walsh & Raote, 1995) and career indecision (Lent, Brown & Larkin, 1987). These results suggest that the effects of congruence may vary across individuals, but also supports the notion

that there will be some form of negative consequence for individuals who are highly incongruent. In addition, these findings highlight the potential need for career counseling for individuals who are incongruent to remediate the career or personal distress they are experiencing.

Career-related interventions based on Holland's (1997) model often focus on working with individuals to identify future opportunities that are a better fit for their interests, skills and other attributes (Swanson & Fouad, 1999). As such, these interventions assume that one of the key factors leading individuals to seek help is their current state of incongruence, and improving person-environment fit can ameliorate the current distress. Thus, experiencing incongruence between one's interests and career (or predicted career path) is an explicit assumption in the decision to seek help for their career concerns. Given this implicit assumption of Holland's model and many of the interventions based on it, it is somewhat surprising that there has been little research examining the direct role of incongruence in the decisions to seek career counseling. To address this gap, this study will be the first to explore the concept of incongruence, empirically, by examining the role of this variable in predicting help-seeking attitudes toward career counseling.

In addition to simply exploring the relationship between incongruence and attitudes toward career counseling, this study will address the disparate and unclear findings in the congruence literature regarding the measurement of congruence. A relatively large number of congruence indices have been developed or utilized, but researchers have demonstrated that correlations amongst the congruence indices have varied widely (.05-.98; Camp & Chartrand, 1992). Spokane, Luchetta & Richwine (2000) discuss three generations of congruence indices, which range from simple to more complex numerical descriptions of the person-environment

relationship. The benefit of the simpler to calculate measures is the ease of computation and understanding of the index. However, it may be important to know more about *how* congruent (e.g. measured by the distance between Holland types) an individual is to best determine need for services, and as such the more complex measures may more accurately reflect the congruence construct. Therefore, a congruence index from each generation will be computed to determine which indice(s) will best predict attitudes toward career counseling. In addition, incongruence between current interests and both current academic major and stated occupational career choice will be examined. Both types of person-environment comparisons will be explored as they may provide different information regarding one's level of incongruence. For example, one may feel their academic major is highly incongruent with their interests; however, their stated occupational choice may reflect a greater congruence to their interests. Therefore, six congruence indices (3 generations for 2 environment types) will be computed and explored in the relation to help seeking for career counseling.

**Moderating or Mediating Career Variables.** Holland's Theory of Vocational Personality and Choice (1997) acknowledges that congruence can be impacted by other career-related factors. Two variables in the career development literature that have received the most attentions are: major satisfaction and career decision-making self-efficacy. A small to moderate relationship has been consistently found between satisfaction and congruence. It has also been found that satisfaction may act as a moderator and/or mediator for the relationship between congruence and career distress (see Spokane, Meir & Catalano, 2000). Holland predicted individuals in congruent environments will experience the most satisfaction. In turn, however, when individuals are in incongruent environments remediation will occur either by changing environments or by adapting to the environment by changing behaviors and expectations.

Satisfaction may in this situation act a mediator (i.e., the degree of incongruence leads to how satisfied someone is and this satisfaction leads to whether someone changes or stays in a job/career path). Conversely satisfaction may act as a moderator (i.e., the interaction between the degree of congruence-incongruence and satisfaction may predict whether someone changes or stays in a job/career path). While few studies have examined more than direct effects of satisfaction and congruence some research supports the possibility for moderation and/or mediation of satisfaction. For example, a few researchers have demonstrated the role of satisfaction as a potential moderator in career variable relationships. Pelled & Xin (1999) found that satisfaction moderated positive affect and absenteeism in the workplace, in that for individuals with low levels of satisfaction, positive affect was a stronger predictor of absenteeism than for those with higher levels of satisfaction. It is, therefore, possible that major satisfaction will interact with incongruence in the prediction of help seeking attitudes. For example, the relationship between incongruence and attitudes may be stronger for individuals with lower levels of major satisfaction. These individuals may experience more significant career distress from both incongruence and dissatisfaction with their major, potentially leading to increased attitudes toward treatment in order to alleviate their distress. Alternatively, those with high levels of satisfaction may not demonstrate the same relationship between incongruence and attitudes due to a lower need to seek services (i.e., they are content despite their being some incongruence due to other factors such as job success or high pay).

A few researchers have also demonstrated the potential role of satisfaction as a mediator of congruence and other career-related factors (Barnes, Ghumman & Scott, 2013; Ko, 2012; Holschlag & Masuda; 2011). For example, a recent study by Ko (2012) found that the professional competence only indirectly predicted career confidence through the experience of

satisfaction. Based on this work, incongruence may only act upon attitudes through the experience of feeling dissatisfied with one's major. As such, one may be incongruent; however, it is the subsequent dissatisfaction that may be most closely linked with one's attitudes toward career counseling. Based on the conflicting findings of the extant literature one goal of the current study is to examine the potential differing role(s) as of major satisfaction on the link between incongruence and attitudes toward seeking career counseling to better understand whether moderation and/or mediation could explain any links found.

Similarly, evidence for both moderating and mediating effects are present for the variable of career decision-making self-efficacy. Based upon Holland's (1997) theory, congruent environments would be more likely to elicit positive self-evaluations of our abilities. Holland (1997) referred to these evaluations as self-beliefs that other theories (i.e. SCCT; Lent, Brown & Hackett, 1994) have since defined as the experience of self-efficacy (Gottfredson, 2002). In turn, incongruent environments could elicit lower perceptions of our abilities and may lead to changing environments to one that better fits our perceived capabilities or by learning new behaviors so that we feel more capable and confident. Consistent with this, a couple of studies have examined moderating and/or mediating effects of self-efficacy. For example, Srsic and Walsh (2001) discovered an interaction between career decision-making self-efficacy and congruence predicted individuals who were undecided on their college major. Specifically, they found that individuals who experienced lower levels of congruence and self-efficacy better predicted career indecision than those with higher levels of self-efficacy. Building on this finding, in the case of decisions to seek career services, it is possible that if an individual has lower self-efficacy in their ability to make career decisions and they have greater incongruence between their interests and their career decisions they would be most likely to be in need of

services and most likely to perceive career counseling as something that could be of benefit (i.e., more positive attitudes toward seeking help). The opposite should be the case for individual who have higher self-efficacy in their ability to make career decisions and have greater congruence between their interests and their career decisions. These individuals would be least likely to be in need of services and, therefore, least likely to perceive career counseling as something that could be of benefit. Similarly, those with higher self-efficacy and high incongruence and those with lower self-efficacy and lower incongruence would fall somewhere in the middle as their need for services (due to the ability to handle problems if they had high self-efficacy or not have problems in the case of high congruence) is modest.

Conversely, some researchers have noted that possibility that career decision-making self-efficacy may mediate the relationship between incongruence and career decisions. In other words, incongruence may only act indirectly on attitudes towards career counseling through one's experience of career decision-making self-efficacy. In the larger self-efficacy literature, multiple researchers have demonstrated the mediational power of self-efficacy (e.g., Pan, Sum & Chow, 2010; Spurk & Atele, 2010; Nauta, 2004). In one example, Spurk & Atele (2010) found that the personality characteristics of neuroticism and conscientiousness lead to experiences of self-efficacy which in turn predicted one's annual salary. In sum, the extant research suggests a potential role of self-efficacy on the relationship between congruence and help-seeking attitudes for career concerns, but again there are conflicting findings that need to be addressed. The current study will expand the previous literature by directly examining both the potential moderating and mediating role(s) of career decision-making self-efficacy on the link between incongruence and attitudes toward seeking career counseling. In sum, this research will expand previous research, by directly examining more complex relationships between incongruence and

career decision-making self-efficacy and with major satisfaction on attitudes toward seeking help.

**Other Moderating or Mediating Variables.** Another needed step in the literature is to determine if known predictive variables for personal counseling also play a role in any links between incongruence and attitudes toward career counseling. Two of the most important variables in predicting attitudes and willingness to seek help for personal concerns are public and self-stigma (Vogel, Wade & Haake, 2006; Vogel, Wade & Hackler, 2007, Komiya, Good & Sherrod, 2000; Vogel & Wester, 2003). Public stigma is defined as the perception that one is socially unacceptable for a specified reason, which will lead the group or society to experience negative reactions toward the individual (Corrigan, 2004). Self-stigma on the other hand has been defined as “the reduction of an individual’s self-esteem or self-worth caused by the individual self-labeling herself or himself as someone who is socially unacceptable” (Vogel, Wade & Haake, 2006, p. 325). These two types of stigmas have consistently linked with the avoidance of personal counseling (Cooper, Corrigan & Watson, 2003; Vogel, Wade & Hackler, 2007; Stefl & Prosperi, 1985; Komiya, Good & Sherrod, 2000) and in one prior study was also linked with perceptions of career counseling. Ludwikowski, Armstrong and Vogel (2009) reported that both self-stigma and public stigma were linked to willingness to seek help for career concerns. Building on this single study, the current investigation will examine the predictive variables of stigma on attitudes toward seeking help for career concerns as well as examine the potential moderating and/or mediating effects of public and self-stigma on the links between incongruence and career help-seeking attitudes.

Similar to the selected career variables, the stigma literature demonstrates the potential for stigma to not just have a direct effect on attitudes towards career services, but also to play a

role in the link between congruence and attitudes, though, whether stigma would act as a moderator or mediator is uncertain. Support for moderating effects have been found in a number of studies related to general mental health symptoms (Cavelti et al., 2012; Ghaffari, 2011; Ehrlich-Ben Or et al., 2013). In one such study, self-stigma was found to interact with psychological symptoms to predict psychological growth, in that, individuals with greater symptoms and feelings of stigma demonstrated the worst growth outcomes. Public and self-stigma may similarly act as moderators in the relationship between incongruence and attitudes; in that individuals who experience lower levels of stigma and are more incongruent in their interest-environment fit should be most likely to endorse positive attitudes toward seeking help for career concerns. Experiencing incongruence should lead to more positive attitudes towards career counseling due to feeling counseling should help with the incongruence among those who perceive few negative consequences (i.e., low stigma) for seeking help. In other words, the relationship between incongruence and attitudes toward seeking help will be strongest for individuals who experience low levels of stigma. Conversely, however, if one experiences high levels of stigma (i.e., perceived some negative consequences for seeking help either in other reactions [public stigma] or in the self-evaluation [self-stigma]) this may weaken the relationship between incongruence and attitudes as the risk of seeking treatment may be perceived as too great.

Alternatively, mediation effects have also gathered some consistent support in the larger literature on stigma and mental health (Vogel, Schetman & Wade, 2010; Vogel, Wade & Hackler, 2007). For example, stigma has been shown impact the link between distress and decisions to seek help (Stefl & Prospero, 1985) as well as fully mediate the relationship between public stigma and attitudes toward seeking help (Brown et al., 2010; Vogel, Schetman & Wade,

2010). As such, stigma may act as a mediator in the incongruence and attitudes relationship. In other words, incongruence may only indirectly influence help-seeking attitudes through one's experience of stigma. An example of this would be if an individual was experiencing significant obsessive compulsive behaviors they may perceive a benefit for seeking help for their concerns. However, this relationship may only play out through their subsequent experience of stigma. If that individual feels the risk of seeking help is too great, they may be reluctant to view therapy as a viable possibility. To pull together these differing lines of research, this research will directly examine the potential complex relationships between incongruence and public and self-stigma on attitudes toward seeking help.

Finally, stigma and in particular self-stigma, has been noted as being particularly salient for men due to the prescription of the traditional male gender role (e.g. that men should be independent, controlled, and self-sufficient) may lead to increased concerns about seeking help, because seeking help may mean admitting an inability to handle concerns on one's own (Addis & Mahalik, 2003; Pederson & Vogel, 2006). Therefore, a man who believes that he needs counseling may feel a strong sense of failure, which would make the act of asking for help particularly difficult. Consistent with this, Mansfield, Addis, and Courtenay (2005) found that self-reliance (i.e., the desire to not have to depend on others and feeling bad about oneself if one needs help) was related to men's negative attitudes toward seeking professional psychological help. Magovcevic and Addis (2005) also directly found that college students who reported higher levels of male gender role conflict also reported greater self-stigma associated with experiencing psychological problems. Research by Pederson and Vogel (2007) also documented the relationship between self-stigma and willingness to seek help for men. These authors highlighted how men's experience of their gender role led to greater self-stigmatization, in turn leading to

less positive attitudes and less willingness to seek mental health services. Vogel, Wade, and Hackler (2007) also found that self-stigma was endorsed to greater degree by men than women. In sum, the evidence suggests that self-stigma about personal counseling is related may be particularly salient for many men (Vogel, Heimberdinger-Edwards, Hammer, & Hubbard, 2012). Therefore, to explore whether these findings are also accurate for the self-stigma associated with career counseling, in the current investigation of gender as well as the interaction of gender, self-stigma, and incongruence was examined. Specifically, based on above findings, the relationship between congruence and attitudes may not only be moderated by self-stigma but also by gender (i.e., a three-way interaction). The effects of self-stigma on the incongruence – attitude relationship may be stronger for males than females. In other words, men who are experiencing more incongruence between their interests-environment fit may be more likely to seek career services (i.e., have more positive attitudes) but only if they have internalized less self-stigma. Those who have internalized greater self-stigma may feel the risks of seeking help to be too great. In turn, self-stigma may have less of an effect on women. Women who experience greater incongruence may have more positive attitudes about seeking help regardless of level of self-stigma as the gender role prescription for women is less likely to violated by seeking help.

### **Current Study**

Based on Holland's Theory of Vocational Personality and Choice (1997) the goal of this study is to fill in a much need gap in the career counseling literature by exploring the relationship between incongruence and attitudes towards career counseling. The primary research question in the current study will explore if incongruence will directly predict attitudes toward seeking help for career counseling. To examine this question, a congruence index from each of the three generations of indices will be computed for two types of environments (academic major and

stated occupational choice) in the person-environment relationship. This analysis will allow the field to both note if a link is present between incongruence and attitudes towards seeking career counseling as well as which type of congruence measurement best reflects this relationship, if present. It is expected that the newer generation that assesses both type and distance would best account for the link due to the more complex and descriptive ability this generation of index provides. In addition, the current investigation expands the extant literature by exploring the potential moderating and/or mediating effects of major satisfaction, career decision-making self-efficacy, and two types of stigma (public and self) on the links between incongruence and attitudes. Specifically, four additional research questions will be examined:

1) Does major satisfaction moderate or mediate the incongruence-attitudes relationship?

For example, moderation might be present as individuals who are less satisfied in their major could show a stronger relationship between congruence and attitudes than those who are more satisfied (See Figure 1). Conversely, mediation might be present as incongruence could lead to the experience of dissatisfaction in turn predicting attitudes toward counseling.

2) Does career decision-making self-efficacy moderate or mediate the incongruence-

attitudes relationship? For example, moderation might be present as individuals who demonstrate lower levels of career decision-making self-efficacy could show a stronger relationship between congruence and attitudes than those with greater self-efficacy (See Figure 2). Conversely, mediation might be present as incongruence could lead to the experience of lower career decision-making self-efficacy, in turn predicting attitudes toward counseling.

3) Does public and self-stigma moderate or mediate the incongruence-attitudes relationship? For example, moderation might be present as individuals who experience less stigma could show a stronger relationship between congruence and attitudes than those who experience greater stigma (See Figure 3). Conversely, mediation might be present as incongruence could lead to the experience of stigma due to one's negative perceptions of themselves if they were to perceive themselves to need therapy, which in turn, could predict attitudes toward counseling.

4) Does gender further moderate the relationship such that there will be a three-way interaction with incongruence, self-stigma and gender. For example, if moderation is present the relationship between congruence and attitudes could be moderated by self-stigma for males (see Figure 4) to a greater degree than it moderates the relationship for females (see Figure 5).

## CHAPTER 2: LITERATURE REVIEW

Career distress is one of the most common sources of stress for college students. Career distress can look very different for many students; often arising when one is undecided about their career path or major selection. This is commonly known as career indecision which, broadly defined, is “the inability to select and commit to a career choice” (Tokar, Withrow, Hall & Moradi, 2003, p. 3). This difficulty is pervasive in the college setting, studies have estimated that up to 50% of college students suffer from career indecision (Hannah & Robinson, 1990) and up to 68% indicated they needed help in making a career decision (Wollman, Johnson & Bottoms, 1975). Frequently, career indecision is the result of individuals’ perceptions that the career path they have chosen is unsatisfactory or incongruent with their true interests. The discomfort of this incongruence often leads individuals to be dissatisfied with their vocational and personal life (Holland, 1997). In a sample of college freshman, almost 50% indicated they would benefit from assistance in making career decisions (Hannah & Robinson, 1990) and over 50% of college students have been reported to change their declared major at least once during their time in college (Orndorff & Herr, 1996), suggesting dissatisfaction (perhaps due in large part to incongruence) is highly prevalent in college settings.

Career distress and indecision can also lead to many negative emotional consequences for college students. For instance, career indecision has been related to higher rates of depression, lower appraisals of self-esteem and less career decision-making self-efficacy (Smith & Betz, 2002), state and trait anxiety (Hartman & Fuqua, 1983; Fuqua, Newman & Seaworth, 1988) and difficulties within interpersonal relationships (Lucas, Skokowski & Ancis, 2000; Tokar, Withrow, Hall & Moradi, 2003). Dissatisfaction with career or major choice and career indecision has also been linked to lower retention rates for those who did not receive counseling

for these concerns as well as poorer academic functioning (Sharkin, 2004; Turner & Berry, 2000). Conversely, certainty of one's major was the most predictive single factor in intent to continue in college in a study examining background, academic and environmental variables (Chartrand, 1992).

Forms of career distress are so prevalent that many students elect to seek help for these concerns from campus resources. Multiple forms of assistance are available to students depending on their needs. Academic advisors often act as a starting place for many students to begin to explore any career concerns or uncertainties. Often this resource is helpful for students who need support regarding specific class and major options available at their college or university. Advisors often act as a mini-counselor to determine what, logistically, may be the best fit for their advisee. Similarly, many students may turn to faculty members whom they admire to point them in the 'right' direction. Many colleges also have programs or departments which are designed to assist students in their career paths. For example, career exploration centers (separate from counseling centers) often provide psycho-education and world of work information to any student who wishes to utilize the service. Advanced students may also volunteer to act as peer mentors for these individuals. Additionally, many colleges also provide direct career assistance in providing services for resume building, interviewing skills and general help in finding a job (Benton et al., 2003). For example, the university from which the current study's sample was taken contains a department for each academic college to provide these services to students.

Despite the potential benefit of these services, many students may not be in a place, developmentally, to utilize the resources described above. Students with significant career distress, incongruence, indecision or dissatisfaction may need additional help in solving their

career concerns. Researchers have discovered that a large percentage of the clientele seen on campus seek help for career, academic, educational and vocational concerns. During a two-year period at a large public university in the southwest, archival data indicated that 19% of individuals seeking help during this period presented with career/academic concerns (Bauman & Lenox, 2000). In another longitudinal study spanning 13 years of client data at a large Midwestern University counseling center; researchers found that 17-25% of presenting concerns were considered educational/vocational in nature (Benton et al., 2003).

Career counseling is verifiably an effective method for reducing career distress. Career counseling, defined as “an ongoing, face to face interaction between counselor and client, with career- or work-related issues as the primary focus” (Swanson, 1995, p. 219), has been shown to be an effective means for remediating a number of career concerns. Typically the efficacy of career counseling has been demonstrated in studies examining specific career interventions. Career interventions are more explicitly defined by Spokane & Oliver (1983) as “any treatment or effort intended to enhance an individual’s career development or to enable the person to make better career-related decisions” (p. 100). These authors also demonstrated in an early meta-analysis that individuals who received career interventions, compared to a no treatment condition, scored one standard deviation higher on career outcome measures. Using more statistically sophisticated and conservative methods, other researchers have also found career interventions to be effective in comparison to no-treatment or placebo conditions. Effect sizes for career interventions typically fall between .30 and .50 (Brown & Ryan Krane, 2000; Whiston, Sexton & Lasoff, 1998). These effect sizes, falling in the small to moderate range, may be lesser than expected given the overwhelming efficacy for individual or personal counseling (the average effect size for individual counseling is .80; see Wampold, 2001). However, when

examining career interventions, outcomes are typically measured by intermediate steps (such as career maturity, career decision making self-efficacy, etc.) rather than by the overall effectiveness of helping a client reach a career decision. A summary of the efficacy literature supports this argument; career interventions demonstrate larger effects for those intermediate outcomes and lesser effects for more distal decision-making outcomes such as decidedness and certainty (Whiston & Rahardja, 2008).

Studies examining intermediate career outcomes have found that career interventions led to an increase in realistic vocational choices (Pool, 1965), greater career maturity which in turn led to greater certainty (Rubington, 1980) and greater decision making abilities (Egner & Jackson, 1978). Attributional retraining interventions have also been shown to increase career exploration behaviors (Luzzo, James & Luna, 1996). Additionally, career counseling has been linked to greater rates of retention in college (Wilson, Mason & Ewing, 1997). One study found that students who received counseling (80% of which were seen for academic and vocational concerns) demonstrated a 10% increase in graduation rates (Frank & Kirk, 1975). Additionally, there is some evidence of a ‘ripple effect’ of career counseling on other areas of student functioning. In one study students who received career counseling and reduced career distress also demonstrated improvement in both measures of academic and personal functioning. (Choi, Buskey & Johnson, 2010).

The benefits of career interventions and counseling appear to be long lasting despite the relatively short “dosage” of treatment. Clients may be seen, on average, for career counseling from anywhere from one to 16 sessions depending on the presenting concerns and comorbidity of other personal issues. A review of the research suggests that the optimum dose for effective treatment ranges from 4-5 sessions (Brown & Ryan Krane, 2000). The retention rate advantage

for graduation also dissipates after 6 sessions (Wilson, Mason & Ewing, 1997), suggesting that the benefits received in career counseling and with career interventions are most potent in a short-term model. Furthermore, the benefits of counseling appear to be retained over time. In a 6-month follow-up, students continued to demonstrate positive attitudes toward continued career exploration and decision making after a 5-week group therapy intervention (Johnson, Johnson & Yates, 1981). Healy (2001) also found that 85% of clients continued the career exploration and decision making process (by continuing to gather information and take career actions) after a one to 12 month follow-up.

Despite the benefits of career counseling, research has clearly illustrated that not all students who potentially need professional psychological help seek services. Many individuals hold negative views of therapy (Furnham & Wardley, 1990) and have been found to view professional services as a last resort (Lin, 2002), preferring instead to seek help from friends or family or deal with their concerns on their own. For those who are identified as suffering from a mental illness, less than one third seek help from a professional (Andrews, Issakidis & Carter, 2001). The rate of help seeking is even lower for individuals who do not meet the threshold for having a mental disorder; Andrews, Issakidis and Carter (2001) found that only 10.6% of individuals who were in distress but were classified as *sub-threshold* for a mental disorder sought some form of professional mental health services. Individuals with career concerns and distress would likely fit this sub-threshold category, suggesting that individuals with career concerns may seek help even less frequently than individuals with other psychological concerns.

Some students in need have been suggested to not have awareness of services available on the college campus. In a study examining need, awareness and perceptions toward career counseling, researchers identified that many students in their study were in need of career

services to address career indecision and dysfunctional career beliefs (Fouad et al., 2006). However, only 51.2% of students were aware of counseling services on campus. Of these students, only 6.1% utilized individual counseling services. Awareness and utilization of other campus resources (such as resume assistance, a career development class and a career workshop) was even lower for students identified in need. Despite this low awareness and utilization, the majority of students (64%) did indicate they would be *comfortable* or *somewhat comfortable* seeking these services (Fouad et al., 2006). The discrepancies between the percentages of students who experience career distress and express comfort with the idea of help seeking, and the percentage of students who actually utilized services certainly engenders the question: What is preventing these students from choosing to seek help?

It would appear that there is a need for information regarding the help-seeking process for career counseling. First, the field is in significant need of understanding the unique career barriers to career counseling; including the factors which may impact one's level of career distress which would then impact help seeking attitudes. Second, unification between the career and personal counseling help seeking literatures is needed. At this point, there is a great divide between the two areas of research. Help seeking for personal concerns has engendered a large and informative research background. A number of barriers, factors and attitudes have been examined for individuals considering the decision to seek professional mental health services for a personal or emotional concern. Less attention has been paid specifically to career concerns or the process of decision making for help seeking. Do unique career-specific factors impact attitudes toward career counseling? Do barriers traditionally explored in the help seeking literature also apply to career counseling attitudes? This study will attempt to answer these questions to fill the gap in the help seeking literature.

Specifically, the current study will explore the question: Does incongruence predict attitudes toward seeking professional help for career concerns, and if so, which of the congruence indices is the best predictor in this relationship. Incongruence is a highly meaningful career counseling variable derived from Holland's (1997) theory of vocational personality and choice and is often the focus or theme of career counseling. Thus, I believe this important career variable will predict attitudes toward seeking help. Secondly, I will further explore the incongruence-attitudes relationship in relation to a number of both career variables (major satisfaction, career decision making self-efficacy) and traditional help seeking variables (public stigma, self-stigma) found in the literature. Previous research has provided evidence that each of these selected variables could act as either a moderator or mediator in the incongruence-attitudes relationship. Next, I will discuss the rationale behind each of these hypotheses and exploratory questions in more detail.

### **Holland's Theory of Vocational Personality and Choice and Congruence**

Holland's theory (Holland, 1997) is arguably the most widely cited, researched and utilized theory to explain career choice and satisfaction. Holland's theory can best be described as a person-environment fit theory (P-E fit) in which the person has a set of skills, traits, talents and abilities and will gain career satisfaction when they are able to find an environment that will allow them to utilize their talents. In other words, a good "fit" will occur when the environment's personality matches the person's. Congruence refers to the degree of fit between a person and environment. If a person whose code is SI is in a RC type of job, congruence will be low, likely resulting in career dissatisfaction. First, I will provide a little background regarding Holland's theory, the theoretical underpinning for the concept of career congruence, and then I will discuss

congruence more directly, how it is measured and how it could be linked to help-seeking attitudes.

The origins of Holland's (1959, 1966, 1973, 1985, 1997) theory can be traced back to Murray's (1938) personality research, which highlights that behaviors are the result of the interaction of one's personality and their environment. Holland believed that individuals would make career decisions that lead to a congruent match between their personality and the environment. Four main assumptions are outlined in Holland's (1997) theory. First, the person can be classified by one of six vocational personality types, which coherently and simplistically describe the traits, interests, activities and values inherent in the person. The first letter of each of these types has become the commonly known and referenced acronym, RIASEC; representing the Realistic, Investigative, Artistic, Social, Enterprising and Conventional types (described below). Most individuals are not one type, but a combination of types (typically represented by the top two to three types) which together best explain their vocational personality composition. Similar to general personality traits, RIASEC personality types are thought to develop as the product of "cultural and personal forces including peers, biological heredity, parents, social class, culture and the physical environment" (Holland, 1997, p. 2) which guide how the person views the world and themselves.

The *Realistic* type describes individuals who are emotionally stable, reliable, practical, thrifty, persistent, and are shy and hold traditional values. These types of individuals often enjoy jobs and careers that contain a tangible result, require hands-on work involving fixing, building or repairing, require more physical or psychomotor skill and involve problem solving with tools and/or machines (Harmon, Hansen, Borgen & Hammer, 1994; Holland, 1997). Typical careers with a "strong" realistic component include construction, athletic trainer and electrician.

The *Investigative* type describes individuals who are independent, self-motivated, analytical, reserved, introspective and original. An individual with a strong investigative type may enjoy a career in research, computer science or physics. Often investigative types enjoy tasks that are of a more ambiguous or abstract nature, involve problem solving through thinking, and/or like to work independently with data. These individuals are also often skilled at scientific analysis and have strong mathematical and analytical talents (Swanson & Fouad, 1999; Harmon, Hansen, Borgen & Hammer, 1994; Holland, 1997)

The *Artistic* type describes individuals who are independent and non-conforming but also display a higher degree of self-expression, intuition, sensitivity, emotionality and are often drawn to aesthetic qualities. Artistic individuals tend to enjoy tasks that require creativity and imagination such as creating artwork or performing. These individuals also enjoy working independently in more unstructured or flexible work environments that allow them to utilize their skill in verbal language, music and/or art. Careers that represent an artistic type include journalism, performing and musician (Swanson & Fouad, 1999; Harmon, Hansen, Borgen & Hammer, 1994; Holland, 1997).

The *Social* type describes individuals who are humanistic, idealistic, generous, kind, understanding, insightful and display concern for the welfare of others. These individuals often have strong skill in interpersonal communication, teaching and have a high degree of empathy. These skills allow for an enjoyable career in teaching, leading, social service and solving interpersonal difficulties. Thus, typical jobs with a strong social component include being a teacher, counselor or nutritionist (Swanson & Fouad, 1999; Harmon et al., 1994; Holland, 1997).

The *Enterprising* type describes individuals who are often ambitious, competitive, gregarious, adventurous, energetic and aggressive. Common enterprising careers include being a

sales manager, lawyer or political advisor. Individuals in these careers often have skill in selling, leading, managing, public speaking and display high interpersonal skill. They also enjoy tasks common in high-pressure business settings such as making impactful decisions and taking charge (Swanson & Fouad, 1999; Harmon et al., 1994; Holland, 1997).

Lastly, the *Conventional* type describes individuals who are as conscientious, persevering, practical, orderly, accurate, conservative, careful and controlled. Conventional individuals excel at organization, keeping records, following through with tasks and display a high degree of efficiency, mathematical skill and have a keen eye for attention to detail. Enjoyable careers for conventional individuals include being an office manager and careers in finance and banking (Swanson & Fouad, 1999; Harmon et al., 1994; Holland, 1997). No personality type is seen as any “better” than any other; and the types are simply used to classify and describe individuals with differing dispositions, interests and skills.

Holland’s (1997) second assumption asserts that the environment can also be classified in one of the six RIASEC types. In theory, individuals with similar skills, talents and attributes will flock to similar work environments; in turn creating environments that reflect the personality constellation of the individuals within it. The third assumption highlights that individuals will seek environments that will allow them to exercise their skills and talents and feel at home with their disposition (Holland, 1997). Environments also are in search of individuals that will be a good match. This can be seen in specialized recruiting activities and hiring processes that allow for individuals who match the environment to be selected for employment. Holland’s last main assumption asserts that the individual’s personality will interact with the environment to produce behaviors (Holland, 1997; Swanson & Fouad, 1999). Job choice, satisfaction, work-related activities and decisions could be predicted based on this interaction. This fourth assumption lies

at the heart of a P-E fit model; the degree of fit between a person and their environment allows us to make certain assumptions about their satisfaction and potential choices.

Much research has supported the validity of Holland's model. The theoretical tenets of the P-E fit model have been supported empirically; interests account for a significant amount of variance in occupational choices (Betz et al., 2006, Rottinghaus et al., 2006) and individuals generally tend to choose congruent work environments (Betz, 2008). In more general terms, research has suggested the presence of a strong match between personality and jobs (Swanson & Gore, 2000). The specific RIASEC model also has been supported. The hexagon model explains a limited amount of types for high school and college students as well as working adults (Holland, 1962; Edwards & Whitney, 1972; Rachman, Amernic & Aranya, 1981). The underlying circular structure of RIASEC has also received support (Tracey and Rounds, 1993).

Supplementary theories and constructs to Holland's theory have also gained support in the empirical research. The primary example of this can be found in Prediger's (1982) dimensional representation. Prediger proposed a three-factor model, which contains one general factor, response bias, and two bipolar dimensions representing work tasks. The bipolar dimensions of work tasks correspond to the inter-point of RIASEC distances. The "data-ideas" dimension intersects the investigative and artistic type axis of the hexagon while the "things-people" dimension intersects the perpendicular axis of realistic and social types. In theory, individuals with conventional and enterprising types prefer working with data, individuals with investigative and artistic types prefer working with ideas while social individuals prefer working with people and individuals with realistic types favor working with things as a part of their daily occupational tasks. The fit of this model onto a RIASEC circumplex model was found to be good and fared as well as other models tested in a large-scale study (Rounds & Tracey, 1993). The

bipolar dimensions were also found to generalize across individuals despite age, sex or the interest inventory utilized. Prediger's addition allows clinicians and clients to utilize a relatively simple conceptualization of work tasks which could aid in understanding career distress and guide informed career decision-making. For example, if a college student client is in a major which requires the completion of tasks working with data, such as engineering, but, prefers working with people, the student is likely dissatisfied or potentially distressed due to this incongruence. Career counselors can use this knowledge to guide information gathering and encourage more congruent decision making with their client.

Despite the empirical support for the structure and validity of Holland's main assumptions, the vast majority of this research has been conducted with primarily European American participants. Critics have questioned the validity of this theory for use with diverse populations. Some researchers have found very few differences between ethnic groups on interest inventories. Rounds and Tracey (1993) discovered that Asian samples replicate 4-6 similar code types and Fouad (2002) found that the only difference amongst ethnic groups were that Asian Americans scored higher on Investigative occupational interests. In a major study examining potential differences in career interests among the five major U.S. ethnic groups, Day and Rounds (1998) found no significant differences amongst the groups. These findings suggest that the structure of career interests is incredibly similar amongst diverse groups. However, when these data were reanalyzed using different statistical methods, Armstrong, Hubert and Rounds (2003) illustrated that this may not be the case. Their findings highlighted that the circumplex model (distance between code types is fixed equidistantly) was only an appropriate fit for Caucasian and Asian American groups, a quasi-circumplex model (non-fixed distances) was deemed more appropriate for Latino/a Americans and African Americans. Due to these findings,

it appears Holland's original hexagon model is better explained by a less stringent, quasi-circumplex model.

Other researchers have also suggested that there may be gender differences in Holland's model. Betz and Gwilliam (2002) state that gender differences trump racial differences on interest inventories. Women have been found to more frequently endorse interests and careers in the Social and Artistic realm while men tend to endorse items in the Realistic and Investigative realm (Fitzgerald, Fassinger & Betz, 1995). Related, researchers have discovered that women prefer working with people and men with things on Prediger's (1988) People/Things dimension, a compatible extension of Holland's RIASEC model (Su, Rounds & Armstrong, 2009). Although the model may present differently for ethnicities and the genders, the model is generally considered valid and effective for all individuals. The general argument for the validity would state that the unique cultural, biological, and environmental factors will predispose individuals to certain types of career fields compared to others from a diverse background and with different experiences. Thus, the potential ethnicity and gender differences are best explained by identity and environmental factors rather than by the ill-fit of the model itself.

Many authors have written about the superiority of Holland's theory due to its applicability to practice and ability to be tested empirically. No other career theory has received as much support or attention in the field of counseling psychology. Numerous assessments such as the Self-Directed Search (SDS; Holland, Fritzsche & Powell, 1994), Vocational Preference Inventory (VPI; Holland, 1994) and Strong Interest Inventory (Hansen & Campbell, 1985) and career interventions have been developed from this theory. These interest inventories and related interventions are dominant in career counseling settings.

Rayman & Atansoff (1999) reflect on five qualities that allow Holland's theory to be considered as an exceptional theory in comparison to other career development theories. First, Holland's theory is unique for its simplicity in describing complex personality characteristics of both the person and the work environment. Second, the theory demonstrates appropriate face validity that allows the public to interact with the theory easily. Third, the organizational framework of the RIASEC hexagon affords users of the theory a "simple, logical and utilitarian" (p. 115) framework for categorizing numerous personality traits and occupational titles. Fourth, the pervasive and widespread use of Holland's theory has provided the field with a common vocabulary to discuss occupations as well as interests. The RIASEC types have become a form of shorthand for therapists, researchers, theorists and career guidance counselors. Fifth, Holland's theory is easily translatable into practice. The concept of RIASEC types can be discussed without difficulty in a counseling session and, as discussed previously, clinicians have multiple options for career and interest assessments that utilize the RIASEC model. Additionally, the vast majority of the world of work has been translated into RIASEC types as well. This can be seen in Holland's Dictionary of Occupational Titles (cite) as well as online forms of the Department of Labor's workforce information (such as the website O\*Net). Due to the empirical support and wide spread utility of Holland's (1997) theory, the use of this theory as a guiding framework for understanding individuals who are in career distress.

### **Theory and Research on Congruence**

As discussed previously, Holland's theory of congruence is central to his P-E fit model. Congruence, or "the degree of fit between an individual's personality type and the work environment" (Nauta, 2010), is the cornerstone of how we conceptualize, measure and understand the relation between the personality and environment. Holland (1973) argues that this

construct is the most influential (compared to differentiation and consistency) as it has the power to influence a number of work-related outcomes. In his refinement of the theory, Holland (1997) went on to specify a number of congruence-related tenets. First, the individual is most satisfied when their environment represents their own personality, which then leads to more stable work behaviors. Second, incongruent environments motivate change whereas congruent environments facilitate stability. The greater the similarity between the person and environment, the more influential the environment will be on the person. Third, environments and individuals tend to change to become more like one another to increase congruence within the relationship. Fourth, incongruence is remediated by the person seeking new environments or changing one's own behaviors and expectations. Fifth, the environment remediates incongruence by removing individuals who are not a congruent fit.

As this construct has the capability to explain much work related behavior and outcomes, several researchers have explored congruence empirically. Typically, congruence is conceptualized as the fit between a person and occupation. However, as reviewed in Spokane, Meir & Catalano (2000), congruence can also be conceptualized as the fit between an individual's personality type and the dominant type of persons within the environment (environmental congruence), the match between one's beliefs in their skills and the requirements of the job (skill utilization congruence), and other fits such as within occupation congruence, aspect-based congruence, vocational congruence and self-efficacy congruence. With various methods of determining congruence or incongruence, much of the research has focused on the basic relationship between interests and current or projected job paths. Within this literature, the majority of this research focuses on Holland's (1997) first tenet regarding satisfaction. Hundreds of studies have been published which have explored the relationship between congruence and

satisfaction; however, a review of this literature reveals mixed results – making it difficult to draw firm conclusions about the strength or power of this relationship. A brief review of this literature will be provided below.

*Congruence and Satisfaction:* A number of studies have illustrated that the relation between congruence and satisfaction is a moderate, yet modest one. In a large scale study utilizing employed adults and examining one's actual job interests compared with their interest hexagonal configuration, congruence was positively related to intrinsic job satisfaction. Satisfied individuals were found to be more congruent than incongruent individuals (Swaney & Prediger, 1985). This was also found in smaller studies of employed adults, with congruence-satisfaction correlations of .29 (Gottfredson, 1994) and .33 (Oleski & Subich, 1996). Similar correlations are found for specific population samples as well. For example congruence was positively related to satisfaction for vocational rehabilitation clients (Jagger, Neukrug & McAuliffie, 1992) as well as Jewish teachers (Meir, Melamad & Abu-Freha, 1990). Additionally, in a sample of 345 bank tellers, congruence was correlated (.36) with overall job satisfaction and also was related to persistence, competency utilization and job involvement (Gottfredson & Holland, 1990).

The largest correlations for this relationship have been discovered in the population-specific studies of congruence. For example, in samples of teachers, Wiggins (1976) and Wiggins, Lederer, Salkowe & Rys (1983) reported correlations of .56 and .57, respectively. A relatively larger correlation (.41) was also found when Meir & Yaari (1988) investigated congruence and satisfaction for individuals within eight specific occupations. In other words, the relation between congruence and satisfaction may be larger when examining finer distinctions amongst jobs or occupations.

Despite these strong correlations for a social science phenomenon, a number of other researchers have found contrary evidence for the support of the congruence hypothesis. Tokar & Subich (1991), Upperman & Church (1995) and Heesacker, Elliott & Howe (1988) each found that congruence was not related to job satisfaction in a wide variety of settings and for specific occupations. However, some of these studies have been criticized for having low statistical power (Spokane, Meir & Catalano, 2000). Despite this criticism, doubts of the strength or presence of the relation between congruence and satisfaction have been posed by more empirically sound research. In a sample of 823 employed adults from 16 occupations, only two of five correlations of job satisfaction and congruence were positive for only 4 of the 16 occupations sampled (Hoegland & Hansen, 1999). These correlations were considered small according to Cohen's (1988) criteria. Another study not only provided evidence for a lack of relationship between satisfaction and congruence but also demonstrated an inverse relationship in which highly incongruent women reported great satisfaction with their work (Salmone & Pask-McCartney, 1990). These findings are inconsistent with Holland's theory and propositions.

Because of this inconsistency a number of researchers have tried to summarize and explain the disparate findings. Two flagship meta-analytical reviews suggest that the relationship between satisfaction and congruence is moderate at best. Assouline & Meir's (1987) review supported an average correlation of .21, whereas Tranberg et al (1993), utilizing only recent studies with stronger empirical foundations found the average correlation to range from .17 to .20. However, Holland type was discovered to moderate this relationship; individuals with a strong Social code displayed a larger correlation than the other Holland types (.33). Other reviews have suggested that the correlation is slightly higher; early accounts of this relationship suggested the "magic .30" correlation (Spokane, 1985), whereas more recent reviews suggest

that the average correlation in studies is .25 with approximately five percent of the variance in satisfaction being accounted for by congruence (Spokane, Meir & Catalano, 2000).

The widespread variation and less than impressive impact of congruence on satisfaction even led one researcher to conclude that although we have support for Holland's theory, perhaps the validity of the theory is not present or as strong as we wish it to be. Tinsley (2000) provided a number of criticisms for the congruence theory, such as arguing a lack of correlation between hexagonal congruence and satisfaction, the invalidity of most hexagonal congruence indices and poor research design in congruence studies resulting in the overall model lacking validity. This dramatic assertion drew attention from the field and a number of researchers responded with dismay. Although there have been difficulties with the congruence literature, I will discuss shortly ways in which this literature could be improved upon and how this study will attempt to do so.

The general consensus of the replies indicates that Tinsley's overall criticism of the model is unfounded, that Holland's theory does have validity in that the empirical findings support overall concepts of Holland's (1997) P-E fit theory, even if they have yet to provide support for the specific tenants of every assumption. In addition, experts in the field of vocational choice and decision making agreed that the quality of research being conducted was less than superb; however, they faulted Tinsley in not elucidating some of the specific pitfalls in why satisfaction may not be the only (or best) predictive outcome measure for congruence (Prediger, 2000; Rounds, McKenna, Hubert & Day, 2000; Tracey, Darcy & Kovalski, 2000). In sum, the literature on the satisfaction and congruence relationship illustrates a contentious and equivocal history of findings.

*Congruence and Other Work-Related Outcomes:* Although the majority of research has focused on satisfaction as the sole outcome measure of congruence a number of other vocational-related behaviors and outcomes have been studied as constructs which could be greatly influenced by congruence. For example, congruence has been found to correlate with self-knowledge (Raphael, 1986), significantly predicted MBA completion (Martin & Bartol, 1996) and persistence in a career for individuals employed in business and technology (Meir, Esformes, & Friedland, 1994) as well as for those in science fields (Richards, 1993). Congruence has also been linked to psychological symptoms. In a sample of male ministers, incongruence was related to symptoms of depression and anxiety (Celeste, Walsh & Raote, 1995). In a longitudinal study, 93% of individuals who demonstrated high congruence were available for retesting (i.e. were in the same job) compared to 68% of low congruent individuals, suggesting that congruence is related to career stability (Meir, Tziner & Glazner, 1997). Congruence has also been found to be linked to the perception of a range of career options and is inversely related to career indecision (Lent, Brown & Larkin, 1987). In contrast, another study found that although congruence accounted for variance in career indecision, congruence was not related to academic satisfaction or congruence (Chartrand, Camp & McFadden, 1992).

Similar to the satisfaction research, others have also found a lack of relationship between congruence and work-related constructs. Studies have suggested that congruence is not related to career readiness (Hirshi & Läge, 2007), well-being (Meir & Green-Eppel, 1999), anxiety (Meir & Malamed, 1986) or volition (Tanaka & Ogawa, 1986). Congruence was also not found to be related to higher incomes; in a large study of accountants, congruent accountants reported lower incomes than incongruent accountants (Schwartz, Andaippan & Nelson, 1986). However, this finding may not be clear-cut as congruent individuals may gain satisfaction or other work related

gains from their work, which could lower the need for gaining higher incomes. Simultaneously, incongruent accountants may strive for higher incomes to offset the unpleasant aspects of their incongruent job. What is clear from this research is that there has not been a consistent use of the congruence construct. Each researcher or research group has examined parts of the congruence hypothesis and each has arrived at varied and inconsistent results.

### **Issues with Congruence**

From an examination of the literature, it becomes apparent that the inconsistent findings from congruence research can be contributed to two main problem areas: the conceptualization of congruence and career-related outcomes and/or considerable pitfalls in research methodology. One of the largest problems that have been detected is with the conceptualization and treatment of satisfaction in congruence research. Some argue that an overall job satisfaction measure or score is not representative of satisfaction in real world settings. Dawis (1991) illustrates that, in a job, satisfaction can be seen both intrinsically (satisfaction with the work, itself) and extrinsically (satisfaction with conditions of work). Overall measures mask this distinction and fail to measure the real relationship between the facets of satisfaction and congruence. In one study, 34 distinct facets of satisfaction were identified by participants; 12 of the most frequently endorsed facets only correlated as highly as .48 with a global satisfaction score (Scarpello & Campbell, 1983) suggesting satisfaction is a much more complex construct than has been treated in the literature. This may explain why we see correlations with satisfaction ranging from -.09 to .51 (Assouline & Meir, 1987).

Another issue with conceptualization of satisfaction is the lack of identification of moderating variables in the satisfaction and congruence relationship. A few studies have examined potential moderating variables (such as Holland type, age, occupational status, etc);

however, the vast majority of research appears to neglect the intermediate or interactive components of this potential relationship.

Donahue (2006) also criticizes previous research for not controlling for the effects of age or career tenure. As Holland (1997) asserts, one of two things will happen in the presence of incongruence; individuals and environments will developmentally grow to become more like one another or the incongruence will lead to the expulsion of the individual from the environment. Thus, theoretically, when individuals have been in a career for a significant period of time, it is likely congruence has been fostered enough for the individual to remain in the job. Higher rates or stronger levels of congruence are likely to be found for individuals who have been in an occupation for longer periods of time. One significant problem in not controlling for tenure or age is that a severe restriction in the available range for congruence will occur. If individuals are generally congruent then there is not much variance to account for by career constructs such as satisfaction. This has been discussed in the literature as one of the most damaging pitfalls in congruence research (Spokane, Meir & Cantalano, 2000; Chartrand & Walsh, 1999). In addition to the restricted range of congruence, satisfaction has also been suggested to be naturally restricted (Rounds, McKenna & Hubert, 2000). Donnay & Borgen (1996) report that 62% of women and 59% of men indicate they are “very satisfied” with their job. Restriction of range on both variables prevents, statistically, larger correlations from being discovered. In the current study participants will be college students, earlier in their academic career. As many students are early in the decision-making process and have not had much time to be naturally remediated by their work/academic environment, this will circumvent some of the restriction of range seen in congruence research with adults later in the careers.

Another difficulty with the congruence research is that the measurement of congruence has been as varied as the constructs explored in relation to congruence. Over a dozen congruence indices have been developed and range on the continuum of complexity. But, are the various indices comparable? A review of the literature illustrates that the measurement of congruence has undergone changes over time. Spokane, Luchetta & Richwine (2000) review the three generations of congruence measurement and indices. The first generation and in early studies of congruence, researchers would utilize a one point, or one type comparison. Interest inventories utilizing Holland's hexagon would provide the highest code type that would then be compared to the environments' (typically stated career or predicted career choice) top code. This provided a simple comparison in which if one's type matched their employers determined type, then the individual was considered congruent.

While an analysis like the First-letter Hexagonal Distance (FL-Hex; Holland, 1973) is useful in its simplicity one drawback to using such a simplistic measure is that a deeper level investigation of incongruent individuals is not possible. All individuals who do not match the environments first type (or letter) are considered incongruent; yet it raises the question of *how* incongruent are these individuals? According to Holland's (1997) theory, code types that are adjacent on the hexagon are more similar than those opposite. If an environment's first letter code is E, someone who is a C would theoretically be more congruent than someone who is an A. One letter only comparisons do not allow for this type of examination. However, what is lost in complexity is made up for in simplicity. First-letter indices are easy to compute and extremely easy for both the clinician and client to understand.

The second generation built on previous research by utilizing two to three point codes in which the rank order of codes for the individual and environment are examined based on the

location of the types on the Hexagon (Spokane, Luchetta & Richwine, 2000). This generation expands on the first generation by providing the fit between the top two to three codes. The Gore-Brown index (Brown & Gore, 1994) is a common congruence index representative of this generation. Despite the increase in comparison complexity, second generation indices also fail to inform the researcher of important profile information. For example, how differentiated code types are could make a significant impact on congruence for the individual in a highly differentiated typed profession.

Lastly, the third generation has again improved upon prior congruence indices by utilizing mathematical indices to arrive at a congruence measure (Spokane, Luchetta & Richwine, 2000). Many of these indices will mathematically take into account profile consistency and differentiation. For example, by comparing not only the code types, but also the code type profile for both the individual and the environment we can view much clearer image of how, spatially, congruent individual interests are in comparison to the work environment. A significant drawback to this generation of measurement is that while the field has done an excellent job at characterizing individuals (based on Holland types), we have done a much poorer and inconsistent job with characterizing the work environment. A number of researchers have suggested this is one of the biggest flaws in congruence research (Spokane, Meir & Catalano, 2000; Chartrand & Walsh, 1999).

Young, Tokar and Subich (1998) examined 11 congruence indices with a large, representative sample of occupations. A median correlation of .73 was found for the 11 indices with congruence correlations ranging from .18 to .98. Similarly, Camp and Chartrand (1992) reported congruence correlations for 13 different indices ranging from .05 to .98. These results indicate that congruence indices are not necessarily interchangeable. However, satisfaction

outcomes were unrelated to the vast majority of indices examined in both studies; suggesting that even though indices appear to vary widely, no one index or grouping of indices better predicts satisfaction. In contrast, in a study examining 5 congruence indices ranging in complexity, Hoeglund and Hansen (1999) reported congruence correlations ranging from .47 to .85, illustrating that congruence indices may demonstrate more overlap than was previously suggested. Due to these mixed findings, a more thorough examination of incongruence is needed. Specifically, an examination of incongruence utilizing an index from each of the three generations will provide additional information regarding the measurement of incongruence and how complex of a measure is needed to determine attitudes toward career counseling.

### **Congruence in the Current Study**

Career-related interventions based on Holland's (1997) model often focus on working with individuals to identify future opportunities that are a better fit for their interests, skills and other attributes (Swanson & Fouad, 1999). As such, these interventions assume that one of the key factors leading individuals to seek help is their current state of incongruence, and improving person-environment fit can ameliorate the current distress. Therefore, it is somewhat surprising that there has been little research examining the role of incongruence in career distress and help seeking attitudes and behaviors. This apparent gap in practice and research needs to be bridged. To address this gap, my study will be the first to explore the concept of incongruence, empirically, to examine the weight of this variable in relation to career distress and help seeking attitudes toward career counseling.

As has been discussed, the congruence and satisfaction relationship has been the most frequently studied relationship in the congruence literature. Although Holland (1997) did state that individuals would be most satisfied when their personality matches that of the environment,

many researchers have taken this statement as dogma. Meir (1989) reframes the congruence relationship in what he terms a “mapping sentence” in which one’s level of congruence will lead to one’s well-being. According to this definition, satisfaction would be one component of well-being. Other components of congruence well-being would likely be the outcomes already explored individually in the literature: psychological health (such as the absence of distress, anxiety or depression) and work-related outcomes (such as stability, performance and success). I argue that when an individual is incongruent with their environment the consequences of incongruence may manifest differently depending on individual differences. For one person, satisfaction may suffer, while for someone else the ability to complete tasks on time may suffer. To attempt to conceptualize all individuals based on one outcome seems to mask or inhibit the view of the potentially significant consequences of incongruence.

In other words, incongruence is a cue to any number of specific symptoms of career distress. Thus, the type of consequence is not important; the fact that one is incongruent and distress may be present will be what matters. A number of researchers have documented the positive relationship between distress and help-seeking attitudes and behaviors (Constaintaine, Wilton, & Caldwell, 2003; Cramer, 1999; Cooper-Patrick, Gallo, Powe, Steinwachs, Eaton & Ford, 1999); suggesting that individuals in a distress will approach counseling settings. I believe that individuals who are incongruent may be in greater career distress which will lead to more positive attitudes toward seeking help for career counseling due to the perception these individuals would benefit from services.

In addition to simply examining the relationship between incongruence and attitudes toward treatment, this study will also provide clarifying information regarding *which* of the congruence indices (or all of them) are meaningful in this relationship. One congruence index

from each generation of indices will be utilized in order to examine multiple levels and depths of incongruence. In addition, two types of environments will be measured: current academic major and stated future career choice. Both types of environments will be examined to account for any differences which may occur for individuals who may be currently incongruent in their major or will be incongruent in their future career. For example, an individual may currently be congruent in their major; however, if external pressures (e.g. from parents) have led this individual to choose an occupation outside of their major they likely will exhibit incongruence and some form of career distress from this type of environmental incongruence. In sum, six congruence indices will be computed and examined in the incongruence and attitudes toward seeking help for career counseling relationship. By investigating multiple layers of incongruence and types of environmental incongruence, we will arrive at a much more informed view of incongruence in relation to help seeking. This knowledge will be necessary to guide future research.

Understanding what complexity or depth of congruence and environment measure to use will guide future research in the development of interventions to increase help seeking behavior.

### **Mediating or Moderating Career Variables**

As I predict incongruence to be a salient and important career distress variable, it will likely interplay with other career-related variables in regard to help seeking attitudes. Holland's Theory of Vocational Personality and Choice (1997) acknowledges that congruence can be impacted by other career-related factors. Two variables in the career development literature that have received the most attentions are: major satisfaction and career decision-making self-efficacy. These variables are potentially meaningful constructs which would likely increase career distress and affect one's help-seeking attitudes.

**Major Satisfaction.** The satisfaction or dissatisfaction with one's college major has been discussed in many areas of research literature. Career researchers and counselors find this construct to be highly important as major satisfaction is seen as analogous to job satisfaction (Nauta, 2007). Allen (1996) describes that similar to employment settings, the academic environment in one's major provides reinforcement patterns and opportunities to utilize skills, interests and build one's self-concept. Recalling Holland's (1997) theory, major satisfaction is considered the outcome from the interaction of the individual's personality and work environment for college students. Others have also written about major satisfaction as a proxy for job satisfaction later in life (Astin, 1965). College majors often represent themes, characteristics and even job tasks that are found in commensurate occupations after college. In addition, Nafziger, Holland and Gottfredson (1975) discuss how college major is for students the most representative of the immediate sub-environment of the more varied campus environment. Thus, major satisfaction is the best representation or measure of a student's career or work life.

Major satisfaction has linked to a number of academic and life variables. For example, major satisfaction has been associated with academic performance (Nauta, 2007; Graunke & Woosley, 2005), certainty of career plans (Ware & Pogge, 1980) and career decision-making self-efficacy (Nauta, 2007). Other researchers have found that major satisfaction is related to life satisfaction and overall level of well-being (Lounsbury & Gibson, 2006) and precursors to withdrawal or dropout from college (see Logue et al., 2007 for review). For individuals who are dissatisfied with their major, the ability to feel confident in one's career choice or decision making process appears much more difficult. Nauta (2007) also discovered that students who were highly dissatisfied with their college major demonstrated greater scores on the Career Choice Anxiety and Generalized Indecisiveness subscales of the Career Factors Inventory, a

popular measure of career indecision. These findings suggest that individuals who are more satisfied with their major experience little anxiety in the decision-making process. The intuitive rational for this is that individuals who are satisfied in their major have much less work to do in the decision-making process because choices which would result in a satisfied career have already been narrowed.

Because of the influential role of major satisfaction in both academic and life variables, I predict major satisfaction to also relate to attitudes toward seeking help for career concerns by moderating or mediating the incongruence-attitudes relationship. If an individual is highly satisfied with their major, perceived attitudes toward career counseling would likely be lower as there is less of a need for services. However, if an individual is highly dissatisfied with their major, the distress arising from the dissatisfaction may increase one's need for services, in turn increasing attitudes toward seeking help. A dissatisfied individual could also be conceptualized as stuck in their career decision-making process. Dissatisfaction is considered to be a cue that the environment is not a good fit for one's personality or vice versa. Because of this, dissatisfaction with one's major is hypothesized to positively influence one's attitudes to seek career counseling.

As was mentioned above, there is a need to assess for more complex relationships in the incongruence-attitudes relationship. The vast majority of congruence and satisfaction research has discovered small effects for congruence in the prediction of work-place satisfaction (Spokane, Meir & Catalano, 2000). Despite the varied results for this relationship, a clear, documented relationship exists between these variables. Perhaps the lack of relationship (or strong relationship) traditionally found between congruence and satisfaction is more indicative of

a more complex relationship between these variables. For instance, major satisfaction may better act as a mediator or moderator in career variable relationships.

A number of researchers have demonstrated the predictive ability of satisfaction when acting as a mediator amongst a number of career variables in the larger career literature. For example, job satisfaction has been found to mediate the relationship between having challenging career visions and one's intention to leave work (Holschlag & Masuda, 2011), supervisor support in the work place and job involvement (Elias & Mittal, 2011), sleep and organizational citizenship behavior (Barnes, Ghumman & Scott, 2013), as well as professional competence and career development confidence (Ko, 2012). In addition, in a large meta-analysis examining a variety of workplace role concerns, job satisfaction was found to separately mediate three types of role concerns (ambiguity, conflict and overload) and organizational citizenship behavior (Eatough, Chang, Miloslavic & Johnson, 2011). In sum, higher satisfaction interacts with other variables to lead to better outcomes; whereas low satisfaction interacts to predict poorer outcomes.

A mediational relationship may be the prime method to conceptualize the relationships amongst the variables in the current study. Incongruence may only indirectly affect attitudes toward treatment through one's level of major satisfaction. For example, one's level of incongruence could predict one's level of satisfaction, in turn predicting attitudes toward career counseling. Thus, major satisfaction may mediate the relationship between incongruence and attitudes. As satisfaction has been found to be an excellent mediator variable in previous literature, major satisfaction may also mediate the relationship between incongruence and attitudes toward career counseling.

Conversely, major satisfaction may act as a moderator in the incongruence and attitudes relationship. Pelled and Xin (1999) demonstrated that satisfaction was a successful moderator of the relationship between affect and absenteeism. When job satisfaction was low, employees were more likely to attribute low positive affect to their work experience, resulting in absences from work. However, when job satisfaction was high, no such relationship was found.

Although more empirical support is present for a mediational hypothesis, I will also examine the potential moderating effects of major satisfaction. For example, the interaction between incongruence and major dissatisfaction could lead to more positive attitudes toward seeking help, in that the relationship between incongruence and attitudes toward career counseling will be stronger for individuals whom are experiencing dissatisfaction with their major. Conversely, if an individual is experiencing higher levels of satisfaction with their major this likely will have little impact on the incongruence-attitudes relationship. In other words, if one is experiencing high levels of incongruence and low satisfaction with their major, this may lead to more positive attitudes toward seeking help as that individual is likely in significant career distress. High career distress may lead to more positive attitudes as that person may be more motivated to seek treatment to alleviate their distress. As discussed previously, distress has been documented to be an approach factor for seeking help for mental health concerns (Constaintaine, Wilton, & Caldwell, 2003; Cramer, 1999; Cooper-Patrick, Gallo, Powe, Steinwachs, Eaton & Ford, 1999). Yet, if one is experiencing higher levels of major satisfaction, the relationship between incongruence and attitudes toward career counseling may be weaker as that person may not be in as much distress due to their happiness in their current environment. Both mediating and moderating relationships will be examined as the extant literature does not provide a consensus.

**Career Decision-Making Self-Efficacy.** Self-efficacy has been defined as the belief in one's ability to plan, act and attain a goal (Bandura, 1997). Self-efficacy is the central feature of another career theory, the Social Cognitive Career Theory (SCCT; Lent, Brown & Hackett, 1994) a well-known and popular model based on Bandura's (1977) Social Cognitive Theory.

Bandura explains that self-efficacy can be acquired through four types of learning experiences: personal performance accomplishments, vicarious learning, social persuasion and physiological and/or affective states. In other words, self-efficacy is built through learning, observation and experiences. In addition to the four types of learning, four types of self-efficacy have been discussed: content or task-specific, coping, process and self-regulatory self-efficacy (Lent, Brown & Hackett, 1994). The current study will examine process self-efficacy, or the belief in one's ability to move along career developmental tasks. This form of self-efficacy was chosen specifically due to its influence in one's ability to successfully navigate career distress (Lent, Brown & Hackett, 1994). If one does not feel capable or efficacious in engaging in career related exploration or tasks, they may be more willing to seek help to address this barrier. Specifically, career decision-making self-efficacy is predicted to influence one's attitudes toward seeking help.

Career decision-making self-efficacy is defined as one's belief in their ability to engage in the related tasks of career exploration and selection. Individuals with low levels of self-efficacy often engage in defensive behaviors, devalue their potential outcomes, engage in avoidance behaviors, and experience anxiety (Bandura, 1997). When an individual does not have adequate efficacy to engage in the decision making process, individuals will likely not only be in distress, but will also experience significant career barriers.

Career decision-making self-efficacy has been found to be related to career indecision (Taylor & Betz, 1983), vocational identity (Robbins, 1985), career exploration (Blustein, 1989), career maturity (Patton & Creed, 2001), career barriers (McWhirter, Rasheed & Crothers, 2000), overall career decision-making attitudes (Luzzo, 1993) and general measures of self-efficacy (Betz & Serling, 1993). Individuals with low levels of career decision-making self-efficacy also devalue outcomes of potential careers when weighing career options (Gianakos, 1995). In sum, individuals who are experiencing low career decision-making self-efficacy find it difficult to engage in career exploration behaviors, struggle with developing a career identity and prematurely dismiss potential career options due to distress, anxiety or career immaturity. Due to this, it appears career decision-making self-efficacy is a highly important variable to consider in the vocational literature. For example, career decision-making self-efficacy has received the most support in terms of its relation to career indecision. Career decision-making self-efficacy has been found to be the only predictor of career indecision (Taylor & Pompa, 1990), the best predictor when investigated with other variables such as academic and career outcome expectations (Betz & Voyten, 1997) and a mediator between career indecision and other distal variables (Guay et al., 2003).

As career decision-making self-efficacy has been linked to a number of career process variables, the inclusion of the construct in the current study is deemed important. Based upon Holland's (1997) theory, congruent environments would be more likely to elicit positive self-evaluations of our abilities. Holland (1997) referred to these evaluations as self-beliefs that other theories (i.e. SCCT; Lent, Brown & Hackett, 1994) have since defined as the experience of self-efficacy (Gottfredson, 2002). In turn, incongruent environments could elicit lower perceptions of our abilities and may lead to changing environments to one that better fits our perceived

capabilities or by learning new behaviors so that we feel more capable and confident. Career decision-making self-efficacy has yet to be examined in terms of its relation to attitudes toward career counseling. Also, as congruence and self-efficacy are constructs which belong to separate (and sometimes, competing) career theories, only a few studies have examined the relationship between the two variables. In an early study, no such relationship was found between self-efficacy and congruence (Chartrand, Camp & McFadden, 1992; Gore & Leuwerke, 2000). However, subsequent researchers have noted that the small sample size and limited generalizability of these studies may impact the interpretation of these findings.

On the other hand, when both variables are included in the same study, both appear to predict a number of career outcomes. Lent, Brown and Larkin (1987) discovered that congruence and career decision-making self-efficacy both predicted participants' perceptions of career opportunities and subsequently career indecision. Two additional unpublished studies also demonstrated a potential link between congruence and career decision-making self-efficacy. After taking a course focused on career exploration, both congruence and career decision-making self-efficacy improved for students (Cassie, 2005). In addition, after career counseling experiences, clients experienced a 10% increase in self-efficacy and a 12% increase in congruence. Although these studies did not examine the direct relationship between self-efficacy and congruence, they suggest that the interaction of these variables may have a greater impact when acting together than if acting alone. Only one published study has examined this interactive relationship. Srsic and Walsh (2003) discovered that experiencing low levels of career decision-making self-efficacy was a stronger predictor for individuals who are undecided on their major and were exhibiting lower levels of congruence. When higher levels of career decision making self-efficacy, this relationship was no longer found. Their study illustrates how the interactive

effect of being low on self-efficacy and congruence may lead to more negative outcomes. Applied to the current study, this finding suggests that participants low on career decision-making self-efficacy and experiencing incongruence may lead to a greater level of distress, thus in turn, increasing attitudes toward seeking help. A number of studies in the larger self-efficacy literature have also demonstrated the successful utilization of self-efficacy as a moderator in a variety of career and mental health relationships (Buser, Buser & Kearney, 2012; Korning et al., 2012; Park, Beehr, Han & Grebner, 2012; Panatik, O'Driscoll & Anderson, 2011). For example, Park and colleagues (2012) found that self-efficacy interacted with job demands to predict psychological strain. The relationship between job demands and strain was stronger for participants whom experienced less self-efficacy.

From a career counseling perspective, it is understandable how someone experiencing incongruence in their major or future career choice may have difficult with the decision-making process. Holland (1997) states that individuals whom are incongruent will experience some form of remediation – either the environment or the individual will choose to remove themselves from that environment. As the majority of career clients are current college students, the academic major does not often remove individuals from the environment unless the student has received poor enough grades to be dismissed from the university completely. Thus, remediation of incongruence is left to the individual. One reason individuals may remain incongruent is a difficulty with career decision making; specifically, individuals may experience low levels of career decision making self-efficacy causing them to remain incongruent in the major or career choices. The interaction of incongruence and lower levels of career decision-making self-efficacy may result in greater career distress which will lead to more positive attitudes toward seeking help for career concerns.

Alternatively, incongruence may only act indirectly through career decision-making self-efficacy in the prediction of help-seeking attitudes. For some, career decision-making self-efficacy is assumed to be an antecedent to being decided or undecided in terms of career choice. Although there is some support for this assumption, one study found that when examined in a time lag design, career decision-making self-efficacy was not in fact an antecedent in the decision making process (Creed, Patton & Prideaux, 2006). However, other researchers have discovered that self-efficacy has successfully mediated other career relationships. For example, self-efficacy has been found to mediate relationships between personality constructs of the Big 5 and other career variables (Spurk & Atele, 2010; Nauta, 2004). Because career decision-making self-efficacy may also act as a mediator, mediational analyses will also be examined.

### **Mediating or Moderating Traditional Help Seeking Variables**

Another excellent starting point in exploring what predicts attitudes toward career counseling is to examine those variables which have been previously explored in the traditional help seeking literature for personal counseling. In other words, a uniting of the help seeking information for personal concerns and career concerns is needed. In order to do this, the assumption is made that career counseling is similar enough to personal counseling for variables to act in the same way when predicting attitudes toward seeking help. Some authors have written that there is a false dichotomy (Hackett, 1993) for many researchers and graduate student trainees, in that there is a belief that career counseling can be considered separate from personal therapy. The definitions of career and personal counseling speak to the inherent differences in the two approaches. Spokane (1992) defines career counseling as “any attempt to assist an individual in making improved career decision through such means as workshops, classes, consultation, prevention, etc.” (p. 44). On the other hand, Zeig and Munion (1990) define

personal counseling as a “change-oriented process that occurs in the context of a contractual, empowering, and empathetic professional relationship” (p. 14). These definitions imply very different foci, goals and processes for the two forms of counseling. Career counseling has also been stereotypically thought to be more rational, less emotional, more problem-solving driven and distinct from personal counseling (Betz, 1993).

Despite these apparent differences, many other researchers have discussed the false dichotomy of separating career and individual counseling. A number of studies have illustrated that presenting concerns in either setting cannot be differentiated from one another. Pace and Quinn (2000) discovered that 11% of concerns discussed in career counseling were related to mental health concerns whereas 20% of concerns discussed in personal counseling were related to career issues. It appears that even if clients present for one “type” of therapy, the concerns discussed in therapy vary widely. In a large scale study examining the presenting concerns of career counseling clients during an intake session and throughout their therapy experience, Niles, Anderson and Cover (2000) discovered that there was no relation between goals or concerns discussed at intake and the goals and concerns discussed throughout therapy. In other words, clients appear to have an idea of what they would like to address during therapy at the onset. However, they end up discussing a wider variety of concerns than initially anticipated. Of the 1,023 concerns tallied for clients in this study, 533 could be classified as career concerns, 344 as non-career (i.e. personal) concerns, and 126 as a combination of career and non-career concern (for instance, the role of family distress in understanding career decisions). This study illustrates that in a career counseling setting, at least one third of concerns discussed were of non-career issues. A finding supporting Anderson and Niles (1995) original finding that one third of concerns discussed in career counseling were for personal issues.

From a process standpoint, the distinction between career and personal counseling also is somewhat artificial. Naïve clinicians and researchers appear to understand career counseling as an experience which helps clients with a simple, solution-focused problem and fail to take into account the complexity of the individual and their career concerns. Many clients who arrive to career counseling are in significant distress (Multon et al., 2001); clients can feel distress due to a lack of decision, an incongruent decision and experience distress from the rippling effect of the consequences for career concerns. For example, many clients experience academic difficulties, interpersonal difficulties and/or depression and anxiety as a result of career distress (see Hinkleman & Luzzo, 2007). In addition, clinicians cannot compartmentalize client's concerns. Often career distress cannot be distinguished from the mental health concerns discussed in personal counseling, as was illuminated above. Although many clients and clinicians may be surprised at the high levels of psychological distress in career counseling (Multon, Heppner, Gysbers, Zook, & Ellis-Kalton, 2001), there has been a push in recent years to view the client holistically (Schultheiss, 2000) and integrate the traditionally emotion-focused approach of personal counseling into career counseling (Hinkleman & Luzzo, 2007).

When one thinks of the general components of personal therapy, often what comes to mind is a strong therapeutic bond between the clinician and client, a focus on providing support, creating change in the client's life and an integration of new coping skills or techniques. The same components are a necessity for career counseling. In order to address the unique career concerns of clients, the client must feel they are in a safe environment where there is support to explore the new and potentially distressing career options. To address career concerns without these "traditionally" personal counseling facets seems cold and ineffective. In a study examining the benefits of career and personal counseling clients from both settings agreed that the most

helpful aspects of their counseling experience was the presence of emotional support and self-exploration (Anderson & Niles, 2000).

Hackett (1993) cautions clinicians and researchers against negating the unique aspects of career counseling while avoiding the pitfall of assuming this type of counseling is incompatible with personal counseling. To illustrate this fine balance, Hackett (1993) utilizes the analogy of family therapy. Most clinicians and researchers agree that family therapy is personal counseling; however, to conduct family therapy clinicians must receive special training and often operate from a distinct theoretical orientation and theory (systems theory). Hackett (1993) believes that career counseling can be viewed in the same way; career counseling is personal therapy but requires specific training in career assessment and understanding of career theory. Due to the vast overlap described above, it is necessary to also examine help seeking variables explored with personal counseling to understand help seeking attitudes for career counseling. Specifically, I will examine the role of self-stigma and public stigma in participants' attitudes toward counseling.

**Stigma.** The single most cited factor for why individuals may not choose to seek therapy despite a need is the stigma related to seeking treatment (Corrigan, 2004). In the help seeking literature, two main areas of stigma have been explored: the more global area of public stigma, and the personal realm of self-stigma. Public stigma can be defined as the perception that one is socially unacceptable for a specified reason, which will lead the group or society to experience negative reactions toward the individual (Corrigan, 2004). Applied to help seeking, the perception is often that an individual is weak, damaged or unacceptable for seeking treatment for mental health reasons. Many individuals fear the criticisms, judgments and rejections from society should they seek treatment. In return, many individuals do not seek the help they need to

avoid being negatively labeled. Cooper, Corrigan & Watson (2003) verified this concept by illustrating that individuals who endorsed stigmas for those who are mentally ill were less likely to seek professional mental health services for themselves.

Many researchers and clinicians refer to the basic concept of stigma in terms of public stigma. In other words, much of early research on the topic has discussed stigma in terms of the perceptions of the ramifications one would face in the public or interpersonal realm if they were to seek counseling. Prior research has demonstrated that for those in need who have not sought treatment were twice as likely to see stigma as an important barrier in seeking treatment (Stefl & Proseri, 1985). Similarly, Komiya, Good & Sherrod (2000) demonstrated that stigma, being a male, having greater discomfort with emotions and lower psychological distress accounted for 25% of the variance in negative attitudes toward seeking psychological help. These studies demonstrate the impact fear of judgment or labeling from others can be on both attitudes toward treatment and seeking professional help for mental health concerns.

More recently, researchers have turned their attention to understanding the internalization process of stigma. From this research, the concept of self-stigma has arisen. Self-stigma has been defined as “the reduction of an individual’s self-esteem or self-worth caused by the individual self-labeling herself or himself as someone who is socially unacceptable” (Vogel, Wade & Haake, 2006, p. 325). Many authors consider self-stigma the internalization of public stigma (Vogel, Bitman, Hammer, & Wade, 2013). In other words, societal perceptions regarding those that seek help as inferior are internalized so that the individual feels that the individual feels he or she is inferior (Fisher, Nadler & Witcher-Alagna, 1982). This form of stigma was found to be related to anticipated risks of therapy, public stigma, self-concealment, low distress disclosure and fewer anticipated benefits of therapy (Vogel, Wade & Haake, 2006). In other words, not

only does self-stigma prevent help seeking behaviors, but it also inhibits one's perceptions, attitudes and perceived ability to effectively utilize therapy.

The interrelation of public and self-stigma has also been explored in relation to attitudes and willingness to seek help. Vogel, Wade & Hackler (2007) utilized structural equation modeling to demonstrate that the relation between public stigma and willingness to seek help was fully mediated by self-stigma and attitudes toward seeking treatment. Public stigma led to internalized feelings of self-stigma, which in turn predicted attitudes toward treatment and intentions to seek counseling. Fifty-seven percent of the variance of the model was accounted for in predicting attitudes toward counseling, agreeably a large degree of variance accounted for by such a simple model. Although very few articles have addressed the specific barriers to help seeking for career counseling, one prior study has examined the role of these two types of stigma in career counseling attitudes and intentions. Ludwikowski, Vogel & Armstrong (2009) examined a model in which public stigma predicts self-stigma, in turn explaining attitudes toward career counseling. Although this study has been informative, a major limitation is that the authors only addressed stigma in the prediction of help-seeking attitudes. The current study will expand upon this article by providing additional evidence for the importance of stigma, but also will continue to explain additional predictive relationships of career variables.

I predict that both public stigma and self-stigma will predict attitudes toward career counseling. In addition, I also more complex relationships will be present for these variables. To date, no other study has examined stigma in relation to incongruence. However, stigma has been found to act as a moderator and mediator in a number of previous research studies. For example, stigma has also been found to act as a moderator in a variety of studies: stigma was found to moderate the relationship between insight and demoralization of mentally ill patients (Cavelti, et

al 2012), as well as the relationship between mental health symptoms and psychological growth (Ghaffari, 2011). In addition, the moderating effect of stigma on the relationship between insight and psychological functioning has been well documented (see Ehrlich-Ben Or et al., 2013). In sum, these findings highlight that better outcomes are found for individuals who experience less stigma despite other predictive variables. The most recent research on stigma appears to argue for stigma as a strong moderating variable for a number of mental health relationships. Due to this stigma may also moderate the relationship between incongruence and help-seeking attitudes.

In the current study, public stigma could moderate the relationship between incongruence and attitudes; in that lower levels of public stigma and being incongruent will lead to the most positive attitudes toward seeking help for career concerns. Being in distress (due to incongruence) and experiencing low stigma could lead to greater attitudes toward seeking help. In other words, the relationship between incongruence and attitudes toward seeking help could be stronger for individuals who experience low levels of public stigma. The rationale for this argument is that individuals will be in greater career distress due to incongruence; however, will not experience the barrier of experiencing public stigma. This interaction could lead to the most positive attitudes toward seeking help. Conversely, if one experiences high levels of public stigma this may weaken the relationship between incongruence and attitudes as the emotional risk of seeking treatment may be perceived as too great.

Again, to provide an additional view of the data, mediational analyses will also be conducted to examine both public stigma and self-stigma as mediators in the incongruence and attitudes toward career counseling relationship. Stigma has been shown impact the link between distress and decisions to seek help (Stefl & Proseri, 1985) and previous research has demonstrated a fully mediated model for public and self-stigma (Vogel, Wade & Hackler, 2007);

suggesting that these variables may better act as mediators than moderators in the proposed relationship. For example, in the help-seeking literature a number of studies have documented the mediational effect of stigma. Self-stigma was found to mediate the public stigma and attitudes relationship for both individual (Brown et al., 2010; Vogel, Wade & Hackler, 2007) and group counseling (Vogel, Shectman & Wade, 2010). Another study also found stigma to mediate the relationship between misconceptions about HIV and willingness to disclose for women in the study (Brown & Pinel, 2003). Because there is not a consensus in the extant stigma and help-seeking literature, both types of relationships will be examined.

**Incongruence, Self-Stigma and Gender.** Stigma, and in particular self-stigma, has been noted as being particularly salient for men due to the prescription of the traditional male gender role that men should be independent, controlled, and self-sufficient may lead to increased concerns about seeking help, because seeking help may mean admitting an inability to handle things on one's own (Addis & Mahalik, 2003; Pederson & Vogel, 2006). Therefore, a man who believes that he needs counseling may feel a strong sense of failure, which would make the act of asking for help particularly difficult. Due to this theory, I also will explore if a three-way interaction amongst incongruence, self-stigma and gender will be present.

Previous research has demonstrated how self-stigma is a much stronger predictor for men than women; thus it will be important to examine the effects of congruence and self-stigma for both genders. In regards to biological sex, men have been repeatedly shown to seek help less frequently than their female counterparts (Andrews, Issakidis & Carter, 2001; MacKay, Rutherford, Cacciola & Kabasakalian-McKay, 1996; Thom 1986) and hold more negative attitudes toward seeking help (Chandra & Minkovitz, 2006; Masuda, Suzumura, Beauchamp, Howells & Clay, 2005). This finding is found across studies (Addis & Mahalik, 2003; Rickwood

& Braithwaite, 1994) even when taking into account the level of psychological distress (Carpenter & Addis, 2000; Kessler, Brown & Boman, 1981).

A number of authors have written about the role of the male gender role in explaining this phenomenon. Many societies and cultures both implicitly and explicitly encourage men to 'stay strong,' appear manly and deny emotional experiences. The phrase "boys don't cry" is just one example of messages men receive from childhood; providing the message from an early age that behaviors regarding emotions are unacceptable (Levant, 2001). In turn, men who have received this type of message may deny or avoid psychological services in the attempt to fulfill a traditional male gender role and avoid perceptions of shame for this behavior (Vogel, Heimerdinger-Edwards, Hammer, & Hubbard, 2011). Men who endorse more traditional gender roles have been found to display more negative attitudes toward seeking help (Berger, Levant, McMillian, Kelleher & Sellers, 2005) and a decreased willingness to utilize professional mental health services (Good & Wood, 1995). In other words, men who perceive a greater need to appear masculine tend to consider the experience of seeking help more negatively, possibly due to feeling that receiving counseling is weak or emasculating. Thus, these men may experience distress at the thought of having to seek help.

Recent research has further illustrated that self-stigma and willingness to self-disclose partially mediates the relation between the male gender role and willingness to seek help (Pederson & Vogel, 2007). This pattern is also found in career counseling settings (Lucas, 1993). One major reason, which has been predicted for why men seek help less frequently than women is due to the experience of self-stigma. Men appear to be less open to disclosing distressing personal information, revealing emotions or expressing affection towards others. Good, Dell and Mintz (1989) suggest that these experiences cause a sense of shame or stigma, resulting in poorer

help-seeking behaviors. Therefore, there may be a further interaction of gender and self-stigma, along with experiencing incongruence, which will lead to poorer attitudes toward therapy for men than for women. In other words, the relationship between congruence and attitudes will be moderated by self-stigma for males to a greater degree than it will moderate the relationship for females.

### **Purpose**

The purpose of the current study is to provide greater and more refined information regarding the career help seeking process. Prior researchers have chosen to focus on help-seeking attitudes for personal concerns. Very little research is available regarding help seeking attitudes for career counseling and which factors may influence or act as barriers to the help seeking process. A uniting of the diverse lines of research related to help seeking and career struggles is needed to best understand the unique factors related to the prediction of help seeking for career-related concerns. Specifically, utilizing Holland's Theory of Vocational Personality and Choice (1997), I predict that incongruence will act as a significant source of distress, which will influence attitudes toward seeking help for career concerns. Incongruence will be an excellent variable to examine in terms of career distress because of its power and meaning for an individual in terms of their career or major satisfaction and performance. Congruence is the central feature to Holland's (1997) theory and the most basic indicator of potential difficulties in the workplace or academic setting. If an individual's interests are incongruent with their chosen major or career this will likely cause some sort of difficulty for the person. The type of difficulty (e.g. dissatisfaction, poor performance, demoralization, etc ...) will vary for each individual; however, it is assumed by Holland's theory that a difficulty will arise if one is incongruent. The

distress caused from incongruence will be a main predictive factor in one's attitudes toward seeking help.

To examine the role that other theoretically relevant factors play in the formation of one's attitudes toward seeking professional help, I have also chosen to incorporate both important career-related variables along with two well-known traditional help-seeking factors as predictor variables for these attitudes. In addition to incongruence I have included major satisfaction and career decision-making self-efficacy as career-related variables, which I expect will predict one's attitudes toward seeking help for career concerns. The help seeking variables utilized in the current study are public stigma and self-stigma. Because I discuss incongruence as a major source of distress and a large factor in attitudes toward career counseling, a closer examination of how this variable interplays with other predictive variables is needed. Therefore, I will explore whether each of the proposed predictive variables will either moderate the relationship between incongruence and attitudes toward seeking help for career concerns or whether they would mediate the relationships. Previous research highlights evidence for why each of the proposed variables (major satisfaction, career decision-making self-efficacy, public stigma and self-stigma) could either moderate or mediate the relationship between incongruence and attitudes toward seeking career counseling.

### **Research Questions**

The primary research question in the current study is to determine if incongruence will directly predict attitudes toward seeking help for career counseling. To examine this, a congruence index from each of the three generations of indices will be computed for two types of environments (academic major and stated occupational choice) in the person-environment relationship. Incongruence has never been explored in relation to attitudes toward career

counseling; therefore, no specific hypotheses are proposed regarding which of the indice(s) will best predict attitudes. However, I will explore each of these six indices in relation to attitudes toward career counseling. It is expected that the newer generation that assesses both type and distance would best account for the link due to the more complex and descriptive ability this generation of index provides.

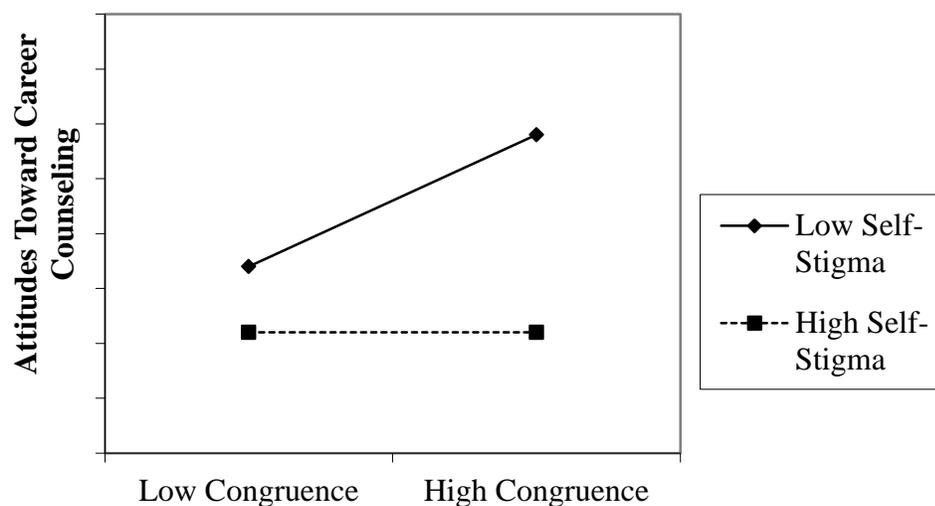
In addition, four research questions will be examined:

- 1) Does major satisfaction moderate or mediate the congruence-attitudes relationship?

For example, moderation might be present as individuals who are less satisfied in their major could show a stronger relationship between congruence and attitudes than those who are more satisfied (See Figure 1). Conversely, mediation might be present as incongruence could lead to the experience of dissatisfaction in turn predicting attitudes toward counseling.

Figure 1

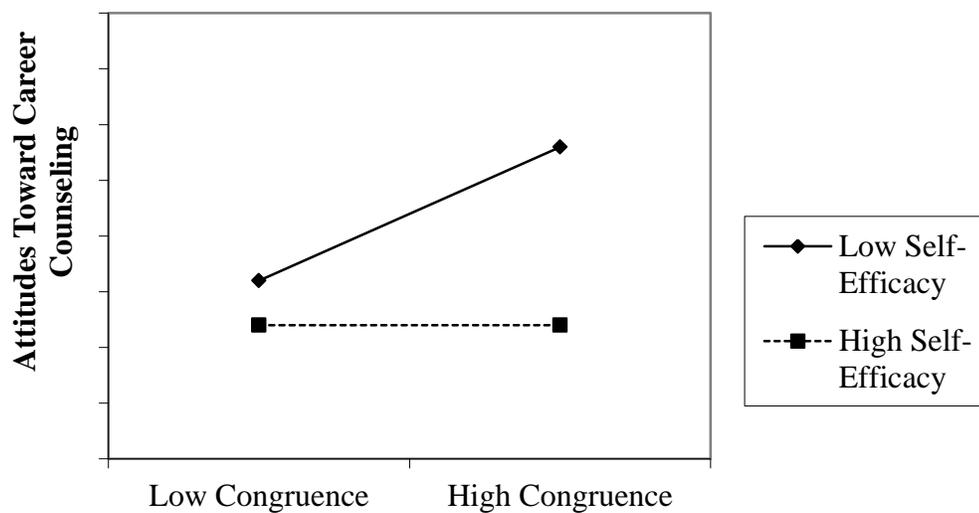
*The Predictive Moderating Relationship of Major Satisfaction on the Congruence-Attitudes Relationship*



- 2) Does career decision-making self-efficacy moderate or mediate the congruence-attitudes relationship? For example, moderation might be present as individuals who demonstrate lower levels of career decision-making self-efficacy could show a stronger relationship between congruence and attitudes than those with greater self-efficacy (See Figure 2). Conversely, mediation might be present as incongruence could lead to the experience of lower career decision-making self-efficacy, in turn predicting attitudes toward counseling.

Figure 2

*The Predicted Moderating Relationship of Career Decision Making Self-Efficacy on the Congruence-Attitudes Relationship.*

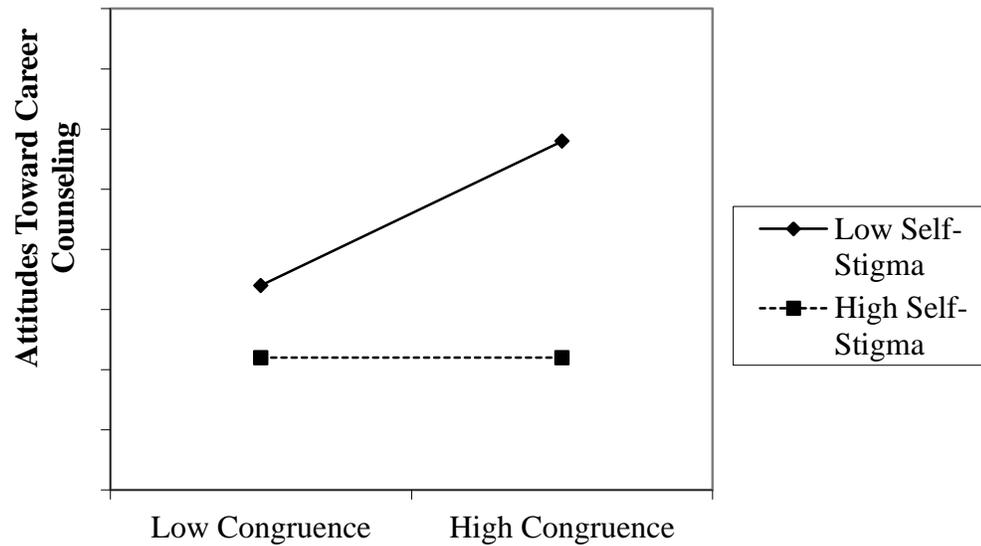


- 3) Does public and self-stigma moderate or mediate the congruence-attitudes relationship? For example, moderation might be present as individuals who experience less stigma could show a stronger relationship between congruence and attitudes than those who experience greater stigma (See Figure 3). Conversely, mediation might be present as incongruence could lead to the experience of stigma

due to one's negative perceptions of themselves if they were to perceive themselves to need therapy, which in turn, could predict attitudes toward counseling.

Figure 3

*The Predictive Moderating Relationship of Public Stigma on the Congruence-Attitudes Relationship*



4) Does gender further moderate the relationship such that there will be a three-way interaction with congruence, self-stigma and gender. For example, if moderation is present the relationship between congruence and attitudes could be moderated by self-stigma for males (see Figure 4) to a greater degree than it moderates the relationship for females (see Figure 5).

Figure 4

*The Predicted Moderating Relationship of Self-Stigma on the Congruence-Attitudes Relationship for Men.*

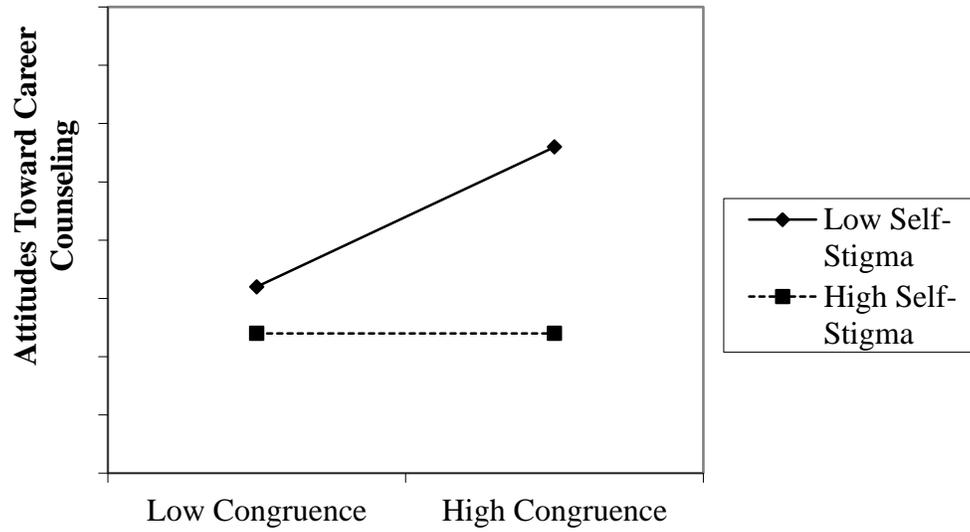
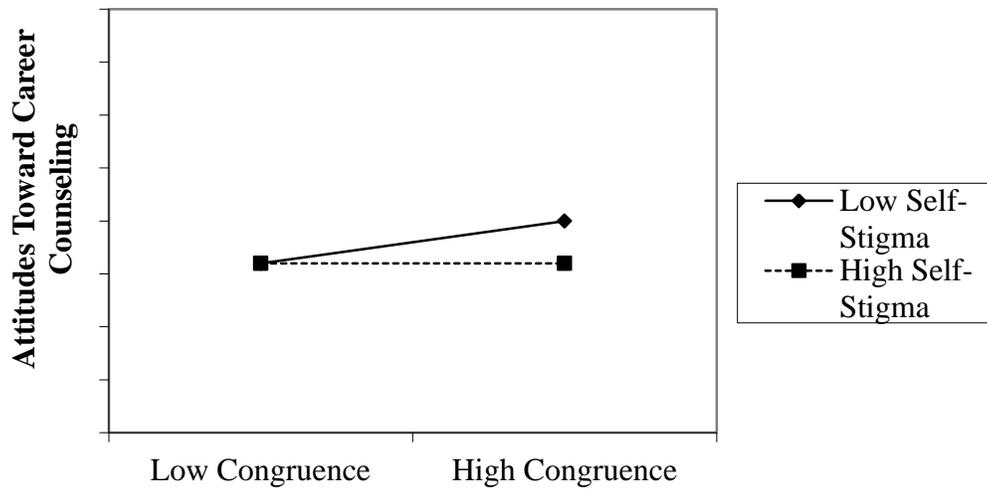


Figure 5

*The Predicted Moderating Relationship of Self-Stigma on the Congruence-Attitudes Relationship for Women.*



## CHAPTER 3: METHOD

### Participants and Procedures

All participants in the study were enrolled in a large, Midwestern public university. Eight-hundred and fifty-seven participants initiated participation in the study. Participants' ages ranged from 17 to 35 with a mean age of 19.29. The majority of participants identified as freshman (52.4%) followed by sophomores (28.9%), juniors (11.9%), seniors (6.1%) and one graduate student (.1%). One participant chose not to report their year in school. The majority of participants also identified as female (67.7%). Thirty-two percent of participants identified as male and one participant (.1%) chose not to respond. In addition, the majority of participants in the current study identified as White/Caucasian (84.7%) followed by African American (5.0%), Hispanic (3.3%), Asian American (2.7%), and "other" (4.2%).

Data utilized in the current study was drawn from a larger data set collected in 2007 and 2008 at Iowa State University in the Department of Psychology. This data set has never before been viewed, analyzed or manipulated by any other researcher. A description of data collection procedures as well as a list of measures used in the current study will be outlined below.

Students enrolled in introductory psychology courses (Psychology 101, Communication Studies 101, Psychology 230 and Psychology 280) elected to participate in this study to receive research credit applicable to their final grade. Introductory psychology students are recruited to participate in research studies through an online research sign-up system. If a student chose to participate in the current study they were directed to sign up for a convenient time to complete research materials in a laboratory in the department of psychology. Upon arrival to the laboratory, participants were instructed to read and complete an informed consent form by a trained research assistant. Upon giving consent for participation, students were then given a

demographic questionnaire and one of three survey packets to complete. Students were instructed to complete the packet of questionnaires at their leisure over the course of one week and return to the laboratory to turn in and receive their second packet. After completion of the second packet, participants returned the materials and received their last packet to complete on their own time. Each packet was estimated to take 50 minutes to complete.

Measures included in the survey packets consisted of scales assessing for experiences with mental health and attitudes toward treatment, career barriers, career interests and self-efficacy, personality assessments and other career-related assessments. Participants also completed several demographic questions including reporting their age, current major, any previous majors, grade point average, gender, year in school, and ethnic/cultural identity (see the Appendix for the full demographic survey). The ordering of packets was counterbalanced across participants to account for any fatigue effects participants may experience during data collection. Participants responded by manually completing paper and pencil bubble sheets, which were then later scanned into an electronic file. After completing all materials, participants were thanked for their participation and given a debriefing statement.

## **Measures**

All measures utilized in the current study can be found in the Appendix.

**Incongruence.** To examine the interest side of the interest-environment relationship, the Alternate Forms Public Domain (AFPD) RIASEC markers (Armstrong, Allison & Rounds, 2008) was utilized. The AFPD contains six scales consisting of eight items each to assess for each RIASEC code type, for a total of 48 items. Participants were asked to respond to how much interest they would have in performing each work activity. Participants could respond on a scale from one (*strongly dislike*) to five (*strongly like*). Example work activities include: “handle

customers' bank transactions" and "play a musical instrument." Higher scores for each scale represent greater interests for the associated RIASEC code type. Internal consistency was found to range from .79 to .94 with an average internal consistency of .88 (Armstrong, Allison & Rounds, 2008). Internal consistencies for the six scales in the current study are as follows: .91 (Realistic), .90 (Investigative), .84 (Artistic), .84 (Social), .81 (Enterprising), and .89 (Conventional). This scale was developed to address the limitations of lengthy commercial measures for research purposes utilizing a short, easy to understand form and has been found to correlate with scales of the Strong Interest Inventory (SII; Harmon, Hansen, Borgen & Hammer, 1994). Correlations between AFPD and SII scales range from .56 to .72 with an average correlation of .64.

Participants' congruence between stated interests and chosen occupation was computed using three different methods for two types of occupational choices. Congruence between one's interests and current academic major was computed, as was congruence between one's interests and stated career choice. Some degree of overlap will occur between these two types of interest congruence as one's major is often an accurate representation of skills and interests related to a future career choice. However, in the case one's chosen major does not align with stated future occupational choice, both types of congruence were computed to best understand the construct of congruence. The computations of the congruence indices are discussed in the Results section.

**Major Satisfaction.** Major satisfaction was assessed utilizing the Academic Major Satisfaction Scale (AMSS, Nauta, 2007). The AMSS is a 6-item scale measuring global satisfaction with one's academic major. Factor analysis revealed a one factor solution in which all retained items possessed at least a medium effect size (.50 or larger). A sample item is "I am strongly considering changing to another major." Participants respond to questions from one

(*strongly disagree*) to five (*strongly agree*). Three items are reversed scored so that higher scores represent a greater satisfaction with one's chosen major. Internal consistency has been reported to range from  $\alpha = .90$  to  $.94$  (Nauta, 2007). In the current study, internal consistency was found to be  $.91$ . Satisfaction as measured by the AMSS has been found to increase over time. Students who remained in their major demonstrated small increases in satisfaction; while those who changed majors demonstrated a greater increase in satisfaction after 2.5 years (Nauta, 2007). In addition, the AMSS has been found to relate to academic performance ( $r = .35$ ), career decision-making self-efficacy ( $r = .45$ ), career choice anxiety ( $r = -.50$ ) and generalized indecisiveness ( $r = -.30$ ; Nauta, 2007).

**Career Decision-Making Self-Efficacy.** The Career Decision-Making Self-Efficacy Scale – Short Form (CDMSE-SF; Betz, Klein & Taylor, 1996) was used to assess for participant's perceptions of their ability to make career-related decisions or engage in the career decision making process. This form of self-efficacy is focused specifically on one's confidence in their ability to engage in information gathering and the career decision-making process. The CDMSE-SF contains 25 questions in which participants respond on a scale from one (*very low confidence*) to five (*very high confidence*). Scores for each item are summed for a total score; higher scores reflecting a greater confidence in career decision-making self-efficacy. Participants were asked to rate how much confidence they have in their ability to perform each activity listed. Sample items include: "Determine the steps you need to successfully complete your chosen major," and "Decide what you value most in an occupation." Internal consistency has been reported to be high for the 25 items ( $\alpha = .94$ ), in the current study internal consistency was also high at  $.93$ . Career decision-making self-efficacy has also been found to relate to measures of general self-esteem, career decision-making attitudes and career indecision (Luzzo, 1996).

**Public Stigma:** To assess for public stigma, the Stigma Scale for Receiving Psychological Help (SSRPH; Komiya, Good & Sherrod, 2000) was utilized. The SSRPH contains five questions; a few items were modified for applicability to a career counseling population. An original sample item is “Seeing a psychologist for an emotional or interpersonal problem carries social stigma.” This question was modified to read: “Seeing a psychologist for an academic or vocational issue carries social stigma.” Participants were instructed to respond to questions on a scale of one (*strongly disagree*) to five (*strongly agree*). Higher scores are representative of greater levels of public stigma. Factor analysis indicated the strong presence of one factor and an internal validity of  $\alpha = .72$  (Komiya, Good & Sherrod, 2000). In the current study, internal consistency was slightly lower at .68. The SSRPH has been found to correlate with attitudes toward seeking help ( $r = -.40$ ; Komiya, Good & Sherrod, 2000) and another measure of public stigma (Vogel et al., 2008).

**Self-Stigma.** Self-stigma was assessed using the Self-Stigma of Seeking Help Scale (SSOSH; Vogel et al., 2006). The SSOSH is a 10 item measure in which participants respond to questions regarding feelings toward the self about seeking therapy on a scale from one (*strongly disagree*) to five (*strongly agree*). Five items on the scale are reverse coded so that higher scores are indicative of greater levels of self-stigma. Sample items include: “If I went to a therapist, I would be less satisfied with myself” and “My self-confidence would NOT be threatened if I sought professional help” (reverse coded). During scale creation and validation, the SSOSH was found to correlate with attitudes toward seeking help ( $r_s = -.53$  to  $-.63$ ), the likelihood of seeking counseling ( $r_s = -.32$  to  $-.38$ .) and public stigma ( $r_s = .46$  and  $.48$ ; Vogel et al., 2006). Internal reliability estimates have been reported to range from .86 to .90 with a test-retest estimate of .72. Internal consistency in the current study was found to be .86. The SSOSH has also been found to

reliably differentiate students who sought psychological services from those who did not (Vogel et al., 2006).

**Attitudes Toward Career Counseling.** To assess attitudes toward career counseling I used the Attitudes Toward Career Counseling Scale (ATCCS; Rochlen, Mohr & Hargrove, 1999). The ATCCS contains two factors; stigma related to career counseling and value of services. To prevent collinearity with the assessed stigma variables, only the Value of Career Counseling (VCC) subscale will be utilized as the dependent variable. This subscale contains 8 items rated on a scale from one (*strongly disagree*) to five (*strongly agree*). Higher scores indicate greater attitudes toward career counseling. A sample item is “If a career related dilemma arose for me, I would be pleased to know that career counseling services are available.” The VCC has a reported internal consistency estimate of  $r = .86$  and a test-retest correlation (for both subscales) of  $.80$  (Rochlen, Mohr & Hargrove, 1999). Internal consistency in the current study is  $.85$ . Authors of the scale also report validity evidence as indicated by the VCC’s relation to overall attitudes toward seeking professional help ( $r = .34$ ) and stigma toward counseling ( $r = -.31$ ).

**Demographic variables.** In addition to the scales described above a few of the demographic questions included in the data set were utilized for the current study. Specifically, one’s gender, current academic major and occupational choice was used in the present study. Participants were asked to report their sex (0 = male, 1 = female), state their current major and their anticipated occupational choice. Gender will be utilized as a predictor in the regression analyses and computed into an interactional term to test the research question that gender, along with stigma, will moderate the congruence and attitudes toward career counseling relationship.

Stated major and future occupational choice will be utilized as the environmental measures to compute the person-environment congruence indices as described below.

## CHAPTER 4: RESULTS

### Data Preparation

Data cleaning procedures were conducted based on Tabachnick and Fidell's (2007) recommendations. Eight hundred and fifty seven participants initiated participation in the current study; however, 116 of those individuals did not complete all three sections of the study and were removed from future analyses. Chi-square tests indicated there was a significant difference noted for participants whom dropped out of the study. One section of the study was completed less frequently than the other two sections ( $\chi = 5.13, df = 1, p = .024$ ). This particular section comprised of the Alternative Forms Public Domain interests and self-efficacy scales which measure the RIASEC codes for participant's stated interests and efficacy expectations (AFPD, Armstrong, Allison & Rounds, 2008). This suggests there may have been something about this particular survey, which resulted in incompleteness. This limitation will be discussed further in the discussion section. However, it is important to note that the section of the study comprising of the help-seeking measures was completed at the same frequency as the section comprised of other career measures. This provides some evidence that individuals did not stop participation in the study due to the potential experience of shame or stigma in responding to these more disclosive or sensitive items. In sum, the resulting data set was comprised of 86.5% of the initial data set.

No patterns of missing items were noted for participants in the study. No participant missed more than 2 items per scale and no particular item on any scale was missed more than 3 times by all 741 remaining participants. As there were no patterns of missing data, the participant's averaged scale score of the remaining scale items replaced missing items.

The data was then assessed for univariate and multivariate outliers and normality based on Tabachnick and Fidell's (2007) recommendations. First, univariate outliers were examined by comparing the z-score of each item to the critical value of 3; no outliers were discovered with this method. Mahalanobis distance was utilized to evaluate multivariate outliers, 8 participants were found to exceed the critical value (40.79,  $p = .001$ ) and were, therefore, removed from the data set. The removal of these participants resulted in a total data set of 733 participants. To test for normality, skewness and kurtosis of the data were examined by dividing the skewness and kurtosis of each scale by the standard error of its skewness or kurtosis, respectively. The resulting z-score can then be compared to the critical value of 1.96 to determine if the scale is skewed or kurtotic. A number of scales in the current study were found to exhibit skewness and/or kurtosis, suggesting that multivariate normality cannot be assumed. To evaluate this, the Mahalanobis distance variable was tested to determine if skewness or kurtosis was present across the scales in the study. The data did meet criteria for multivariate normality as both skewness and kurtosis fell below the critical z-value of 1.96.

Although the data exhibited univariate abnormality, Tabachnik and Fidell (2007) indicate this deviation is not particularly impactful due to the large sample size of the study (over 700 participants). Therefore, transformations were not conducted in order to maintain the interpretability of the results and due to the large sample size. In addition, collinearity was analyzed by both examining bivariate correlations amongst all variables in the study as well as examining multicollinearity diagnostic statistics in preliminary regression analyses. Tabachnick and Fidell (2007) suggest that correlations between variables that exceed .90 indicate significant collinearity between the variables. No bivariate correlations were found above this cut-off value.

In addition, the variance inflation factor (VIF) in the regression analysis was within normal limits and well below the recommended cutoff value of 4 (Tabachnick & Fidell, 2007).

### **Congruence Indices Computation**

Interest profiles from the AFPD (Armstrong, Allison & Rounds, 2008) provide the Holland code for each individual. The ordering of the six Holland types was computed for each individual by rank ordering the types from highest interest to lowest interest. This information provides the interest side of the congruence relationship for each of the two types of congruence. Means and standard deviations of the interest types are provided in Table 1.

Table 1

#### *Scale Means and Standard Deviations for the Alternative Forms Public Domain Measure*

Scale	# of Items	Mean	SD
Realistic	8	2.00	.84
Investigative	8	2.81	.92
Artistic	8	2.80	.87
Social	8	3.39	.75
Enterprising	8	2.89	.71
Conventional	8	2.56	.82

The Holland classification of participant's chosen occupation was completed utilizing information provided by the Department of Labor through their online website, O\*Net. This informational website provides classification numbers, data and information regarding each job title identified by the Department of Labor. Researchers through this organization have developed a four level numerical system to classify occupations. The broadest level is identified as the "major group" followed by "minor groups," "broad occupations," and "detailed occupations." Each occupation is assigned a numerical number, which is categorized first by major group and then by the more detailed occupational group and job title. Researchers in the

Department of Labor have determined and compiled a list of RIASEC codes for the majority of occupations (897) identified by the Department of Labor and that match the numerical system. This document is made available for public, research use and provides a value (ranging from 0 to 7) for each of the Holland types for each occupation. Higher values are indicative of a greater focus of that Holland type in the work environment. For instance, for the occupation “Graphic Designer” the Holland code values provided were 4.33 (Realistic), 1.67 (Investigative), 7.00 (Artistic), 2.00 (Social), 4.33 (Enterprising) and 2.33 (Conventional). These values show face validity in that we would expect a graphic designer to have a high artistic work interest as represented by the values above.

In order to find the RIASEC code for each participant’s stated future occupation the title was searched on the O\*Net website. If the occupation was a direct match to an occupation listed by the Department of Labor then the classification number was cross-referenced with the RIASEC file to find the RIASEC code for that participant’s occupation. Some participants listed occupations which were not a direct match to an occupation listed on O\*Net. In these cases two options were considered for each participant. First, it was decided if the occupation listed by the participant could better be explained through another occupational title. If so, the direct occupation was cross-referenced with the O\*Net file and the Holland code was determined. For example one participant listed the future occupation of “restoration manager.” After researching the job tasks of a restoration manager (one who oversees the reconstruction and restoration of buildings such as houses, churches and schools), this occupation could better be classified (according to the Department of Labor) more generally as a “construction manager.” The RIASEC code for construction manager was then used for this participant.

If an occupation did not fit one occupation listed by the Department of Labor, then additional occupations were considered and each potential occupation which could have tasks comprising the job tasks of the stated occupation were listed. RIASEC codes were found for each of these occupations and the types were averaged to obtain one RIASEC code, which represents the diverse tasks/components of the participant's stated occupation. For example, one participant listed the occupation "Criminal Profiler" As no Department of Labor occupation best represented this career choice a number of occupations was listed as close occupations, which likely would encapsulate the tasks required of a criminal profiler. In this case, the occupations of detective, criminal investigator and clinical psychologist were listed, cross-referenced to obtain RIASEC codes and averaged to determine one Holland code profile for this participant's stated occupation.

The process for determining the Holland code profile of participant's major was conducted in a similar fashion. As each academic major could result in a number of potential occupations, the average of the RIASEC codes for these potential occupations was conducted. To determine which occupations could result from a potential major a number of sources were examined: career literature, information regarding future employment provided by academic departments on the campus from which this data was collected, and the education crosswalk search engine of O\*Net. The latter search engine provides information regarding occupations held by individuals with selected educational or academic foci.

To avoid the pitfall of subjective decision making two steps were taken to reduce the likelihood of reducing the objective decision making process for both occupational congruence and major congruence. First, a systematic process was developed in order to determine the decision making steps needed for each participant as described above. Second, occupations or

majors which appeared less clear-cut were identified and this researcher consulted with other graduate students immersed in career and Holland research as well as a well-known Holland researcher regarding these more questionable occupations. Consultation was used to garner additional opinions and approval of the Department of Labor occupations which constituted either the participants stated occupation or academic major. By engaging in this process, I arrived at a clear decision for each participant's Holland Code and values for both their stated future occupation and major.

With both interests and environments identified, congruence was computed using three different methods. As was discussed in the literature review, the measurement of congruence has widely varied over time with three generations of congruence indices having been supported in the literature. As such, it is not clear which method of calculating congruence is best. To address this disparity in the literature I will utilize a congruence index from each generation to determine which best predicts attitudes toward seeking help for career counseling. First, a simple comparison utilizing the first letter of one's interest profile and chosen major/occupation was conducted. The First-letter Hexagonal Distance (FL-Hex; Holland, 1973) is computed by comparing the location of the highest interest Holland code value to the location of the highest occupation Holland code value on the RIASEC hexagon (see figure 1). The exact location (e.g. the highest values are the same Holland code type) receives a value of 4. Adjacent values (e.g. codes next to each other on the hexagon) receive a value of 3. Proximate values (e.g. codes one spot away from one's top interest code) receive a value of 2 and opposite values (e.g. codes found completely opposite one another on the hexagon) receive a value of 1. This simplistic congruence measure provides an easy to understand measure in which higher values represent a

greater degree of congruence. This first generation index was computed for both interest-occupation and interest-major congruence pairs.

Second, the Gore-Brown congruence index, an index from the second generation, was computed in which the three-point code from the interest profile and environment are correlated. The computation for this index is similar to the Holland First Point index described above. Depending on the location of the highest Holland code value in comparison to the highest environment Holland code value, the first point is assigned a value of 3 (exact location) to 0 (opposite location). This process is conducted again for both the second highest and third highest values. Once all three values are assigned, they are entered into a formula which weights the value of the three highest codes. The formula is as follows:  $G-B \text{ Index} = (3*H1)+(2*H2)+H3$ . In which H1 equals the assigned value for the first point location match, H2 equals the second point location match and H3 equals the third point location match.

In some instances a tie was found for the high point Holland codes. For example, Investigative interests may tie for third highest interest with Realistic interests. In these cases, each of the potential Gore-Brown indices were computed and an average was taken. The range of this congruence index is from 0 (complete incongruence) to 18 (complete congruence). This second generation index was computed for both interest-occupation and interest-major congruence pairs.

Lastly, a Euclidian distance representation was computed to represent a congruence index from the third, and most complex, generation. This index takes into account the interest profile's consistency and differentiation, providing a much clearer image of congruence by measuring the distance between two points (one for interests and one for environment). This is done using the following formula:  $\text{Euclidean distance} = \text{SQRT} ((H1_{\text{interest}} - H1_{\text{occupation}})^2 + (H2_{\text{interest}} -$

$H2_{\text{occupation}})^2 + (H3_{\text{interest}} - H3_{\text{occupation}})^2 + (H4_{\text{interest}} - H4_{\text{occupation}})^2 + (H5_{\text{interest}} - H5_{\text{occupation}})^2 + (H6_{\text{interest}} - H6_{\text{occupation}})^2$ . The formula provides a congruence value; however, to allow for ease of interpretation, the lowest congruence index of the study was subtracted from each participant's congruence index. High congruence scores, therefore, would represent greater congruence whereas low values would represent low congruence, with the lowest Euclidean congruence index of 0.

### **Congruence Indices Descriptive Analyses**

The number and percentage of participants whom exhibited high point codes for each of the RIASEC code types are listed in Table 2. The greatest percentage of participants identified the Social code type as their strongest interest (39.70%). In addition, participants demonstrated the Social environmental interest type as the greatest interest for both their major (31.92%) and stated occupational choice (29.20%). As participants were drawn from courses in the social services field, this greater interest would likely be expected. Seventy-nine participants, however, were not able to have a congruence indices calculated for their interest-major fit due to not having yet selected a major and had either not responded to the item or indicated they were an "open option." Twenty-seven participants were also not able to have interest-occupational congruence indices calculated as they had either not responded to the item or reported a career, which would not be classified for the Department of Labor. For example, a few participants indicated their career goal was to be a "stay at home mom." The Department of Labor does not classify this as a profession (as it is not a taxable career) and, therefore, does not provide data regarding the Holland code profile of this future goal.

Table 2

*Number and Percentage of Participants per Holland Code Type*

Type	Interests		Major		Occupation	
	#	%	#	%	#	%
Realistic	42	5.73	13	1.77	36	4.91
Investigative	136	18.55	134	18.28	190	25.92
Artistic	113	15.42	68	9.28	105	14.32
Social	291	39.70	234	31.92	214	29.20
Enterprising	85	11.60	173	23.60	123	16.78
Conventional	66	9.00	32	4.37	38	5.18
*Missing	-	-	79	10.78	27	3.68

\*Note. Missing values indicate the major or occupation Holland code was not able to be computed due to missing data.

The means, standard deviations and the range of each congruence index are provided in Table 3. Each congruence index mean fell slightly above the median suggesting this sample demonstrates higher congruence overall. Correlations amongst the congruence indices are provided in Table 4. A bonferroni adjustment ( $.05/6 = .008$ ) was utilized to determine appropriate significance to account for correlations, which may be due to chance. Only two correlations were not found to be significant. Holland's First Letter Occupational index did not significantly correlate with the Euclidean Distance congruence index for one's major. In addition, the occupational Gore-Brown index did not significantly correlate with the major Euclidian Distance congruence index. These non-significant correlations may indicate that the indices examining one's major as the environment, do not demonstrate meaningful or significant overlap with different indices examining one's stated occupation as the environment. Small to moderate (.30 to .58) correlations were found for the same index between the major and occupation, indicating that participants were experiencing differences in their level of congruence depending on if their major or occupation better matched their interests. The highest correlations were found between the Holland First Letter index and the Gore-Brown Index when

comparing each index with major (.81) and occupation (.83). The high degree of overlap is conceptually meaningful as both indices are calculated using a similar method with the only difference being the Gore-Brown index utilizes the three highest point codes (versus only the highest code for the Holland First Letter index).

Table 3

*Scale Means, Standard Deviations and Ranges for the Congruence Indices*

Scale	Mean	SD	Range
First-Letter Major	3.10	.92	1.00 - 4.00
First-Letter Occ	2.96	.96	1.00 - 4.00
G-B Index Major	10.95	3.56	1.00 - 18.00
G-B Index Occ	10.52	3.67	0 - 18.00
Euclidian Distance Major	2.81	.86	0 - 5.31
Euclidian Distance Occ	3.51	.86	0 - 5.82

*Note.* First-Letter = First-letter Hexagonal Distance; Occ = Occupation; G-B = Gore Brown Index.

Table 4

*Correlations among Congruence Indices*

Index	1	2	3	4	5	6
1. First-Letter Major	1.00					
2. First-Letter Occ	.30*	1.00				
3. G-B Index Major	.81*	.22*	1.00			
4. G-B Index Occ	.29*	.83*	.31*	1.00		
5. Euclidian Distance Major	.26*	.07	.36*	.09	1.00	
6. Euclidian Distance Occ	.11*	.30*	.17*	.33*	.58*	1.00

*Note.* \*\*  $p < .01$  First-Letter = First-letter Hexagonal Distance; Occ = Occupation; G-B = Gore Brown Index.

A regression analysis was conducted to answer my first research question: will incongruence lead to more positive attitudes toward career counseling? In addition, this analysis will help to explore which of the congruence indices best predicts attitudes toward career

counseling. A step-wise hierarchical regression analysis was conducted in which the six congruence indices were entered into one step in the prediction of the VCC scale of the ATCCS (Rochlen, Mohr & Hargrove, 1999). The only significant predictor for this criterion variable was the Euclidian Distance index for one's stated occupational choice ( $R^2 = .027$ ,  $b = .11$ ,  $F(1, 624) = 17.37$ ,  $p < .001$ ). This demonstrates that incongruence is related to attitudes toward seeking help for career counseling; however, only one of the congruence indices holds this predictive power over the others. In addition, the relationship is in the opposite direction that was predicted. Individuals with higher levels of congruence demonstrate more positive attitudes toward seeking help.

Due to these results, only the third generation, Euclidean Distance Occupation index will be utilized in the subsequent regression analyses testing the moderation and mediation effects. The third generation index takes into account all six Holland types, the match between high and low point codes and the distance between Holland codes for the interests and environment. The complexity of this analysis is assumed to provide the most comprehensive information regarding one's level of congruence (Spokane, Luchetta & Richwine, 2000), which may be why these particular indices were significant predictors whereas the more simple indices were not as useful as predictors. This issue is discussed further in the discussion section. Interestingly, though, the degree to which congruence predicts attitudes toward seeking help for career counseling is small, explaining approximately 2-3% of the variance in attitudes. The implications of this small degree of prediction will also be discussed further below. Results of the regression analysis can be found in Table 5.

Table 5

*Stepwise Congruence Hierarchical Linear Regressions Predicting Attitudes Toward Career Counseling*

Predictor	<i>R</i>	<i>R</i> <sup>2</sup>	<i>B</i>	<i>B</i> 95% CI	<i>SE</i>	$\beta$	<i>T</i>
Euclidian Distance: Occ	.165	.027**	.106	[.056, .156]	.025	.165	4.17**
Excluded Variables							
First-Letter: Occ			.08				1.7
First-Letter: Major			.04				.99
G-B Index: Occ			.00				.05
G-B Index: Major			.03				.70
Euclidian Distance: Major			.01				.16

*Note:* \*\* $p < .001$ . First-Letter = First-letter Hexagonal Distance; Occ = Occupation; G-B = Gore Brown Index.

**Descriptive Analyses**

Means, standard deviations and ranges are provided in Table 6 for each of the measures in the current study. In general, participants demonstrated attitudes toward seeking help for career counseling, major satisfaction, and career decision-making self-efficacy that were all higher than the median of each scale. Correlations amongst study variables are provided in Table 7. A Bonferroni adjustment ( $.05/7 = .007$ ) was utilized to account for the multiple correlations. Of note, the highest correlations were found between self-stigma and attitudes towards career counseling ( $-.53, p < .001$ ), as well between self-stigma and public stigma ( $.62, p < .001$ ). Also of interest, major satisfaction did not correlate with any variable except for career decision-making self-efficacy. Although a correlation would not be expected between major satisfaction and traditional help-seeking variables, it would be expected from the literature that at least a

small correlation between major satisfaction and congruence would be found (Spokane, Meir & Catalano, 2000).

Table 6

*Scale Means, Standard Deviations and Ranges for all Study Scales*

Scale	Mean	SD	Range
Attitudes	3.56	.63	1.00 - 5.00
Self-Stigma	2.54	3.56	1.00 - 5.00
Public Stigma	2.45	3.67	1.00 - 5.00
Major Satisfaction	3.53	1.12	1.00 - 5.00
Self-Efficacy	3.66	.55	1.00 - 5.00
Congruence	2.81	.86	0 - 5.31

*Note.* Means for scales were divided by the number of items for each scale to aid in interpretability. Attitudes = Attitudes Toward Career Counseling Scale; Self-Stigma = Self-Stigma of Seeking Help; Public Stigma = Stigma Scale for Receiving Psychological Help; Major Satisfaction = Academic Major Satisfaction Scale; Self-Efficacy = Career Decision-Making Self-Efficacy Scale – Short Form; Congruence = Occupational Euclidian Distance.

Table 7

*Correlations amongst Study Variables*

Index	1	2	3	4	5	6
1. Congruence	1.00					
2. Major Satisfaction	.02	1.00				
3. Self-Efficacy	.02	.36**	1.00			
4. Public Stigma	-.06	-.04	-.09*	1.00		
5. Self-Stigma	-.06	-.03	-.11**	.62**	1.00	
6. Attitudes	.14**	.03	.12**	-.29**	-.53**	1.00

*Note.* \*\*  $p < .01$  \*  $p < .05$  Congruence = Occupational Euclidian Distance; Major Satisfaction = Academic Major Satisfaction Scale; Self-Efficacy = Career Decision-Making Self-Efficacy Scale – Short Form; Public Stigma = Stigma Scale for Receiving Psychological Help; Self-Stigma = Self-Stigma of Seeking Help Scale. Attitudes = Attitudes Toward Career Counseling Scale.

## Regression Analyses

To prepare the data for the moderation tests being examined in the regression analyses, all predictor variables were standardized and the categorical variable of gender was coded 0 = male and 1 = female (Tabachnick and Fidell, 2007). In addition, four terms were computed to represent the expected interaction terms for the moderation hypotheses (Congruence x Major Satisfaction, Congruence x Self-Efficacy, Congruence x Public Stigma, and Congruence x Self Stigma x Gender). As noted above, gender was added into the expected three way interaction between congruence, stigma, and gender due to previous research showing that men experience greater self-stigma than women (Good, Dell and Mintz (1989; Lucas, 1993; Pederson & Vogel, 2007). To test the remaining four hypotheses each predictor variable (gender, congruence career decision making self-efficacy, major satisfaction, public stigma, and self-stigma) was entered into the first step of the hierarchical regression analysis. The four interaction terms were added in the second step to examine the moderating hypotheses. The model in Step 1 was significant,  $R^2 = .59$ ,  $F(5, 698) = 198.58$ ,  $p < .001$  (see Table 8). Each predictor except major satisfaction significantly predicted attitudes toward career counseling. Congruence was positively related to attitudes toward career counseling; suggesting that individuals who are demonstrating higher levels of occupational congruence have more positive attitudes toward seeking help. This relationship was also found for career decision-making self-efficacy, those with greater self-efficacy held higher attitudes toward seeking help. These findings are opposite what was initially expected, showing that the individuals whom have the best attitudes are the ones assumingly not in need of therapy. Public-stigma and self-stigma also were negatively associated with attitudes toward career counseling, a finding that replicates prior research (Vogel, Wade & Hackler, 2007; Vogel, Wade & Ascherman, 2009; Vogel, Wade & Haake, 2006).

Table 8

*Prediction of Main and Interactive Effects for Attitudes Toward Career Counseling*

Predictor	$R^2$	$\Delta R^2$	$B$	$B$ 95% $CI$	$SE$	$\beta$	$t$
Step 1	.59**	.59**					
Gender			.10	[.04, .16]	.03	.08	3.37**
Congruence			.05	[.02, .08]	.01	.09	3.37**
Major Satisfaction			-.01	[-.03, .02]	.01	-.01	-.39
Self-Efficacy			.04	[.01, .07]	.01	.07	2.68**
Public Stigma			-.08	[-.11, -.05]	.02	-.14	-4.63**
Self-Stigma			-.35	[-.38, -.31]	.02	-.63	-20.06**
Step 2	.61**	.017**					
Gender			.10	[.04, .16]	.03	.09	3.48**
Congruence			.04	[.02, .07]	.01	.08	3.09**
Self-Efficacy			.04	[.02, .07]	.01	.08	3.04**
Major Satisfaction			-.01	[-.03, .02]	.01	-.01	-.46
Public Stigma			-.08	[-.12, -.05]	.02	-.15	-4.92**
Social Stigma			-.34	[-.37, -.30]	.02	-.61	-19.54**
Congruence x Major Satisfaction			-.01	[-.04, .02]	.01	-.02	-.81
Congruence x Self Efficacy			.05	[.03, .08]	.01	.10	3.91**
Congruence x Public Stigma			.02	[-.02, .05]	.02	.03	1.03
Congruence x Stigma x Gender			-.03	[-.05, -.01]	.01	-.08	-2.58**

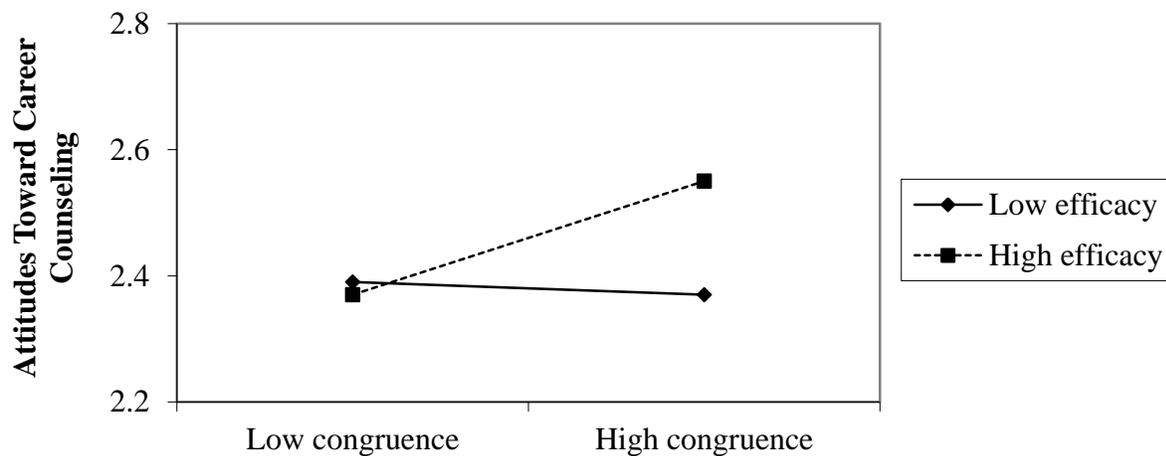
*Note.* \*\*  $p < .01$ . Congruence = Occupational Euclidian Distance; Major Satisfaction = Academic Major Satisfaction Scale; Self-Efficacy = Career Decision-Making Self-Efficacy Scale – Short Form; Public Stigma = Stigma Scale for Receiving Psychological Help; Self-Stigma = Self-Stigma of Seeking Help Scale.

The model in Step 2 was also significant;  $R^2 = .61$ ,  $\Delta R^2 = 1.7$ ,  $F(4, 694) = 117.38$ ,  $p < .001$ . Specifically, two of the four hypothesized moderating relationships were significant. The congruence and career decision making self-efficacy interaction term was significant. Plotting of the interaction (see Figure 6) demonstrates that little effect is noted for individuals low on congruence and low on career decision-making self-efficacy. However, at higher levels of

congruence, career decision-making self-efficacy contributes to greater attitudes toward seeking help for career counseling. This finding indicates that the relation between congruence and attitudes toward career counseling is stronger for individuals with high career decision-making self-efficacy. Again, although this relationship is significant, it is in the opposite direction hypothesized. The interaction terms for major satisfaction and public stigma were non-significant, demonstrating no moderating relationship for these variables (see Table 8).

Figure 6

*The Moderating Effects of Career Decision Making Self-Efficacy on the Congruence-Attitudes Relationship*



The congruence, stigma, and gender three-way interaction term was significant. To examine the interaction more closely, I split the data file by gender and reran the hierarchical regression analysis including congruence and self-stigma in Step 1 and the interaction term (congruence x self-stigma) in Step 2. For women, Step 1 was significant,  $R^2 = .59$ ,  $\Delta R^2 = .59$ ,  $F(2, 476) = 341.17$ ,  $p < .001$ . As in the previous regression, congruence positively predicted attitudes toward career counseling and self-stigma negatively predicted attitudes. However, the

addition of the interaction term in Step 2 was not significant and did not contribute additional variance,  $R^2 = .59$ ,  $\Delta R^2 = 0.0$ ,  $F(1, 475) = 227.19$ ,  $p = .60$ . Thus, no moderating effect was found for women (see Table 9). For men, Step 1 was also significant,  $R^2 = .47$ ,  $F(2, 222) = 96.47$ ,  $p < .001$ . Again, congruence positively predicted attitudes toward career counseling and self-stigma negatively predicted attitudes. However, Step 2 was positive for male participants,  $R^2 = .48$ ,  $\Delta R^2 = 1.0$ ,  $F(1, 221) = 3.92$ ,  $p < .05$ . The addition of the interaction term added an additional one percent of the variance explained for men (see Table 10). Figure 7 demonstrates the graphical representation of this moderating effect. For men who experience lower levels of self-stigma, level of congruence does not affect their attitudes toward seeking help for career concerns. However, for those who experience high stigma, higher levels of congruence appear to attenuate the experience of stigma and leads to greater attitudes toward career counseling.

Table 9

*Results for Female Participants for the Congruence-Stigma Interaction*

Predictor	$R^2$	$\Delta R^2$	$B$	$B$ 95% $CI$	$SE$	$\beta$	$t$
Step 1	.59**	.59**					
Congruence			.04	[.01, .07]	.02	.08	2.73**
Self-Stigma			-.41	[-.43, -.37]	.02	-.76	-25.69**
Step 2	.59	0.0					
Congruence			.04	[-.07, -.01]	.02	.08	2.77**
Self-Stigma			-.41	[-.44, -.37]	.02	-.61	-25.65**
Congruence x Self Stigma			-.01	[-.04, .02]	.02	-.10	-.52

*Note.* \*  $p < .05$ , \*\*  $p < .01$ . Congruence = Occupational Euclidian Distance; Self-Stigma = Self-Stigma of Seeking Help Scale.

Table 10

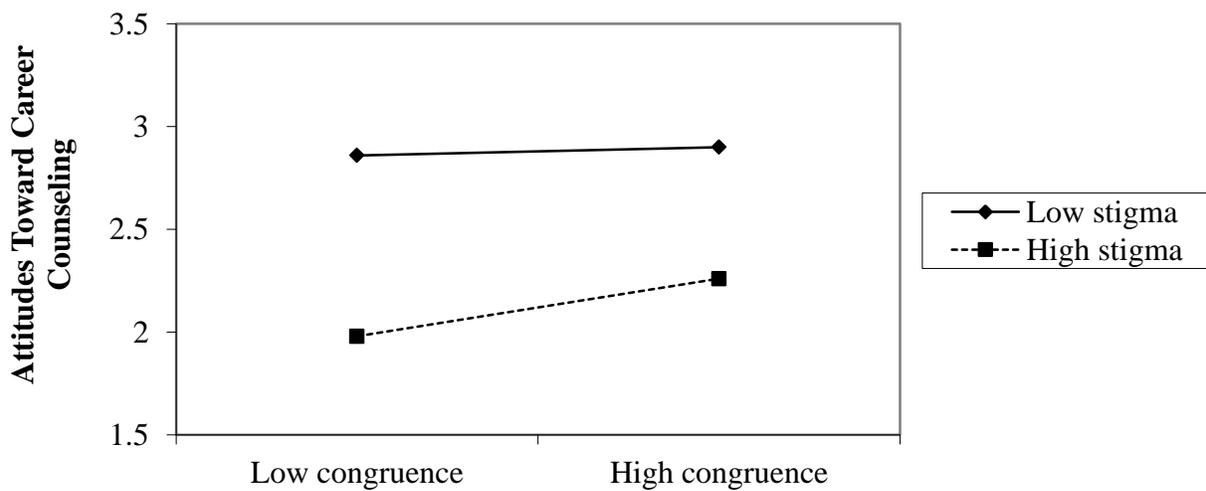
*Results for Male Participants for the Congruence-Stigma Interaction*

Predictor	$R^2$	$\Delta R^2$	$B$	$B$ 95% $CI$	$SE$	$\beta$	$t$
Step 1	.47**	.47**					
Congruence			.08	[.02, .14]	.03	.13	2.68**
Self-Stigma			-.39	[-.45, -.33]	.03	-.67	-13.65**
Step 2	.48	.01*					
Congruence			.08	[.02, .14]	.03	.12	2.48**
Self-Stigma			-.38	[-.44, -.32]	.03	-.65	-13.17**
Congruence x Self Stigma			.06	[.01, .11]	.03	.10	1.98*

Note.. \*  $p < .05$ , \*\*  $p < .01$ . Congruence = Occupational Euclidian Distance; Self-Stigma = Self-Stigma of Seeking Help Scale.

Figure 7

*The Moderating Effects of Self-Stigma on the Congruence-Attitudes Relationship for Men.*



## Mediational Analyses

In order to fully understand the relationships amongst the proposed variables, additional analyses were run to examine an alternative model of mediation for each of the predictor variables in the congruence and attitudes relationship. To complete these analyses the four-step model outlined in Baron and Kenny (1986) was followed. This process involves showing that the predictor variable is correlated with the outcome (step 1), establishing that the predictor is correlated with the mediator (step 2), establishing that the mediator predicts the outcome (step 3), and demonstrating that when the mediator is entered, the relationship between the predictor and outcome is no longer significant (step 4 for complete mediation).

For the mediation analysis four regression analyses were conducted in which congruence was entered into the first step and one of the four mediator variables were each entered separately into the second step. However, none of the variables successfully mediated the relationship in the second step. Major satisfaction was unrelated to the outcome variable; and therefore, was unable to act as a mediator (see Table 11). Career decision making self-efficacy (see Table 12), public stigma (see Table 13) and self-stigma (see Table 14) were significant predictors of attitudes toward career counseling; yet, the addition of these variables did not eliminate the significant relationship between congruence and attitudes. The specific results are listed below:

*Major Satisfaction:* To test for self-efficacy as a mediator of the congruence-attitudes relationship, major satisfaction and congruence were entered into the second step of the regression analysis. This second step was not significant;  $R^2 = .02$ ,  $F(1, 702) = 13.33$ ,  $p = .09$ . Major satisfaction was not a significant predictor of attitudes,  $b = -.04$ ,  $t(702) = -1.68$ ,  $p = .09$  and was not a mediator for congruence,  $b = .08$ ,  $t(702) = 3.62$ ,  $p < .001$  (see Table 11).

Table 11

*Major Satisfaction as a Mediator in the Congruence and Attitudes Relationship*

Predictor	$R^2$	$\Delta R^2$	$B$	$B$ 95% $CI$	$SE$	$\beta$	$t$
Step 1	.02**	.02**					
Congruence			.08	[.04, .12]	.02	.14	3.65**
Step 2	.02	.02					
Congruence			.08	[.03, .12]	.02	.14	3.62**
Major Satisfaction			-.04	[-.08, .01]	.02	-.06	-1.68

*Note.* \*  $p < .05$ , \*\*  $p < .01$ . Congruence = Occupational Euclidian Distance; Major Satisfaction = Academic Major Satisfaction Scale.

*Career Decision Making Self-Efficacy:* To test for self-efficacy as a mediator of the congruence-attitudes relationship, career decision-making self-efficacy and congruence were entered into the second step of the regression analysis. This second step remained significant;  $R^2\Delta = .02$ ,  $F(1, 703) = 16.78$ ,  $p < .001$ . Career decision making self-efficacy was a significant predictor of attitudes,  $b = .08$ ,  $t(702) = 4.10$ ,  $p = .001$ . However, the addition of the mediator term did not affect the significance of the predictor variable of congruence,  $b = .07$ ,  $t(702) = 2.48$ ,  $p < .001$ . These results indicate that career decision-making self-efficacy does not mediate the congruence-attitudes relationship (see Table 12).

Table 12

*Self-Efficacy as a Mediator in the Congruence and Attitudes Relationship*

Predictor	$R^2$	$\Delta R^2$	$B$	$B$ 95% $CI$	$SE$	$\beta$	$t$
Step 1	.02**	.02**					
Congruence			.08	[.04, .12]	.02	.14	3.65**
Step 2	.04	.02**					
Congruence			.07	[.04, .12]	.02	.13	2.48**
Self-Efficacy			.08	[.04, .12]	.02	.15	4.10**

*Note.* \*  $p < .05$ , \*\*  $p < .01$ . Congruence = Occupational Euclidian Distance; Self-Efficacy = Career Decision-Making Self-Efficacy Scale – Short Form.

*Public Stigma:* To test for public stigma as a mediator of the congruence-attitudes relationship, public stigma and congruence were entered into the second step of the regression analysis. This second step remained significant;  $R^2\Delta = .31$ ,  $F(1, 702) = 319.87$ ,  $p < .001$ . Public stigma was a significant predictor of attitudes,  $b = -.31$ ,  $t(702) = -17.89$ ,  $p < .001$ . However, the addition of the mediator term did not affect the significance of the predictor variable of congruence,  $b = .06$ ,  $t(702) = 3.34$ ,  $p < .001$ . These results indicate that public stigma does not mediate the congruence-attitudes relationship (see Table 13).

Table 13

*Public Stigma as a Mediator in the Congruence and Attitudes Relationship*

Predictor	$R^2$	$\Delta R^2$	$B$	$B$ 95% $CI$	$SE$	$\beta$	$t$
Step 1	.02**	.02**					
Congruence			.08	[.04, .12]	.02	.14	3.65**
Step 2	.33	.31**					
Congruence			.06	[.01, .10]	.02	.14	3.34**
Public Stigma			-.31	[-.34, -.27]	.02	-.56	-17.89**

*Note.* \*  $p < .05$ , \*\*  $p < .01$ . Congruence = Occupational Euclidian Distance; Public Stigma = Stigma Scale for Receiving Psychological Help.

*Self-Stigma:* To test for self-stigma as a mediator of the congruence-attitudes relationship, self-stigma and congruence were entered into the second step of the regression analysis. This second step remained significant;  $R^2\Delta = .55$ ,  $F(1, 702) = 889.14$ ,  $p < .001$ . Self-stigma was a significant predictor of attitudes,  $b = -.41$ ,  $t(702) = -29.82$ ,  $p < .001$ . However, the addition of the mediator term did not affect the significance of the predictor variable of congruence,  $b = .05$ ,  $t(702) = 3.80$ ,  $p < .001$ . These results indicate that self-stigma does not mediate the congruence-

attitudes relationship (see Table 14). In sum, none of the predictors mediated the relationship between congruence and attitudes toward seeking help for career counseling.

Table 14

*Self-Stigma as a Mediator in the Congruence and Attitudes Relationship*

Predictor	$R^2$	$\Delta R^2$	$B$	$B$ 95% $CI$	$SE$	$\beta$	$t$
Step 1	.02**	.02**					
Congruence			.08	[.04, .12]	.02	.14	3.65**
Step 2	.57	.55**					
Congruence			.05	[.03, .08]	.02	.14	3.80**
Self-Stigma			-.41	[-.44, -.39]	.02	-.74	-29.82**

*Note.* \*  $p < .05$ , \*\*  $p < .01$ . Congruence = Occupational Euclidian Distance; Self-Stigma = Self-Stigma of Seeking Help Scale.

## CHAPTER 5: DISCUSSION

The current study examined three main research questions: (a) Does incongruence predict attitudes toward seeking help for career counseling?; (b) Which of the congruence indice(s) best predicts these attitudes?; and (c) Do other career and traditional counseling variables moderate or mediate the congruence-attitudes relationship? To this point, no researcher has examined career variables in relation to attitudes toward career counseling. This is the first study to explore career variables, specifically the construct of incongruence, in relation to help-seeking attitudes.

### **Congruence and Attitudes Toward Career Counseling**

Results indicate that incongruence does predict attitudes toward seeking help for career counseling. However, this relationship was in the opposite direction of the expected relation. Individuals who were more highly congruent demonstrated more positive attitudes toward seeking help for career concerns. This finding is somewhat surprising considering the implications for someone if he or she is incongruent. However, the current sample was of a general student population. Results may vary for a specific population identified as in need of services. For example, a large focus of career counseling is centered on remediating the incongruence one may be experiencing between their interests and major or career. Often, a goal for counseling is to encourage the client to discover career options which are going to be most congruent with their interests. It would be expected that individuals who are incongruent would likely be in a level of distress (due to incongruence) which would motivate an individual to reduce their discomfort and seek services.

A number of researchers have supported this assumption. Distress has been found to be related to positive help-seeking attitudes (Constaintaine, Wilton, & Caldwell, 2003; Cramer, 1999; Cooper-Patrick et al., 1999). When individuals perceive themselves to be in distress which

exceeds their ability to cope, distress acts as a motivator in the decision to seek treatment (Cepeda-Benito & Short, 1998; Ingham & Miller, 1986). Cooper-Patrick and colleagues (1999) even found that distress was the strongest predictor of mental health services utilization. I expected that the distress arising from incongruence would act as a motivating factor, increasing attitudes toward seeking help. Other researchers have found that career distress, specifically, leads to help-seeking behaviors as well as overall personal distress (Multon et al., 2001).

However, the current study found evidence that those who were the most incongruent, theoretically in the greatest distress, had the most negative attitudes toward seeking help. This initially unexpected finding, however, may fit some recent research that has shown the connection between distress and help-seeking attitudes is more complex. Several studies have found that higher levels of distress while linked to help-seeking attitudes are also associated with experiences or perceptions of stigma, and stigma in turn is linked with reductions in help-seeking attitudes and behaviors (Eisenberg et al., 2009; Obasi & Leong, 2009). For example, in one study using structural equation modeling, higher levels of distress predicted two types of stigma, and these stigmas then led to more negative help-seeking attitudes (Cheng, Karl Kwan, Sevig, 2013). In turn, some researchers have illustrated that some types of psychological distress can lead individuals to avoid rather seek help (Rickwood, Deane & Wilson, 2007).

Overall this recent lines of research supports the idea that greater distress can lead to multiple responses. On the one hand greater distress may make the option of seeking help more plausible. This might then trigger some negative reactions and attitudes *not* seek help despite the need in many people (Wilson, 2010). However, if the need is great enough the person may seek help even if these reactions are negative (Cooper-Patrick et al., 1999). The results of the current study suggest that for college students career decisions may often fall into the category of

triggering negative reactions about what it means to seek help but may not rise to level of being of great enough distress to overcome these concerns. This might particularly be the case for someone experiencing some incongruence between interests and major where the full impact (i.e., later job choice) is far enough away to lessen concerns. As such, these individuals may feel the emotional risk in seeking therapy is too great for the level of distress they are experiencing. Alternatively, for someone experiencing more pressing or distressing concerns (such as suicidal ideation) this person's distress may override their negative reactions to seeking help. Clearly, additional research is needed to understand this troubling trend that even when experiencing incongruence the level of distress may not be sufficient for individuals to choose to seek help. Counselors and student affairs professionals may want to keep this information in mind as they attempt to reach out to students in potential career need. Normalizing the experience of career distress and offering low-pressure opportunities (e.g. workshops, courses, peer counseling or career counseling) to address career concerns may reduce their negative reactions to a degree which would allow students to seek the help they may need. Future researchers might also want to examine distress and incongruence directly. This suggestion will be discussed further below.

Somewhat supporting the potential lower link between congruence and distress in this sample was the finding that although congruence was a significant predictor of attitudes toward career counseling, the percentage of variance explained by congruence was relatively small (2.7%). This small percentage of variance explained is not consistent with career counseling theories that place congruence as central and note the importance of remediating incongruence in a career counseling setting (Holland, 1997). However, previous researchers have also rarely found moderate to large predictive effects of congruence in relation to a number of outcome variables. The most widely researched relationship between congruence and satisfaction has

consistently found only small relationships. Reviews of the literature have identified an average correlation between congruence and satisfaction to be .25, with approximately five percent of the variance in satisfaction being accounted for by congruence (Spokane, Meir & Catalano, 2000); which is closer the 2.7% found in the current study. Furthermore, in several studies congruence was not found to relate to career readiness (Hirshi & Läge, 2007), well-being (Meir & Green-Eppel, 1999), anxiety (Meir & Malamed, 1986) volition (Tanaka & Ogawa, 1986) or higher incomes (Schwartz, Andaippan & Nelson, 1986). This may suggest that although incongruence is highly important in relation to theory and career counseling, congruence is not a strong predictor of other career variables.

One particularly troubling problem in the congruence literature is that there is often a severe restriction of range in the measurement of congruence and outcome variables, preventing larger relationships from being found (Chartrand & Walsh, 1999). Holland's (1997) theory states one of two things will happen in the presence of incongruence; individuals and environments will developmentally grow to become more like one another or the incongruence will lead to the expulsion of the individual from the environment. Therefore, when an individual is in an environment for a period of time they likely have adapted to their environment or fostered enough congruence to remain in the workplace. Previous studies have failed to account for this natural restriction of range which may be one major reason congruence has not significantly predicted or explained a large degree of variance in outcome variables.

In the current study, restriction of range was not problematic for congruence as the data did not demonstrate a restriction of range nor was skewed. Congruence demonstrated a normal distribution, suggesting that students in the current study have not yet had time to either be remediated by their environment or foster higher levels of congruence to remain in the

environment. However, the outcome variable, attitudes toward career counseling, did demonstrate a restriction of range and was negatively skewed. Participants in the current study, on average, held more positive attitudes toward seeking help for career counseling. This finding is consistent with previous research which indicates that individuals who are younger and educated tend to have more positive attitudes toward seeking help (Fisher & Cohen, 1972). The result of the outcome variable restriction of range may have also prevented a larger percentage of the variance to be explained by congruence.

**Congruence Indices.** In addition to simply exploring the relationship between incongruence and attitudes, it was deemed important to provide some clarity to the existing literature on the measurement of congruence. A review of the literature illustrates that over a dozen congruence indices have been developed, yet various degrees of overlap have been found. Correlations have ranged from as small as .05 (Camp & Chartrand, 1992) to as large as .98 (Young, Tokar & Subich, 1998). Previous findings indicate that while some congruence indices may be seen as interchangeable, it is not guaranteed all indices will act in the same way or predict outcomes to the same degree.

Three generations of indices have been discussed (Spokane, Luchetta & Richwine, 2000). The earliest generation examines congruence by comparing the highest Holland code type of the individual (e.g. their highest type interest) to the highest Holland code type of the environment. Although this type of index is easy to compute and to comprehend, it fails to provide much information regarding *how* incongruent one may be. The second generation expands on this type of measurement by including the second and, in some cases, third Holland type comparisons. The inclusion of additional code types provides greater information regarding one's level of congruence. Lastly, the third generation indices expand further on previous indices by examining

all six Holland types and utilizing more complex mathematical formulas. Although these third generation indices take much more time, effort and much more information is needed (the ranking of all six code types for both the individual and environment), the benefit is a much deeper understanding of one's level of congruence that takes into account the differentiation and consistency of the code types (Spokane, Luchetta & Richwine, 2000).

In the current study, an index from each of the three generations was computed for two environment types (major and stated future occupation). Two environment types were utilized to best be able to describe how or in what ways students in the sample may be incongruent. For example, a student may be incongruent in their current major; however, highly congruent with their stated occupational choice. Therefore, for this individual, obtaining a degree in a certain major may be a necessary evil for obtaining the career they desire. In this case, the individual may not be in need of mental health services as their interests will match their future environment. In sum, six congruence indices were calculated for each participant.

Correlations amongst the congruence indices in the current study ranged from being non-significant to being highly correlated. The highest correlations were found between the first and second generation indices for one's major (.81) and occupation (.83), suggesting a high degree of overlap between these indices when using the same environment type. This finding would be expected, considering the calculation of both indices is very similar. The remainder of the correlations were either non-significant or fell in the small to moderate range, suggesting that there was not a significant degree of overlap between first and second generations with the third generation index. In addition, the correlations between the major and occupation index within each generation ranged from .30 to .58. This also suggests that there is not a large degree of overlap between one's level of congruence within their major and within their stated

occupational choice. Therefore, for some participants, one may be more or less congruent depending on the type of environment measured. Overall, these findings are consistent with previous research when demonstrates a wide range of overlap between the congruence indices (Camp & Chartrand, 1992; Young, Tokar & Subich, 1998).

When entered into a step-wise regression analysis, only one congruence index was a significant predictor of attitudes toward career counseling. The third generation index (Euclidean Distance) utilizing the stated occupational choice as the environment type was the best predictor, accounting for 2.7% of the variance as described above. In other words, this index provided the strongest link to attitudes toward seeking help for career concerns; and, due to its inclusion, none of the other indices were able to predict attitudes. This finding highlights two main points. First, the third, most complex, generation index performed the best in predicting the outcome variable. Simpler congruence indices appear to not provide the information needed to understand one's level of attitudes toward career counseling. The more complex index, taking into account the degree of distance in one's experience of incongruence, emerges as important in the prediction of help-seeking attitudes. It is not simply enough to know if someone is incongruent, but *how* incongruent.

The lack of a relationship or strong relationship between congruence and a variety of outcome variables discussed above may be in part to the usage of less complex congruence indices. Perhaps, the most detailed knowledge of congruence is needed in order to predict and understand the relationship between congruence and other career variables. If this is the case, the downside of the use of this index in future research and/or clinical interventions would be the time and expense in calculating such a complex index for each individual. To calculate this index, the full Holland code profile is needed for both the individual's interests and well as the

environment. Although the full Holland profile is easy to obtain in regard to a person's interests (e.g. through popular interest measures), it is much more difficult to obtain the full Holland profile for the environment. In addition, some environment types have yet to be classified utilizing Holland code types which would further complicate the computation of a complex index. The difficulty of computing this congruence index may supersede its relatively small predictive power, at least in relation to the prediction of help-seeking attitudes.

Second, the occupational environment type was a significant predictor whereas the major environment type utilizing the same congruence index was not. This suggests that for a student population, what is important in terms of one's experience of incongruence is how incongruent or congruent one is in regard to their future occupational choice. College students are unique in that their academic major provides the immediate environment; whereas the workplace would be the immediate environment for employed adults. However, this environment for students may or may not represent the goal environment of their occupational setting. It appears that the future occupational environment is more important to college students than their current major environment in the prediction of attitudes toward career counseling.

These findings may also highlight the importance of examining one's future fit in a career as a primary goal of career counseling. Many students may come into career counseling to address major indecision or to explore new options as they change majors (Orndorff & Herr, 1996; Wollman, Johnson & Bottoms, 1975). While it will be important to explore majors which will fit or lead to desired future careers, it may be more important in counseling to balance encouraging fit with one's major with the fit with one's future career choice. The finding in the current study demonstrating that the congruence between one's interests and future career choice is a better predictor than the congruence between interests and major may point to the

overarching need to find a career choice which will be congruent rather than the more proximal fit in one's major. However, as these results are in relation to the prediction of help-seeking attitudes, this possibility should be interpreted with caution. This would also be an excellent area for future research to explore.

### **Moderating Relationships**

Two of the four predictive moderating relationships were significant in the current study. The interaction between congruence and career-decision making self-efficacy as well as the three way interaction amongst congruence, self-stigma and gender significantly predicted attitudes toward career counseling. The interactions between congruence and major satisfaction and congruence and public stigma were not significant. Although two interactions were found to be significant, the addition of the interaction terms only added 1.7% of the variance explained in attitudes. The inclusion of the predictor variables in the first step accounted for a moderate to large amount of variance (59%) for a social sciences study; perhaps limiting the amount of variance which could be explained by interaction terms. The interaction terms may simply not be a strong of a predictor of help-seeking attitudes for career counseling as other well-known variables on their own.

On the other hand, the effect size for interaction effects in multiple regression analyses are generally small (Chaplin, 1991); thus, according to Cohen's (1992) recommendations, average effect sizes for interaction terms would be approximately .02. This average size is approximate to the  $R^2 = .017$  found in the current study. Suggesting, that while not a large effect, the addition of the interaction term is meaningful and similar in size to other interaction effects found in social science literature.

**Congruence and Career Decision Making Self-Efficacy.** The interaction between congruence and career decision making self-efficacy significantly predicted attitudes toward career counseling. Career decision making self-efficacy moderated the congruence-attitudes relationship; for individuals whom demonstrated higher levels of self-efficacy, the relationship between congruence and attitudes toward seeking help for career counseling was stronger than for those with lower levels of self-efficacy. In fact, for individuals low in career decision-making self-efficacy, level of congruence did not show statistically significant effects on attitudes toward career counseling. Thus, individuals with the most positive attitudes toward career counseling were individuals with high career decision making self-efficacy and congruence. From a career counseling perspective, this finding was not initially anticipated as the experience of being incongruent and demonstrating poor career decision making self-efficacy would potentially lead to a level of distress which would motivate more positive attitudes toward seeking help. Yet, the results of the current study indicate that the interaction of more adaptive levels of career functioning lead to positive attitudes toward career counseling.

This finding, while initially, hypothesized from a career counseling perspective is however consistent with some recent evidence that individuals who are in the most distress do not demonstrate positive attitudes and therefore, may not be seeking the help that they need (Wilson, 2010; Nam et al., 2012). In addition, those who do not appear to need career counseling services show the best attitudes. Thus, it appears that those individuals in the most vulnerable situation of needing help due to greater incongruence and lower self-efficacy may be the least likely to seek it out. While individual with high congruence and career decision making self-efficacy, while potentially less likely to have problem, in general, are also in the positive position

of being able to address problems more directly and therefore never have the problem build to a more problematic level.

**Congruence, Self-Stigma and Gender.** A three-way interaction amongst congruence, self-stigma and gender was also found to present. When comparing the moderating effects of self-stigma between the genders, meaningful differences were found. For men, the relationship between congruence and attitudes toward counseling was stronger for individuals with higher levels of self-stigma. Men whom experienced low levels of stigma appear to hold relatively positive attitudes toward counseling regardless of their level of incongruence. Conversely, no moderating relationship was found for women, suggesting level of self-stigma has no impact on the congruence-attitudes relationship. Women, on average, held more positive attitudes toward career counseling, a finding which is congruent with previous literature (Addis & Mahalik, 2003; Ang, Lim & Tan, 2004; Husaini, Moore & Cain, 1994; McKay, Rutherford, Cacciola & Kabasakalian-McKay, 1996).

The moderation effects for men are important as this information provides additional evidence for the difficulty men may experience in approaching the concept of counseling and help-seeking. Many authors and researchers have written about the in the compatibility of men's gender role and the use of mental health services as evidenced in less frequent help-seeking behaviors as compared to their female counterparts (Raviv, Raviv, Vago-Gefen, & Fink, 2009; Thurston & Phares, 2008; Andrews, Issakidis & Carter, 2001; MacKay, Rutherford, Cacciola & Kabasakalian-McKay, 1996; Thom 1986). One reason for this that has often been discussed in the literature is the concept that the traditional male gender role (of appearing masculine and denying weakness) is in opposition to the vulnerability one must experience in asking or reaching out for help (Levant, 2001). Our society, as well as many other cultures and societies,

expects men to appear strong, masculine, and emotionally stoic. For men whom perceive the need to fit this male gender role, more negative attitudes toward seeking help are found (Pederson & Vogel, 2007; Berger, Levant, McMillian, Kelleher & Sellers, 2005).

Findings in the current study suggest that men with higher levels of congruence may have more positive attitudes toward seeking help for career concerns, and that this relationship is stronger for individuals who experience less self-stigma regarding seeking help. In other words, experiencing low levels of stigma may increase attitudes toward seeking help for those who are highly congruent. Perhaps these individuals may feel greater ease or comfort in seeking career counseling for other career concerns if they feel confident and congruent in their career choice.

Alternatively, these findings may simply represent what has been discussed above, that men who are in least need of services have more positive attitudes toward seeking help. Although the best attitudes were seen for individuals with low levels of self-stigma, those in less need of services were trending toward more positive attitudes. Again, one reason for this could be that those in the greatest distress avoid help-seeking (Eisenberg et al., 2009; Obasi & Leong, 2009).

**Congruence and Major Satisfaction.** No moderating or mediating relationship was found for major satisfaction in the congruence and attitudes toward career counseling relationship. In addition, major satisfaction was not significantly correlated with congruence. This finding is somewhat surprising considering the large extant literature on the relationship between congruence and satisfaction. Despite mixed findings in the literature, the average correlation between satisfaction measures and congruence has ranged from .25 (Spokane, Meir & Catalano, 2000) to .30 (Spokane, 1985) with approximately 5% of the variance in satisfaction being accounted for by congruence, suggesting at least a small relationship is present between

congruence and satisfaction. However, some studies have found a lack of a relationship between satisfaction and congruence (Tokar & Subich, 1991; Upperman & Church, 1995; Heesacker, Elliott & Howe, 1988) or even an inverse relationship (Salmone & Pask-McCartney, 1990). These previous findings indicate that the lack of relationship in the current study may not be unique.

Three reasons may account for why a relationship was not found between congruence and major satisfaction in the current study. First, a restriction of range was discovered for the major satisfaction measure. Data represented a negative skew, suggesting that on average, participants were highly satisfied in the current major. Because the range of satisfaction was limited, this may prevent a significant relationship from being found. This is consistent with issues in previous literature as well (Rounds, McKenna & Hubert, 2000; Donnay & Borgen, 1996) as participants have traditionally indicated they are “satisfied” or “very satisfied” with their environment.

Second, the type of satisfaction measured with the Academic Major Satisfaction Scale (AMSS; Nauta, 2007) may not represent one’s true experience of satisfaction. Some authors have discussed the importance of examining multiple layers of satisfaction to best understand one’s experience. For example, one study discovered a stronger relationship between congruence and intrinsic satisfaction whereas no such relationship was found for extrinsic satisfaction for women. Men demonstrated no relationship between intrinsic satisfaction and congruence and displayed mixed results for the extrinsic satisfaction and congruence relationship (Smart, Elton & McLaughlin, 1986). The AMSS measures general satisfaction as indicated by basic questions such as “Overall, I am happy with the major I have chosen” and “I often wish I hadn’t gotten into this major.” One possibility for the lack of relationship between congruence and major

satisfaction is that the AMSS does measure satisfaction in much depth; thus misses important information regarding one's level of intrinsic or extrinsic satisfaction with their major.

Third, a relationship between these constructs may simply not exist in reality. The measurement of congruence in the current study examined the environment of one's stated future occupational choice whereas the measurement of satisfaction was centered on one's experience in their current major. Although some have written about major satisfaction as a proxy for job satisfaction later in life (Astin, 1965), it is possible that the current major environment would have little overlap with the environment of one's future occupational choice. For example, for an individual majoring in psychology with the aspiration to be a substance abuse counselor, the experience of coursework, meetings and the overall major environment would likely have little resemblance to the work as a substance abuse counselor. Thus, level of satisfaction currently would have no impact on satisfaction or congruence in the future occupation. In sum, the current study has provided additional evidence for the weak (and in this case non-existent) relationship between congruence and satisfaction.

**Congruence and Public Stigma.** Lastly, public stigma was not found to moderate or mediate the congruence and attitudes toward career counseling relationship. Although public stigma has been found to be a significant predictor of attitudes toward traditional counseling, the interaction with congruence in the current study was not significant. I believe this is likely due to one main reason: public stigma best predicts attitudes by acting through the variable of self-stigma. In previous studies public stigma was found to be fully mediated by self-stigma in the prediction of traditional counseling help-seeking attitudes (Vogel, Wade & Hackler, 2007) as well as attitudes toward career counseling (Ludwikowski, Vogel & Armstrong, 2009). This suggests that the power of public stigma lies in the predictive power of self-stigma, rather than

acting uniquely on its own. Therefore, public stigma may not be a unique predictor of help-seeking attitudes and will not interact with other help seeking variables. Perhaps the role of public stigma was best presented in the interaction which was found between congruence, self-stigma and gender.

One may argue that because public stigma was found to be significant in mediational analyses, perhaps public stigma would mediate (rather than moderate) the relationship between congruence and attitudes toward career counseling. Results of the alternative mediational analysis in the current study highlighted that this is also not significant; therefore, providing additional evidence that public stigma best performs with self-stigma rather than on its own in the prediction of help seeking attitudes. Future researchers will want to retain the mediated model of public and self-stigma in relation to help-seeking attitudes.

### **Mediational Analyses**

Previous literature on each of the four proposed variables suggested that major satisfaction, career decision-making self-efficacy, public stigma and self-stigma may act as a mediator in the congruence-attitudes relationship. Mediational analyses were conducted for each of the proposed variables to test this possibility. No mediational relationships were discovered in the analyses, suggesting that major satisfaction, career decision making self-efficacy, public stigma and self-stigma do not mediate the relationship between congruence and attitudes toward career counseling. These findings highlight two main points. First, the alternative analyses do not provide information regarding why two of the four moderation hypotheses were not significant. Second, these analyses provide additional evidence that the true relationship amongst the variables was discovered above. The data appears to best be explained utilizing moderation analyses for both career decision making self-efficacy and self-stigma.

## **Implications and Directions for Future Research**

The current study attempted to fill the gap in the help-seeking literature. Although a significant amount of research has been conducted examining traditional counseling help-seeking attitudes, much less research has specifically explored attitudes toward career counseling. To this point, it was uncertain which variables may predict attitudes toward career counseling. This is the first study to explore both traditional help-seeking variables as well as career variables in relation to help-seeking attitudes for career counseling. The main variable of interest was congruence, or the fit between one's interests and environments. It was predicted this construct would be a significant predictor of attitudes toward career counseling.

Results of the study suggest that congruence does in fact predict attitudes toward career counseling. However, the degree of prediction is relatively small compared to other help-seeking variables. Only 2.7% of the variance in attitudes was explained by congruence. Yet when other variable were entered into the subsequent regression equation, the amount of variance explained jumped to 59%. Arguably, this large degree of variance explained is due to public and self-stigma, two variables which have been found to explain similar amounts of variance in both traditional (Vogel, Wade & Haake, 2006; Vogel, Wade & Hackler, 2007, Komiya, Good & Sherrod, 2000; Vogel & Wester, 2003) and career counseling help-seeking attitudes (Ludwikowski, Armstrong and Vogel, 2009). This appears to indicate that the most important predictors in attitudes toward seeking help for career counseling are the same predictors in attitudes toward traditional counseling. Career counseling has been discussed as a unique form of counseling which shares the same foundation as traditional counseling (Hackett, 1993). It was originally predicted that specific career variables, primarily incongruence, would predict attitudes toward career counseling as this form of counseling contains specific goals regarding

career choice and/or alleviating career distress. The data shows, however, that the traditional variables of stigma may have a greater influence on help seeking attitudes toward career counseling than what was anticipated. This finding is in support of previous traditional help-seeking literature which has demonstrated stigma is the most meaningful predictor in help-seeking attitudes (Nam, Choi, Lee, J., Lee, M., Kim, & Lee, S., 2012). Only one previous study has demonstrated these strong predictive relationships of stigma on career counseling attitudes (Ludwikowski, Armstrong & Vogel, 2009). The current study provides additional support for this prior study, demonstrating that even when additional career variables are explored, stigma still has the strongest influence on attitudes.

The need for career counseling has been documented to be substantial. Up to 50% of college students struggle with career indecision (Hannah & Robinson, 1990) and 68% shared they would like assistance in making a career decision (Wollman, Johnson & Bottoms, 1975). In more general terms, career distress has been linked to higher rates of depression, lower appraisals of self-esteem and less career decision-making self-efficacy (Smith & Betz, 2002), state and trait anxiety (Hartman & Fuqua, 1983; Fuqua, Newman & Seaworth, 1988) difficulties within interpersonal relationships (Lucas, Skokowski & Ancis, 2000; Tokar, Withrow, Hall & Moradi, 2003), and lower retention rates for those who did not receive counseling (Sharkin, 2004; Turner & Berry, 2000). This previous research highlights the detrimental effects of career distress in the absence of counseling and the fact that there is a need to increase help-seeking attitudes and behaviors.

Given the evidence for the effectiveness and benefits of career interventions and counseling, it would be easy to recommend that all college students who experience career distress should seek career services at their institution. However, a major concern prevents such a

recommendation from being viable: the feasibility of fulfilling such a request would overburden already resource-exhausted counseling centers across the country. Up to a quarter of counseling center clients are already seeking help for vocational concerns (Benton, Robertson, Tseng, Newton, & Benton, 2003; Bauman & Lenox, 2000); the additional load of the approximately 68% of college students who report career distress and the need for help in their career decision making process (Wollman, Johnson & Bottoms, 1975) would incapacitate almost every campus counseling center. Although there is some debate about the evidence of increased or more severe distress in students, it is agreed that counseling centers are seeing an increased frequency of utilization of counseling resources (Cornish, Kominars, Riva, McIntosh & Henderson, 2000). The trend in the increase of clients in college counseling centers is not new. Over 25 years ago, 50% of college campuses were already holding a waitlist due to the demand of counseling need (Clack, Stone, & Thurman, 1984).

Despite the benefits of counseling, the limitations on free or reduced rate services for students on campus will require college counseling centers to potentially be more discriminatory for whom they select to provide services and who may need to go on a waitlist or be referred to another resource. Career counseling has been found to be the most effective means for increasing positive career decision-making outcomes when considered in terms of the time allotted to the activity (Oliver & Spokane, 1988). However, career counseling is often the most costly, requiring one counselor per client. Class and group interventions are the most cost-effective; however, they often require a greater time allotment (i.e. a semester for a college course aimed at career exploration). Therefore, counseling centers may have to screen for students who are in greater need of individualized support and refer students who have less complex career distress to a college career exploration course or another career guidance resource.

In terms of future research one of the key implications of the current study is that more information is needed regarding what can be done to increase help-seeking behavior for those *most* in need of services. The current results suggest that interventions centered on career variables such as incongruence may have some small impact on help-seeking decisions, but that the most impact may come from interventions that focus on general stigma reducing strategies that are the same for traditional and career counseling. This should be directly tested in future research. Only a few studies have explored potential interventions to increase help-seeking behaviors related to career counseling and these have primarily examined the effects of brochures on help-seeking attitudes for men (Rochlen, Blazina & Raghunathan, 2002; Blazina & Marks, 2001).

Many studies have been conducted in the attempt to reduce stigma for patients experiencing severe and persistent mental illness. In a review by Mittal and colleagues (2012) a number of successful interventions were discovered that targeted two main areas: to reduce the stigmatizing beliefs and attitudes and to enhance coping behaviors in the face of self-stigma. Multi-media interventions such as videos available on the web have gained some attention in the recent literature as well (Corrigan, 2012). However, each of these recent interventions have focused specifically on individuals who perhaps are the greatest target for discrimination and at high risk for experiencing stigma (the severe and persistently mentally ill). While this research should continue, additional exploration and potential interventions are needed to understand how we can reduce the stigma associated with career counseling and the experience of career distress.

Specifically, it would be useful to examine the impact of the normalization of career distress for potential clients. For example, many college counseling centers, career exploration centers and academic advising services provide outreach presentations to groups on the college

campus. The purpose of these outreach presentations are often to let the student body know of the services available and potentially provide some information about the career decision-making process. I predict that one way to reduce stigma is to normalize the distress arising from career indecision or other career struggles. Future research could explore or test the effects of outreach presentations normalizing career distress on stigma and subsequent attitudes or help-seeking behaviors. The current study illustrated that when an individual does not perceive themselves to be in need of services, more positive attitudes toward treatment are found. Providing normative data to men may be particularly impactful. A number of studies have highlighted how the risk to one's sense of self or self-esteem is large if the man perceives the difficulty to be "non-normal" (Nadler, 1990, Nadler & Maysless, 1983). If as clinicians we could reduce the stigma or shame associated with career distress, we may potentially observe an increase in help-seeking attitudes. If as a field we could increase help-seeking attitudes and utilization of services, individuals in distress could receive a large benefit from these services.

Career counseling has been shown to increase graduation rates (Frank and Kirk, 1975) and improve academic and personal functioning (Choi, Buskey & Johnson). Therefore, increasing the amount or availability of alternative career resources may allow for many of the benefits of career counseling to reach those in need but least likely to seek it. For example, workshops, classes and peer mentoring opportunities have been found to be effective for individuals struggling with career indecision (Oliver & Spokane, 1988). Encouraging the use of these services on campus and making students aware of their benefits may reduce the demand on the counseling center while still reaching the students most in need of services. In addition, taking a college course on career planning may be less stigmatizing for students than the thought of attending counseling to help decide their future career path. Future research is needed in this

area and researchers are encouraged to explore the degree of stigma in attending courses or workshops for career distress.

**Congruence Indices.** A second major finding of this study highlights that the measurement of congruence by various indices are not equivocal. Of the six indices tested in the current study, the degree of overlap ranged from non-significant to being highly correlated. This indicates that congruence indices may not be interchangeable and the congruence index utilized in a given study may have an impact on the results of the study. For instance, in the current study only the most complex index was a significant predictor of help-seeking attitudes, suggesting the need for an index which measures congruence in as much depth as possible is needed in the prediction of the chosen outcome variable.

As this study only examined congruence in relation to attitudes toward seeking help for career counseling, an examination of various congruence indices is needed in relation to other outcome variables. Future research is needed to continue to explore the use of various congruence indices in relation to career variables such as satisfaction, decision-making and distress. Nonetheless, the current study provides evidence for the continued use of the third, most complex, generation of congruence indices.

In addition, the current study provides evidence for the importance of being thoughtful in the determination of the environment type utilized in the congruence index. For college students, it appears that the environment, which is important in terms of help-seeking attitudes, is that of one's stated occupational choice and not their current environment of academic major. Future research may also want to extend research on congruence to the examination of other types of congruence. Although many types have been explored in theory (e.g. environmental congruence, skill utilization congruence, self-efficacy congruence; Meir & Catalano, 2000) very little

research has examined these types of congruence empirically. It is possible that other types of congruence may also predict attitudes toward seeking help for career counseling. Future researchers may be inclined to explore these types of congruence in relation to attitudes or other career variables, such as satisfaction.

Lastly, future researchers are also encouraged to explore congruence in direct relation to measures of distress. The current study hypothesized that incongruence would lead to a level of distress which would be a motivating factor in one's attitudes toward seeking treatment. While the direction of the relationship was not found to be supported, what is still uncertain is if incongruence does lead to distress. It will be important for future research to explore congruence in relation to distress and other unique ways in which incongruence may impact one's career or personal functioning.

### **Limitations**

The current study improved upon methodology in regard to the measurement of congruence. However, as with all studies, a few limitations are present. A main limitation of the current study is the use of an existing data set. Although this data has never before been utilized or manipulated, the use of an existing data set limited which career variables could be included in the study and limited certain relationships from being explored. Primarily, this affected the ability to fully understand the relationship between incongruence and distress. No published measures of current functioning or distress were included in surveys, preventing this relationship from being further explored. Thus, it is uncertain to what degree one's level of incongruence affected career or personal distress.

A second limitation was the finding that one section of the survey was completed significantly less often than the other two sections. The section in question comprised of the

AFPD (Armstrong, Allison & Rounds, 2008) interest scales as well as the AFPD scales assessing for self-efficacy of the Holland types. One possibility for why this section was completed less frequently could be the repetitive nature of the questions. Participants may have become fatigued differentiating interests in the Holland types and their level of self-efficacy in the types. Despite this finding, the sections of the survey were counterbalanced in the attempt to prevent fatigue for the overall experience of completing the study. In addition, it should be noted that the section comprised of the help seeking measures was completed to the same degree as the section comprised of other career measures (e.g. major satisfaction, career decision making self-efficacy and others). This is encouraging as it demonstrates that participants did not withdraw from the study to a greater degree due to shame or stigma in the completion of help seeking measures.

A further limitation of the current study was the relatively young age of participants. It is important to assess for help-seeking attitudes for career counseling of college students, as this population is the primary client in career counseling settings (Spokane & Oliver, 1983). However, the current study was comprised approximately of 52% freshman students. The young tenure of participants may have impacted the experience of congruence and major satisfaction as these participants may not have had adequate time to experience their major. Not having much knowledge or experience in their major could prevent them from understanding or being able to judge their level of satisfaction. In addition, many freshmen may not have yet chosen their major, preventing them from being included in certain analyses.

Lastly, the results of the current study have limited generalizability and should be interpreted with caution as the sample was comprised of primarily Caucasian students enrolled in a Midwestern university. The experience of career distress, incongruence and help-seeking may vary depending on individual differences not addressed in the current study. Future research is

needed to understand how these variables may interplay for individuals of diverse cultures, ethnicities and backgrounds. In addition, the current study was not a longitudinal study; thus prohibiting the ability to measure or understand actual help-seeking behaviors of the participants.

In spite of these limitations, the current study provided additional information regarding the help-seeking attitudes of students in regard to career counseling. This study helped to fill the gap in the help-seeking literature by examining both career variables as well as traditional variables in the prediction of help-seeking attitudes for career counseling treatment.

## CHAPTER 6: REFERENCES

- Addis, M. & Mahalik, J. (2003). Men, masculinity, and the contexts of help seeking. *American Psychologist*, 58, 5-14.
- Allen, M. L. (1996). Dimensions of educational satisfaction and academic achievement among music therapy majors. *Journal of Music Therapy*, 33, 147-160.
- Anderson, W. & Niles, S. (1995). Career and personal concerns expressed by career counseling clients. *The Career Development Quarterly*, 43, 240-246.
- Andrews, G., Issakidis, C. & Carter, G. (2001). Shortfall in mental health service utilization. *British Journal of Psychiatry*, 179, 417-425.
- Ang, R. P., Lim, K. M., & Tan, A. G. (2004). Effects of gender and sex role orientation on help-seeking attitudes. *Current Psychology*, 23, 203-214.
- Armstrong, P. I., Allison, W., & Rounds, J. (2008). Development and initial validation of brief public domain RIASEC marker scales. *Journal of Vocational Behavior*, 73, 287-299.
- Armstrong, P. I., Hubert, L. & Rounds, J. (2003). Circular unidimensional scaling: A new look at group differences in interest structure. *Journal of Counseling Psychology*, 50, 297-308.
- Armstrong, P. I. & Vogel, D. L. (2009). Interpreting the interest-efficacy association from a RIASEC perspective. *Journal of Counseling Psychology*, 56, 392-407.
- Assouline, M. & Meir, E. I. (1987). Meta-analysis of the relationship between congruence and well-being measures. *Journal of Vocational Behavior*, 31, 319-332.
- Astin, A. W. (1975). *Preventing students from dropping out*. San Francisco: Jossey-Bass.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Barak, A. & Rabbi, B. (1982). Predicting persistence, stability, and achievement in college by

- major choice consistency: A test of Holland's consistency hypothesis. *Journal of Vocational Behavior*, 20, 235–243.
- Barnes, C., Ghumman, S. & Scott, B. (2013). Sleep and organizational citizenship behavior: The mediating role of job satisfaction. *Journal of Organizational Health Psychology*, 18, 16-26.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Bauman, S. & Lenox, R. (2000). A psychometric analysis of a college counseling center intake checklist. *Journal of Counseling Psychology*, 47, 454-459.
- Benton, S., Robertson, M., Tseng, W., Newton, F. & Benton, S. (2003). Changes in counseling center client problems across 13 years. *Professional Psychology: Research and Practice*, 34, 66-72.
- Berger, J. M., Levant, R., McMillan, K. K., Kelleher, W. & Sellers, A. (2005). Impact of gender role conflict, traditional masculinity ideology, alexithymia, and age on men's attitudes toward psychological help seeking. *Psychology of Men & Masculinity*, 6, 73–78.
- Betz, N. (1993). The inseparability of 'career' and 'personal' counseling. *Career Development Quarterly*, 42, 137-146.
- Betz, N., Borgen, F. & Harmon, L. (2006). Vocational confidence and personality in the prediction of occupational group membership. *Journal of Career Assessment*, 14, 36-55.
- Betz, N. E. & Gwilliam, L. R. (2002). The utility of measures of self-efficacy for the Holland themes in African American and European American college students. *Journal of Career Assessment*, 10, 283-300.

- Betz, N. E. & Hackett, G. (1983). The relationship of mathematics self-efficacy expectations to the selection of science based college majors. *Journal of Vocational Behavior, 23*, 329-345.
- Betz, N. E., Klein, K. L., & Taylor, K. M. (1996). Evaluation of a short form of the Career Decision-Making Self-Efficacy Scale. *Journal of Career Assessment, 4*, 47-57.
- Betz, N. E. & Serling, D. A. (1993). Construct validity of fear of commitment as an indicator of career indecisiveness. *Journal of Career Assessment, 1*, 21-34.
- Betz, N. E. & Voyten, K. K. (1997). Efficacy and outcome expectations influence career exploration and decidedness. *The Career Development Quarterly, 40*, 179-189.
- Blazina, C., & Marks, L. I. (2001). College men's affective reactions to individual therapy, psychoeducational workshops, and men's support group brochures: The influence of gender role conflict and power dynamics upon help seeking attitudes. *Psychotherapy: Theory/Research/Practice/Training, 38*, 297-305.
- Blustein, D. L. (1989). The role of goal instability and career self-efficacy in the career exploration process. *Journal of Vocational Behavior, 35*, 194-203.
- Brown, S. D. & Krane, N. E. R. (2000). Four (or five) sessions and a cloud of dust: Old assumptions and new observations about career counseling. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed., pp. 740-766). New York: John Wiley.
- Brown, C., Conner, K., Copeland, V., Grore, N., Beach, S., Battista, D. & Reynolds III, C. (2010). Depression stigma, race and treatment seeking behavior and attitudes. *Journal of Community Psychology, 38*, 350-368.
- Buser, T., Buser, J. & Kearney, A. (2012). Justice in the family: The moderating role of social

- self-efficacy in the relationship between non-suicidal self-injury and interactional justice from parents. *The Family Journal*, 20, 147-157.
- Camp, C. C. & Chartrand, J. M. (1992). A comparison and evaluation of interest congruence indices. *Journal of Vocational Behavior*, 41, 162–182.
- Cassie, D. (2005). *Career maturation in the context of a mandated intervention at the grade ten level*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses.
- Carpenter, K. M. & Addis, M. E. (2000). Alexithymia and patterns of help seeking for depression. *Sex Roles*, 43, 363-378.
- Cavelti, M., Kvrjic, S., Beck, E. Rusch, N. & Vauth, R. (2012). Self-stigma and its relationship with insight, demoralization, and clinical outcome among people with schizophrenia spectrum disorders. *Comprehensive Psychiatry*, 53, 468-479.
- Celeste, B. L., Walsh, W. B. & Raote, R. G. (1995). Congruence and psychological adjustment for practicing male ministers. *Career Development Quarterly*, 43, 374–384.
- Cepeda-Benito, A. & Short, P. (1998). Self-concealment, avoidance of psychological services, and perceived likelihood of seeking professional help. *Journal of Counseling Psychology*, 45, 58-64.
- Chandra, A. & Minkovitz, C. S. (2006, May 26). Stigma starts early: Gender differences in teen willingness to use mental health services. *Journal of Adolescent Health*, 38, [Online exclusive] 754.e1–754.e8. Retrieved January 23, 2012, from <http://www.sciencedirect.com/science>.
- Chaplin, W. F. (1991). The next generation in moderation research in personality psychology. *Journal of Personality*, 59, 143–178.
- Chartrand, J. (1992). An empirical test of a model of nontraditional student adjustment. *Journal*

- of Counseling Psychology*, 39, 193-202.
- Chartrand, J. M., Camp, C. C. & McFadden, K. L. (1992). Predicting academic adjustment and career indecision: A comparison of self-efficacy, interest congruence, and commitment. *Journal of College Student Development*, 33, 293–300.
- Chartrand, J. M., Robbins, S. B., Morrill, W. H. & Boggs, K. (1990). Development and validation of the Career Factors Inventory. *Journal of Counseling Psychology*, 37, 491–501.
- Chartrand, J. M., Rose, M. L., Elliott, T. R., Marmarosh, C. & Caldwell, S. (1993). Peeling back the onion: Personality, problem solving, and career decision-making style correlates of career indecision. *Journal of Career Assessment*, 1, 66–82.
- Chartrand, J. & Walsh, W. B. (1999). What should we expect from congruence? *Journal of Vocational Behavior*, 55, 136-146.
- Cheng, H., Karl Kwan, K., & Sevig, T. (2013). Racial and ethnic minority college students' stigma associated with seeking psychological help: Examining psychocultural correlates. *Journal of Counseling Psychology*, 60, 98-111.
- Choi, K., Buskey, W. & Johnson, B. (2010). Evaluation of counseling outcomes at a university counseling centers: The impact of clinically significant change on problem resolution and academic functioning. *Journal of Counseling Psychology*, 57, 297-303.
- Clack, R. J., Stone, C. T, & Thurman, C. W (1984). Waiting lists at university and college counseling centers: A national survey. *Journal of College Student Personnel*, 25, 45-49.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155–159
- Cooper, A. E., Corrigan, P. W. & Watson, A. C. (2003). Mental illness stigma and care seeking. *Journal of Nervous and Mental Disease*, 191, 339–341.

- Cooper-Patric, L., Gallo, J., Powe, N., Steinwachs, D., Eaton, W. & Ford, D. (1999). Mental health service utilization by African Americans and Whites: The Baltimore epidemiologic catchment area follow-up. *Medical Care*, 37, 1034-1045.
- Constantine, M. G., Wilton, L., & Caldwell, L. D. (2003). The role of social support in moderating the relationship between psychological distress and willingness to seek psychological help among Black and Latino college students. *Journal of College Counseling*, 6, 155–165.
- Cornish, J. A., Kominars, K. D., Riva, M. T., McIntosh, S. & Henderson, M. C. (2000). Perceived distress in university counseling center clients across a six-year period. *Journal of College Student Development*, 41, 104–109.
- Corrigan, P. W. (2004). How stigma interferes with mental health care. *American Psychologist*, 59, 614–625.
- Corrigan, P. W. (2012). Research and the elimination of the stigma of mental illness. *The British Journal of Psychiatry*, 201, 7-8.
- Cramer, K. (1999). Psychological antecedents to help seeking behavior: A reanalysis using path modeling structures. *Journal of Counseling Psychology*, 46, 381-387.
- Creed, P., Patton, W. & Prideaux, L. (2006). Causal relationship between career indecision and career decision-making self-efficacy: A longitudinal cross-lagged analysis. *Journal of Career Development*, 33, 47-65.
- Cusack, J., Deane, F., Wilson, C. & Ciarrochi, J. (2006). Emotional expression, perceptions of therapy, and help seeking intentions in men attending therapy services. *Psychology of Men and Masculinity*, 7, 69-82.
- Dawis, R. V. (1991). Vocational interests, values, and preferences. In M. D. Dunnette and L. M.

- Hough (Eds.), *Handbook of industrial-organizational psychology* (Vol. 2, 2nd ed., pp. 833– 871). Palo Alto, CA: Consulting Psychologists Press.
- Day, S. X. & Rounds, J. (1998). Universality of vocational interest structure among racial and ethnic minorities. *American Psychologist*, *53*, 728-736.
- Deane, F. & Chamerlain, K. (1994). Treatment fearfulness and distress as predictors of professional psychological help seeking. *British Journal of Guidance and Counselling*, *22*, 2-11.
- Derlega, V. J., Metts, S., Petronio, S. & Margulis, S. T. (1993). *Self-disclosure*. Newbury Park, CA: Sage.
- Donnay, D. A. C., and Borgen, F. H. (1996). Validity, structure, and content of the 1994 Strong Interest Inventory. *Journal of Counseling Psychology*, *43*, 275–291.
- Donohue, R. (2006). Person-environment congruence in relation to career change and career persistence. *Journal of Vocational Behavior*, *68*, 504-515.
- Eatough, E., Chang, C., Miloslavic, S. & Johnson, R. (2011). Relationships of role stressors with organizational citizenship behavior: A meta-analysis. *Journal of Applied Psychology*, *96*, 619-632.
- Edwards, K. J. & Whitney, D. R. (1972). Structural analysis of Holland's personality types using factor and configural analysis. *Journal of Counseling Psychology*, *19*, 136–145.
- Ehrlich-Ben Or, S., Hasson-Ohayon, H., Feingold, D., Vahab, K., Amiaz, R., Weiser, M. & Lysaker, P. H. (2013). Meaning in life, insight and self-stigma among people with severe mental illness. *Comprehensive Psychiatry*, *54*, 195-200.
- Eisenberg, D., Downs, M. F., Golberstein, E., & Zivin, K. (2009). Stigma and help seeking for mental health among college students. *Medical Care Research and Review*, *66*, 522–541.

- Egner, J. & Jackson, D. (1978). Effectiveness of a counseling intervention program for teaching career decision-making skills. *Journal of Counseling Psychology, 25*, 45-62.
- Elias, S. & Mittal, R. (2011). The importance of supervisor support for a change initiative. *International Journal of Organizational Analysis, 19*, 305-316.
- Erdogan, B. & Bauer, T. (2005). Enhancing career benefits of employee proactive personality: The role of fit with jobs and organizations. *Personality Psychology, 58*, 859-891.
- Fisher, E. H., & Cohen, S. L. (1972). Demographic correlates of attitude toward seeking professional psychological help. *Journal of Consulting and Clinical Psychology, 39*, 70-74.
- Fischer, E. H., & Farina, A. (1995). Attitudes toward seeking professional psychological help: A shortened form and considerations for research. *Journal of College Student Development, 36*, 368-373.
- Fisher, J., Nadler, A. & Whitcher-Alagna, S. (1982). Recipient reactions to aid. *Psychological Bulletin, 91*, 27-54.
- Fitzgerald, L.F., Fassinger, R.E. & Betz, N.E. (1995). Theoretical issues in the vocational psychology of women. *Handbook of Vocational Psychology, 2nd ed.* (pp. 67-109), B. Walsh & S. Osipow (Eds.). Mahwah, NJ: Lawrence Erlbaum Associates.
- Fouad, N. (2002). Cross-cultural differences in vocational interest: Between-groups differences on the Strong Interest Inventory. *Journal of Counseling Psychology, 49*, 4-13.
- Fouad, N., Guillen, A., Harris-Hodge, E., Henry, C., Novakovic, A., Terry, S. & Kantamneni, N. (2006). Need, awareness, and use of career services for college students. *Journal of Career Assessment, 14*, 407-420.

- Frank, A. & Kirk, B. A. (1975). Differences in outcomes for users and nonusers of university counseling and psychiatric services: A 5-year accountability study. *Journal of Counseling Psychology, 22*, 252-258.
- Frantz, T. T. & Walsh, E. P. (1972). Exploration of Holland's theory of vocational choice in graduate school environments. *Journal of Vocational Behavior, 2*, 223-232.
- Fuqua, D. & Hartman, B. (1983). Differential diagnosis and treatment of career indecision. *The Personnel and Guidance Journal, 62*, 27-29.
- Fuqua, D., Newman, J. & Seaworth, T. (1986). Relation of state and trait anxiety to different components of career indecision. *Journal of Counseling Psychology, 35*, 154-158.
- Furnham, A. & Wardley, Z. (1990). Lay theories of psychotherapy: I. Attitudes toward, and beliefs about, psychotherapy and therapists. *Journal of Clinical Psychology, 45*, 878-890.
- Gallagher, R. P., Gill, A. M. & Sysco, H. M., (2000). *National survey of counseling center directors 2000*. Alexandria, VA: International Association of Counseling Service.
- Gianakos, I. (1999). Patterns of career choice and career decision-making self-efficacy. *Journal of Vocational Behavior, 54*, 244-259.
- Gianakos, I. (2001). Predictors of career decision-making self-efficacy. *Journal of Career Assessment, 9*, 101-114.
- Gianakos, I. (1995). The relation of sex role identity to career decision-making self-efficacy. *Journal of Vocational Behavior, 46*, 131-143.
- Gloria, A. & Hird, J. (1999). Influence of ethnic and nonethnic variables on the career decision-making self-efficacy of college students. *The Career Development Quarterly, 48*, 157-174.

- Good, G. E., Dell, D. M., & Mintz, L. B. (1989). Male role and gender role conflict: Relations to help seeking in men. *Journal of Counseling Psychology, 36*, 295-300.
- Good, G. E. & Wood, P. K. (1995). Male gender role conflict, depression, and help seeking: Do college men face double jeopardy? *Journal of Counseling & Development, 74*, 70-75.
- Goodman, S. H., Sewell, D. R. & Jampol, R. C. (1984). On going to the counselor: Contributions of life stress and social supports to the decision to seek psychological counseling. *Journal of Counseling Psychology, 31*, 306-313.
- Gore, P. A., Jr., & Leuwerke, W. C. (2000). Predicting occupational considerations: A comparison of self-efficacy beliefs, outcome expectations, and person-environment congruence. *Journal of Career Assessment, 8*, 237-250.
- Gottfredson, G. (1999). John L. Holland's contributions to vocational psychology: A review and evaluation. *Journal of Vocational Behavior, 55*, 15-40.
- Gottfredson, G. D. (1994). *The person in person-environment interactions*. Paper presented at the Annual meeting of the American Psychological Association, Los Angeles.
- Gottfredson, G. & Holland, J. (1990). A longitudinal test of the influence of congruence: Job satisfaction, competency utilization, and counterproductive behavior. *Journal of Counseling Psychology, 37*, 389-398.
- Graunke, S. S. & Woosley, S. A. (2005). An exploration of the factors that affect the academic success of college sophomores. *College Student Journal, 39*, 367-376.
- Guay, F., Senecal, C., Gauthier, L. & Fernet, C. (2003). Predicting Career Indecision: a self-determination theory perspective. *Journal of Counseling Psychology, 50*, 165-177.
- Hackett, G. (1993). Career counseling and psychotherapy: False dichotomies and recommended remedies. *Journal of Career Assessment, 2*, 105-117.

- Hackett, G. & Betz, N. E. (1981). A self-efficacy approach to the career development of women. *Journal of Vocational Behavior, 18*, 326-339.
- Hannah, L. K. & Robinson, L. F. (1990). Survey report: How colleges help freshmen select courses and careers. *Journal of Career Planning and Employment, 1*, 53-57.
- Hansen, J. C. & Campbell, D. P. (1985). *Manual for the Strong Interest Inventory* (4th ed.). Stanford, CA: Stanford Univ. Press.
- Harmon, L., Hansen, J.-I, Borgen, F. & Hammer, A. (1994). Strong Interest Inventory: Applications and Technical Manual, Palo Alto, CA: Consulting Psychologists Press.
- Healy, C. C. (2001). A follow-up of adult career counseling clients of a university extension center. *The Career Development Quarterly, 49*, 363-373.
- Healy, C. C. & Mourton, D. L. (1985). Congruence and vocational identity: Outcomes of career counseling with persuasive power. *Journal of Counseling Psychology, 32*, 441-444.
- Heesacker, M., Elliott, T. & Howe, L. (1988). Does the Holland code predict job satisfaction and productivity in clothing factory workers? *Journal of Counseling Psychology, 35*, 144-148.
- Hinkleman, J. & Luzzo, D. (2007). Mental health and career development of college students. *Journal of Counseling and Development, 85*, 143-147.
- Hirshi, A. & Läge, D. (2007). Holland's secondary constructs of vocational interests and career choice readiness of secondary students. *Journal of Individual Differences, 28*, 205-218.
- Hoeglund, T. & Hansen, J. (1999). Holland-style measures of congruence: Are complex indices more effective predictors of satisfaction? *Journal of Vocational Behavior, 54*, 471-482.
- Holland, J. L. (1996). Exploring careers with a typology. *American Psychologist, 51*, 397-406.
- Holland, J. L. (1973). *Making vocational choices*. Englewood Cliffs, NJ: Prentice Hall.

- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources.
- Holland, J. L. (1994). Separate but unequal is better. In M. L. Savickas & R. W. Lent (Eds.), *Convergence in career development theories* (pp. 45–52). Palo Alto, CA: CPP Books.
- Holland, J. L. & Holland, J. E. (1977). Vocational indecision: More evidence and speculation. *Journal of Counseling Psychology, 24*, 404–414.
- Holland, J. L., Fritzsche, B. A. & Powell, A. B. (1994). *The Self-Directed Search technical manual*. Odessa, FL: Psychological Assessment Resources.
- Holmes, T. & Rahe, R. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research, 2*, 213-218.
- Holschlag, C. & Masuda, A. (2011). The impact of career visions on work attitudes: A longitudinal analysis. *Career Development International, 16*, 668-683.
- Hughes, H. M. (1972). Vocational choice, level, and consistency: A test of Holland's theory on an employed sample. *Journal of Vocational Behavior, 2*, 377–388.
- Husaini, B. A., Moore, S. T., & Cain, V. A. (1994). Psychiatric symptoms and help-seeking behavior among the elderly: An analysis of racial and gender differences. *Journal of Gerontological Social Work, 21*, 177-193.
- Ingham, J. & Miller, P. (1986). Self-referral to primary care: Symptoms and social factors. *Journal of Psychosomatic Research, 30*, 49-56.
- Jagger, L., Neukrug, E. & McAuliffe, G. (1992). Congruence between personality traits and chosen occupation as a predictor of job satisfaction for people with disabilities. *Rehabilitation Counseling Bulletin, 36*, 53–60.

- Johnson, N., Johnson, J. & Yates, C. (1981). A 6 month follow-up on the effects of the vocational exploration group on career maturity. *Journal of Counseling Psychology, 28*, 70-71.
- Kelly, A. E. & Achter, J. A. (1995). Self-concealment and attitudes toward counseling in university students. *Journal of Counseling Psychology, 42*, 40-46.
- Kessler, R. C., Brown, R. L. & Boman, C. L. (1981). Sex differences in psychiatric help-seeking: Evidence from four large-scale surveys. *Journal of Health and Social Behavior, 22*, 49-64.
- Kieffer, K. M., Schinka J. A. & Curtiss, G. (2004). Person-Environment congruence and personality domains in the prediction of job performance and work quality. *Journal of Counseling Psychology, 51*, 168-177.
- Ko, W. (2012). The relationships among professional competence, job satisfaction and career development confidence for chefs in Taiwan. *International Journal of Hospitality Management, 31*, 1004-1011.
- Komiya, N., Good, G. & Sherrod, N. (2000). Emotional openness as a predictor of college students' attitudes toward seeking help. *Journal of Counseling Psychology, 47*, 138-143.
- Koring, M., Richert, J., Lippke, S., Parschau, L., Reuter, T. & Schwarzer, R. (2012). Synergistic effects of planning and self-efficacy on physical activity. *Health Education and Behavior, 39*, 152-159.
- Kushner, M. & Sher, K. (1989). Fear of psychological treatment and its relation to mental health service avoidance. *Professional Psychology: Research and Practice, 20*, 251-257.
- Kwak, J. C. & Pulvino, C. J. (1982). A mathematical model for comparing Holland's personality and environmental codes. *Journal of Vocational Behavior, 21*, 231-241.

- Larson, D. G. & Chastain, R. L. (1990). Self-concealment: Conceptualization, measurement, and health implications. *Journal of Social and Clinical Psychology, 9*, 439–455.
- Lent, R. W., Brown, S. D. & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior, 45*, 79-122.
- Lent, R. W., Brown, S. D. & Hackett, G. (1996). Career development from a social cognitive perspective. In D. Brown & L. Brooks (Eds.), *Career choice and development* (3rd ed., pp. 373-422). San Francisco: Jossey-Bass.
- Lent, R. W., Brown, S. D. & Larkin, K. C. (1987). Comparison of three theoretically derived variables in predicting career and academic behavior: Self-efficacy, interest congruence, and consequence thinking. *Journal of Counseling Psychology, 34*, 293–298.
- Lent, R.W., Brown, J. Schmidt, B. Brenner, Lyons H. & Treistman, D. (2003). Relation of contextual supports and barriers to choice behavior in engineering majors: Test of alternative social cognitive models. *Journal of Counseling Psychology, 50*, 458–465.
- Levant, R. F. (2001). Context and gender in early adult relationships. *Prevention and Treatment, 4*, 12-18.
- Lin, Y. (2002). Taiwanese university students' conceptions of counseling. *Journal of Contemporary Psychotherapy, 31*, 199–211.
- Logue, C., Lounsbury, J., Gupta, A. & Leong, F. (2007). Vocational interest themes and personality traits in relation to college major satisfaction of business students. *Journal of Career Development, 33*, 269-295.
- Lounsbury, J. W. & Gibson, L. W. (2006). *Personal Style Inventory: A personality measurement system for work and school settings*. Knoxville, TN: Resource Associates.

- Lowe, B. (1981). The relationship between vocational interest differentiation and career undecidedness. *Journal of Vocational Behavior, 19*, 346–349.
- Lucas, M. (1993). A validation of types of career indecision at a counseling center. *Journal of Counseling Psychology, 40*, 440-446.
- Lucas, M. A., Skokowski, C. T. & Ancis, J. R. (2000). Contextual themes in career decision making of female clients who indicate depression. *Journal of Counseling and Development, 78*, 316–325.
- Ludwikowski, W., Vogel, D. & Armstrong, P. (2009). Attitudes toward career counseling: The role of public and self-stigma. *Journal of Counseling Psychology, 56*, 408-416.
- Luzzo, D. A. (1996). A psychometric evaluation of the Career Decision-Making Self-Efficacy Scale. *Journal of Counseling and Development, 74*, 276-279.
- Luzzo, D. (1993). Value of career-decision-making self-efficacy in predicting career-decision-making attitudes and skills. *Journal of Counseling Psychology, 40*, 194-199.
- Luzzo, D., James, T. & Luna, M. (1996). Effects of attributional retraining on the career beliefs and career exploration behavior of college students. *Journal of Counseling Psychology, 43*, 415-422.
- Luzzo, D. A. & Ward, B. E. (1995). The relative contributions of self-efficacy and locus of control to the prediction of vocational congruence. *Journal of Career Development, 21*, 307–317.
- Martin, D. C. & Bartol, K. M. (1986). Holland's Vocational Preference Inventory and the Myers-Briggs Type Indicator as predictors of vocational choice among master's of business administration. *Journal of Vocational Behavior, 29*, 51–65.
- Masuda, A., Suzumura, K., Beauchamp, K. L., Howells, G. N. & Clay, C.(2005). United States

- and Japanese college students' attitudes toward seeking professional psychological help. *International Journal of Psychology*, 40, 303–313.
- May, R. (1991). Effects of waiting for clinical services on attrition, problem resolution, satisfaction, attitudes toward psychotherapy, and treatment outcome: A review of the literature. *Professional Psychology: Research and Practice*, 22, 209-214.
- McKay, J. R., Rutherford, M. J., Cacciola, J. S. & Kabasakalian-McKay, R. (1996). Gender differences in the relapse experiences of cocaine patients. *Journal of Nervous and Mental Disease*, 184, 616–622.
- McWhirter, E. H., Rasheed, S. & Crothers, M. (2000). The effects of high school career education on social cognitive variables. *Journal of Counseling Psychology*, 47, 330-341.
- Mechanic, D. (1975). Sociocultural and social-psychological factors affecting personal responses to psychological disorder. *Journal of Health and Social Behavior*, 16, 393–405.
- Meir, E. I. (1989). Integrative elaboration of the congruence theory. *Journal of Vocational Behavior*, 35, 219–230.
- Meir, E. I., Esformes, Y. & Friedland, N. (1993). Congruence and differentiation as predictors of occupational stability and job performance. *Journal of Career Assessment*, 2, 40–47.
- Meir, E. I. & Green-Eppel, T. (1999). Congruence, skill utilization and group importance as predictors of well-being in army reserve units. *Journal of Career Assessment*, 7, 429-430.
- Meir, E. I., Melamed, S. & Abu-Freha, A. (1990). Vocational, avocational, and skill utilization congruences and their relationship with well-being in two cultures. *Journal of Vocational Behavior*, 36, 153–165.
- Meir, E. I., Tziner, A. & Glazner, Y. (1997). Environmental congruence, group importance, and

- job satisfaction. *Journal of Career Assessment*, 5, 343–353.
- Meir, E. I. & Yaari, Y. (1988). The relationship between congruent specialty choice within occupations and satisfaction. *Journal of Vocational Behavior*, 33, 99–117.
- Mittal, D., Sullivan, G., Chekuri, L., Allee, E. & Corrigan, P. W. (2012). Empirical studies of self-stigma reduction strategies: A critical review of the literature. *Psychiatric Services*, 63, 974-981.
- Morrow, J. (1971). A test of Holland's theory of vocational choice. *Journal of Counseling Psychology*, 18, 422-425.
- Multon, K., Heppner, M., Gysbers, N., Zook, C. & Ellis, Kalton, C. (2001). Client psychological distress: An important factor in career counseling. *The Career Development Quarterly*, 49, 324-335.
- Murray, H. A. (1938). *Explorations in personality*. New York: Oxford University Press.
- Nadler, A. (1990). Help-seeking behavior as a coping resource. In M. Rosenbaum (Ed.), *Learned resourcefulness: On coping skills, self-control and adaptive behavior* (pp. 127–162). New York: Springer.
- Nadler, A., & Mayseless, O. (1983). Recipient self-esteem and reactions to help. In J. D. Fisher, A. Nadler, & B. M. DePaulo (Eds.), *New directions in helping* (Vol. 1, pp. 167–188). New York: Academic Press.
- Nafziger, D. H., Holland, J. L. & Gottfredson, G. D. (1975). Student-college congruence as a predictor of satisfaction. *Journal of Counseling Psychology*, 22, 132-139.
- Nam, S., Choi, S., Lee, J., Lee, M., Kim, A. R., & Lee, S. (2012). Psychological factors in

- college students' attitudes toward seeking professional psychological help: A meta-analysis. *Professional Psychology: Research and Practice*, Advance online publication, 1-9.
- Nauta, M. (2007). Assessing college students' satisfaction with their academic majors. *Journal of Career Assessment*, 15, 446-462.
- Nauta, M. (2010). The development, evolution, and status of Holland's theory of vocational personalities: Reflections and future directions for counseling psychology. *Journal of Counseling Psychology*, 57, 11-22.
- Nauta, M. (2004). Self-efficacy as a mediator of the relationship between personality factors and career interests. *Journal of Career Assessment*, 12, 381-395.
- Niles, S., Anderson, W. & Cover, S. (2000). Comparing intake concerns and goals with career counseling concerns. *The Career Development Quarterly*, 49, 135-145.
- Obasi, E. M., & Leong, F. T. L. (2009). Psychological distress, acculturation, and mental health-seeking attitudes among people of African descent in the United States: A preliminary investigation. *Journal of Counseling Psychology*, 56, 227-238.
- Oleski, D. & Subich, L. M. (1996). Congruence and career change in employed adults. *Journal of Vocational Behavior*, 49, 221-229.
- Oliver, L. & Spokane, A. (1988). Career-intervention outcome: What contributes to client gain? *Journal of Counseling Psychology*, 35, 447-462.
- Orndorff, R. M., & Herr, E. L. (1996). A comparative study of declared and undeclared college students on career uncertainty and involvement in career development activities. *Journal of Counseling and Development*, 74, 632-639.
- Pace, D. & Quinn, L. (2000). Empirical support of the overlap between career and mental health

- counseling of university students. *Journal of College Student Psychotherapy*, 14, 41–50.
- Pan, W., Sun, L. & Chow, I.H.S. (2011). The impact of supervisory mentoring on personal learning and career outcomes: The dual moderating effect of self-efficacy. *Journal of Vocational Behavior*, 78, 264-273.
- Panatik S., O’Driscoll, M. & Anderson, M. (2011). Job demands and work-related psychological responses among Malaysian technical workers: The moderating effects of self-efficacy. *Work & Stress*, 25, 355-370.
- Park, H., Beehr, T., Han, K. & Grebner, S. (2012). Demands-abilities fit and psychological strain: Moderating effects of personality. *International Journal of Stress Management*, 19, 1-33.
- Pascarella, E. T. & Terenzini, P. T. (1991). *How college affects students: Findings and insights from twenty years of research*. San Francisco: Jossey-Bass.
- Patton, W. & Creed, P. A. (2001). Developmental issues in career maturity and career decision status. *The Career Development Quarterly*, 49, 336-351.
- Pederson, E. & Vogel, D. (2007). Male gender role conflict and willingness to seek counseling: Testing a mediation model on college-aged men. *Journal of Counseling Psychology*, 54, 373-384.
- Pelled, L. & Xin, K. (1999). Down and out: An investigation of the relationship between mood and employee withdrawal behavior. *Journal of Management*, 25, 875-895.
- Pool, D. (1965). The relation of personality needs to vocational counseling outcome. *Journal of Counseling Psychology*, 12, 23-27.
- Prediger, D. (1982). Dimensions underlying Holland’s hexagon: Missing link between interests and occupations? *Journal of Vocational Behavior*, 21, 259-287.

- Prediger, D. (1999). Holland's hexagon is alive and well – though somewhat out of shape: Response to Tinsley. *Journal of Vocational Behavior*, *56*, 197-204.
- Rachman, D., Amernic, J. & Aranya, N. (1981). A factor-analytic study of the construct validity of Holland's Self-Directed Search test. *Educational and Psychological Measurement*, *41*, 425–437.
- Raviv, A., Raviv, A., Vago-Gefen, I., & Fink, A. S. (2009). The personal service gap: Factors affecting adolescents' willingness to seek help. *Journal of Adolescence*, *32*, 483-499.
- Rayman, J. & Atanasoff, L. (1999). Holland's theory and career intervention: The power of the hexagon. *Journal of Vocational Behavior*, *55*, 114-126.
- Richards, J. M. (1993). Career development: A ten-year longitudinal study in population scientists. *Journal of Career Assessment*, *1*, 181–192.
- Rickwood, D. J. & Braithwaite, V. A. (1994). Social-psychological factors affecting help-seeking for emotional problems. *Social Science and Medicine*, *39*, 563–572.
- Rickwood, D., Deane, F. & Wilson, C. (2007). When and how do young people seek professional help for mental health problems? *Proto-Psychiatry*, *187*, 35-39.
- Robbins, S. B. (1985). Validity estimates for the Career Decision-Making Self-Efficacy Scale. *Measurement and Evaluation in Counseling and Development*, *18*, 64-71.
- Robbins, J. M. & Greenley, J. R. (1983). Thinking about what's wrong: Attributions of severity, cause, and duration in the problem definition stage of psychiatric help seeking. *Research in Community & Mental Health*, *3*, 209–232.
- Rochlen, A., Blazina, C., & Raghunathan, R. (2002). Gender role conflict, attitudes toward

- career counseling, career decision-making, and perceptions of career counseling advertising brochures. *Psychology of Men and Masculinity*, 3, 127-137.
- Rochlen, A., Mohr, J. & Hargrove, B. (1999). Development of the attitudes toward career counseling scale. *Journal of Counseling Psychology*, 46, 196-206.
- Rottinghaus, P., Gaffey, A., Borgen, F. & Ralson, C. (2006). Diverse pathways of psychology majors: vocational interests, self-efficacy and intentions. *The Career Development Quarterly*, 55, 47-52.
- Rounds, J. B. (1990). The comparative and combined utility of work value and interest data in career counseling with adults. *Journal of Vocational Behavior*, 37, 32-45.
- Rounds, J., McKenna, M., Hubert, L. & Day, S. (2000). Tinsley on Holland: A misshapen argument. *Journal of Vocational Behavior*, 56, 205-215.
- Rounds, J. & Tracey, T. (1993). Prediger's dimensional representation of Holland's RIASEC circumplex. *Journal of Applied Psychology*, 78, 875-890.
- Ryan, N. E. (1999). *Career counseling and career choice goal attainment: A meta-analytically derived model for career counseling practice*. (Doctoral Dissertation). Retrieved from ProQuest Dissertations and Theses.
- Rubington, N. (1980). Instruction in career decision making and decision-making styles. *Journal of Counseling Psychology*, 27, 581-588.
- Salomone, P. R. & Pask-McCartney, C. (1990). Vocational and psychological characteristics of employed, non-college degreed, incongruent women. *Journal of Career Development*, 16, 203-217.
- Scarpello, V. & Campbell, J. P. (1983). Job satisfaction: Are all the parts there? *Personnel Psychology*, 36, 577-600.

- Schultheiss, D. P. (2000). Emotional-social issues in the provision of career counseling. In D. A. Luzzo (Ed.), *Career counseling of college students: An empirical guide to strategies that work*: Washington, DC: American Psychological Association.
- Schwartz, R., Andiappan, P. & Nelson, M. (1986). Reconsidering the support for Holland's congruence-achievement hypothesis. *Journal of Counseling Psychology, 33*, 425-428.
- Sharkin, B. S. (2004). College counseling and student retention: Research findings and implications for counseling centers. *Journal of College Counseling, 7*, 99-108.
- Slaney, R. (1980). Expressed vocational choice and vocational indecision. *Journal of Counseling Psychology, 27*, 122-129.
- Slaney, R. & Russell, J. (1981). An investigation of different levels of agreement between expressed and inventoried vocational interests among college women. *Journal of Counseling Psychology, 28*, 221-228.
- Smart, J. C., Elton, C. F. & McLaughlin, G. W. (1986). Person- environment congruence and job satisfaction. *Journal of Vocational Behavior, 29*, 216-225.
- Smith, H. S. & Betz, N. (2002). An examination of efficacy and esteem pathways to depression in young adults. *Journal of Counseling Psychology, 49*, 438-448.
- Spokane, A. R. (1992). Career intervention and counseling theory for adults: Toward a consensus model. In H. D. Lea & Z. B. Beibowitz (Eds.), *Adult career development* (pp. 42-54). Alexandria, VA: National Career Development Association.
- Spokane, A. R., Luchetta, E. J. & Richwine, M. H. (2002). Holland's theory of personalities in work environments. In D. Brown (Ed.), *Career choice and development* (4th ed., pp. 373-426). San Francisco: Jossey-Bass.
- Spokane, A.R. & Oliver, L.W. (1983). The outcomes of vocational intervention. In Walsh, W.B.

- & Osipow, S.H. (eds.): *Handbook of Vocational Psychology*, Vol. 2, pp.99-136.  
Hillsdale, NJ: Erlbaum.
- Spokane, A., Meir, E. & Catalano, M. (2000). Person-environment congruence and Holland's theory: A review and reconsideration. *Journal of Vocational Behavior*, *57*, 137-187.
- Spurk, D. & Atele, A. (2010). Who earns more and why? A multiple mediation model from personality to salary. *Journal of Business Psychology*, *26*, 87-103.
- Srsic, C. S. & Walsh, W. B. (2001). Person-environment congruence and career self-efficacy. *Journal of Career Assessment*, *9*, 203-213.
- Stefl, M. E. & Proserpi, D. C. (1985). Barriers to mental health service utilization. *Community Mental Health Journal*, *21*, 167-178.
- Su, R., Rounds, J., Armstrong, P. I. (2009). Men and things, women and people: A meta-analysis of sex differences in interests. *Psychological Bulletin*, *135*, 859-884.
- Swaney, K. & Prediger, D. (1985). The relationship between interest– occupation congruence and job satisfaction. *Journal of Vocational Behavior*, *26*, 13–24.
- Swanson, J.L. (1995). The process and outcome of career counseling. In W.B. Walsh & S.H. Osipow (Eds.), *Handbook of vocational psychology: Theory, research and practice*. (pp. 295–329). Mahwah, NJ: Erlbaum.
- Swanson, J.L. & Fouad, N.A. (1999). Applying theories of person-environment fit to the transition from school to work. *Career Development Quarterly*, *47*, 337-347.
- Swanson, J. L. & Gore, P. A., Jr. (2000). Advances in vocational psychology theory and research (pp 233-269). In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd Ed). New York: Wiley.

- Tabachnick, B. G. & Fidell, L. S. (2007). *Using multivariate statistics* (5<sup>th</sup> ed.). New York, NY: HarperCollins.
- Taylor, K. M. & Betz, N. E. (1983). Applications of self-efficacy theory to the understanding and treatment of career indecision. *Journal of Vocational Behavior, 22*, 63–81.
- Taylor, K. M. & Pompa, J. (1990). An examination of relationships among career decision-making self-efficacy, career salience, locus of control, and vocational indecision. *Journal of Vocational Behavior, 37*, 17-31.
- Thom, B. (1986). Sex differences in help seeking for alcohol problems: I. The barriers to help-seeking. *British Journal of Addiction, 81*, 777–788.
- Thurston, I.B., & Phares, V. (2008). Mental health service utilization among African American and Caucasian mothers and fathers. *Journal of Consulting and Clinical Psychology, 76*, 1058-1067.
- Tinsley, H. (2000). The congruence myth: An analysis of the efficacy of the person-environment fit model. *Journal of Vocational Behavior, 56*, 147-179.
- Tinsely, H., de St. Aubin, T. & Brown, M. (1982). College students' help seeking preferences. *Journal of Counseling Psychology, 29*, 523-533.
- Tokar, D. & Subich, L. (1997). Relative contributions of congruence and personality dimensions to job satisfaction. *Journal of Vocational Behavior, 50*, 482-491.
- Tokar, D., Withrow, J., Hall, R. & Moradi, B. (2003). Psychological separation, attachment security, vocational self-concept crystallization and career indecision: A structural equation analysis. *Journal of Counseling Psychology, 50*, 3-19.
- Tracey, T. (2008). Adherence to RIASEC structure as a key career decision construct. *Journal of Counseling Psychology, 55*, 146-157.

- Tracey, T. (2010). Relation of interest and self-efficacy occupational congruence and career choice certainty. *Journal of Vocational Behavior, 76*, 441-447.
- Tracey, T., Darcy, M. & Kovalski, T. (2000). A closer look at person-environment fit. *Journal of Vocational Behavior, 56*, 216-224.
- Tranberg, M., Slane, S. & Ekeberg, S. E. (1993). The relation between interest congruence and satisfaction: A meta-analysis. *Journal of Vocational Behavior, 42*, 253–264.
- Turner, A. L. & Berry, T. R. (2000). Counseling center contributions to student retention and graduation: A longitudinal assessment. *Journal of College Student Development, 6*, 627–636.
- Upperman, P. J. & Church, A. T. (1995). Investigating Holland’s typological theory with army occupational specialties. *Journal of Vocational Behavior, 47*, 61–75.
- Vogel, D. L., Bitman, R. L., Hammer, J. H., & Wade, N. G. (in press). Is stigma internalized?: The longitudinal impact of public stigma on self-stigma. *Journal of Counseling Psychology*.
- Vogel, D. L., Gentile, D. A. & Kaplan, S. A. (2008). The influence of television on willingness to seek therapy. *Journal of Clinical Psychology, 64*, 276-295.
- Vogel, D. L., Heimerdinger-Edwards, S., Hammer, J. & Hubbard, A. (2011). “Boys don’t cry”: Examination of the links between endorsement of masculine norms, self-stigma, and help seeking attitudes for men from diverse backgrounds. *Journal of Counseling Psychology, 58*, 368-382.
- Vogel, D. L., Schechtman, Z. & Wade, N. G. (2010). The role of public and self-stigma in predicting attitudes toward group counseling. *The Counseling Psychologist, 38*, 904-922.
- Vogel, D. L., Wade, N. G. & Ascheman, P. (2009). Measuring perceptions of stigmatization by

- others for seeking psychological help: Reliability and validity of a new stigma scale with college students. *Journal of Counseling Psychology*, 56, 301-308.
- Vogel, D. L., Wade, N. G. & Haake, S. (2006). Measuring the self-stigma associated with seeking psychological help. *Journal of Counseling Psychology*, 53, 325-337.
- Vogel, D. L., Wade, N. G. & Hackler, A. H. (2007). Perceived public stigma and the willingness to seek counseling: The mediating roles of self-stigma and attitudes toward counseling. *Journal of Counseling Psychology*, 54, 40-50.
- Vogel, D. L., Wade, N. G. & Hackler, A. H. (2008). Emotional expression and the decision to seek therapy: The mediating roles of the anticipated benefits and risks. *Journal of Social and Clinical Psychology*, 27, 254-278.
- Vogel, D. L., Wade, N. G., Wester, S. R., Larson, L. M. & Hackler, A. H. (2007). Seeking help from a mental health professional: The influence of one's social network. *Journal of Clinical Psychology*, 63, 233-245.
- Vogel, D. L., Wester, S. R. & Larson, L. M. (2007). Avoidance of counseling: Psychological factors that inhibit seeking help. *Journal of Counseling & Development*, 85, 410-422.
- Vogel, D. L., Wester, S. R., Wei, M. & Boysen, G. A. (2005). The role of outcome expectations and attitudes on decisions to seek professional help. *Journal of Counseling Psychology*, 52, 459-470.
- Wallace, G. R. & Walker, S. P. (1990). Self-concept, vocational interests, and choice of academic major in college students. *College Student Journal*, 23, 361-367.
- Wampold, B. E. (2001). *The great psychotherapy debate: Models, methods, and findings*: Lawrence Erlbaum Associates Publishers: Mahwah.
- Ware, M. E. & Pogge, D. L. (1980). Concomitants of certainty in career-related choices. *The Vocational Guidance Quarterly*, 28, 322-327.

- Wheeler, A., Gallagher, V.C., Brouer, R. & Sablowski, C. (2007). When person-organization (mis)fit and (dis)satisfaction lead to turnover. *Journal of Managerial Psychology, 26*, 206-219.
- Whiston, S. C., Rahardja, D. (2008). Vocational counseling process and outcome. In S. D. Brown R. W. Lent (Eds.), *Handbook of Counseling Psychology* (4th ed.). New York: Wiley.
- Whiston, S. C., Sexton, T. L. & Lasoff, D. L. (1998). Career-intervention outcome: A replication and extension of Oliver and Spokane (1988). *Journal of Counseling Psychology, 45*, 150-165.
- Wiggins, J. D. (1976). The relation of job satisfaction to vocational preferences among teachers of the educable mentally retarded. *Journal of Vocational Behavior, 8*, 13-18.
- Wiggins, J. D., Lederer, D. A., Salkowe, A. & Rys, G. S. (1983). Job satisfaction related to tested congruence and differentiation. *Journal of Vocational Behavior, 23*, 112-121.
- Wilson, C. (2010). Gender psychological distress symptoms and help-avoidance in young Australians. *Advances in Mental Health, 9*, 63-72.
- Wilson, S., Mason, T. & Ewing, M. (1997). Evaluating the impact of receiving university-based counseling services on student retention. *Journal of Counseling Psychology, 44*, 316-320.
- Wollman, M., Johnson, D. A. and Bottoms, J. E. (1975), Meeting Career Needs in Two-Year Institutions. *The Personnel and Guidance Journal, 53*, 676-680.
- Yang, H., Stanton, X., Fang, X., Lin, D., Naar-King, S. (2006). HIV-related knowledge, stigma, and willingness to disclose: A mediation analysis, *AIDS Care: Psychological and Socio-medical Aspects of AIDS/HIV, 18*, 717-724
- Young, G., Tokar, D. M. & Subich, L. M. (1998). Congruence revisited: Do 11 indices

differentially predict job satisfaction and its relation moderated by person and situation variables? *Journal of Vocational Behavior*, 52, 208–223.

Zeig, J. K. & Munion, W. M. (Eds.). (1990). *What is psychotherapy?: Contemporary perspectives*. San Francisco: Jossey–Bass.

**APPENDIX: STUDY MEASURES****Demographic Information Survey**

*Name:* \_\_\_\_\_

*University ID number:* \_\_\_\_\_  
(middle 9 digits)

*NetID:* \_\_\_\_\_

*Age:* \_\_\_\_\_

*Current Academic Major:* \_\_\_\_\_

*Previous Major(s):* \_\_\_\_\_

*Current GPA:* \_\_\_\_\_

*Gender:* Male                  Female

*Year of School:* Freshman          Sophomore          Junior          Senior

*Ethnic/cultural identity:* African American          Asian American          Hispanic American  
Native American          White/Caucasian

Other: \_\_\_\_\_

*Sexual orientation:* Exclusively heterosexual          Bisexual  
Exclusively homosexual          Uncertain at this time

*Current Relationship Status:* Single                  Partnered          Married  
Living with someone Divorced/Separated

*Religious Affiliation:* \_\_\_\_\_

*Religiosity:* Not at all religious          Somewhat religious          Very religious



**Please answer the following questions.**

1. Have you every sought counseling or mental health services for a problem in the past year?
  - 1 = Yes
  - 2 = No
  
2. Are you currently receiving counseling or mental health services?
  - 1 = Yes
  - 2 = No
  
3. Have you ever sought counseling for an academic or vocational issue?
  - 1 = Yes
  - 2 = No
  
4. If you have not sought counseling, have you ever considered seeking counseling for an academic or vocational issue?
  - 1 = Yes
  - 2 = No
  
5. Do you know someone who has sought academic or vocational help from a counselor?
  - 1 = Yes
  - 2 = No
  
6. Did someone (i.e., a friend or relative) ever suggest that you seek counseling for an academic or vocational issue?
  - 1 = Yes
  - 2 = No
  
7. Please indicate if you are currently or recently experienced any of the following issues in your life. If more than one applies, please indicated only the most severe issue you experienced.
  - 1 = Test anxiety
  - 2 = Academic concerns
  - 3 = Trouble choosing a major
  - 4 = Career/Job concerns
  - 5 = Other school/academic concerns

**Alternate Forms Public Domain (AFPD)<sup>1</sup>**

Please rate how much interest you have in performing each activity listed below using the following scale:

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Strongly Dislike</b>	<b>Dislike</b>	<b>Neutral</b>	<b>Like</b>	<b>Strongly Like</b>

1. Test the quality of parts before shipment.
2. Study the structure of the human body.
3. Conduct a musical choir.
4. Give career guidance to people.
5. Sell restaurant franchises to individuals.
6. Generate the monthly payroll checks for an office.
7. Lay brick or tile.
8. Study animal behavior.
9. Direct a play.
10. Do volunteer work at a non-profit organization.
11. Sell merchandise at a department store.
12. Inventory supplies using a hand-held computer.
13. Work on an offshore oil-drilling rig.
14. Do research on plants or animals.
15. Design artwork for magazines.
16. Help people who have problems with drugs or alcohol.
17. Manage the occupations of a hotel.
18. Use a computer program to generate customer bills.
19. Assemble electronic parts.
20. Develop a new medical treatment or procedure.
21. Write a song.
22. Teach an individual an exercise routine.
23. Operate a beauty salon or barber shop.
24. Maintain employee records.
25. Operate a grinding machine in a factory.
26. Conduct biological research.
27. Write books or plays.
28. Help people with family-related problems.
29. Manage a department within a large company.
30. Compute and record statistical and other numerical data.

---

<sup>1</sup> Taken from Armstrong, Allison & Rounds (2008)

31. Fix a broken faucet.
32. Study whales and other types of marine life.
33. Play a musical instrument.
34. Supervise the activities of children at a camp.
35. Manage a clothing store.
36. Operate a clothing store.
37. Assemble products in a factory.
38. Work in a biology lab.
39. Perform stunts for a movie or television show.
40. Teach children how to read.
41. Sell houses.
42. Handle customers' bank transactions.
43. Install flooring in houses.
44. Make a map of the bottom of an ocean.
45. Design sets for plays.
46. Help elderly people with their daily activities.
47. Run a toy store.
48. Keep shipping and receiving records.

### **Career Decision-Making Self-Efficacy Scale – Short Form (CDMSE-SF)<sup>2</sup>**

Please rate how much confidence you have in your ability to perform each activity listed below using the following scale:

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Very Low Confidence</b>	<b>Little Confidence</b>	<b>Moderate Confidence</b>	<b>Above Average Confidence</b>	<b>Very High Confidence</b>

1. Identify employers relevant to your career possibilities.
2. Persistently work at your major or career goal even when you get frustrated.
3. Select one major from a list you are considering.
4. Find out employment trends for an occupation over the next 10 years.
5. Identify some major or career alternatives if you are unable to get your first choice.
6. Figure out what you are and are not ready to sacrifice for your career goals.
7. Find the average yearly earnings of people in an occupation.
8. Determine the steps you need to successfully complete your chosen major.
9. Accurately assess your abilities.

<sup>2</sup> Taken from Betz, Klein & Taylor (1996)

10. Talk with a person already employed in a field you are interested in.
11. Choose a career that will fit your preferred lifestyle.
12. Determine the steps to take if you're having academic trouble with your major.
13. Choose a major or career that will fit your interests.
14. Change occupations if you are not satisfied with the one you enter.
15. Make a career decision and then not worry if it was right or wrong.
16. Find information about graduate or professional schools.
17. Decide what you value most in an occupation.
18. Change majors if you did not like your first choice.
19. Successfully manage the job interview process.
20. Select one occupation from a list of potential occupations you are considering.
21. Prepare a good resume.
22. Use the Internet to find information about occupations that interest you.
23. Determine what your ideal job would be.
24. Make a plan of your goals for the next 5 years.
25. Determine the kind of lifestyle you would like to live.

### Academic Major Satisfaction Scale (AMSS)<sup>3</sup>

The following is a list of personal attitude statements. For each statement please indicate how much you agree with it using the following scale:

1	2	3	4	5
<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neither Agree or Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>

1. I often wish I hadn't gotten into this major.
2. I wish I were happier with my choice of an academic major.
3. I am strongly considering changing to another major.
4. Overall, I am happy with the major I have chosen.
5. I feel good about the major I have selected.
6. I would like to talk to someone about changing my major.

---

<sup>3</sup> Taken from Nauta (2007)

### Stigma Scale for Receiving Psychological Help (SSRPH)<sup>4</sup>

The following is a list of personal attitude statements. For each statement, please indicate how much you agree with it using the following scale:

1	2	3	4	5
<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neither Agree or Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>

1. Seeing a psychologist for emotional or interpersonal problems carries social stigma.
2. It is a sign of personal weakness or inadequacy to see a psychologist for emotional or interpersonal problems.
3. People will see a person in a less favorable way if they come to know that he/she has seen a psychologist.
4. It is advisable for a person to hide from people that he/she has seen a psychologist.
5. People tend to like less those who are receiving professional psychological help.

### Self-Stigma of Seeking Help Scale (SSOSH)<sup>5</sup>

The following is a list of personal attitude statements. For each statement, please indicate how much you agree with it using the following scale:

1	2	3	4	5
<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neither Agree or Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>

1. I would feel inadequate if I went to a therapist for psychological help.
2. My self-confidence would NOT be threatened if I sought professional help.
3. Seeking psychological help would make me feel less intelligent.
4. My self-esteem would increase if I talked to a therapist.
5. My view of myself would not change just because I made the choice to see a therapist.
6. It would make me feel inferior to ask a therapist for help.
7. I would feel okay about myself if I made the choice to seek professional help.
8. If I went to a therapist, I would be less satisfied with myself.
9. My self-confidence would remain the same if I sought professional help for a problem I could not solve.
10. I would feel worse about myself if I could not solve my own problems.

<sup>4</sup> Taken from Komiya, Good & Sherrod (2000)

<sup>5</sup> Taken from Vogel et al. (2006).

### Attitudes Towards Career Counseling (ATCC)<sup>6</sup>

How much do you agree with each of the following statements?

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neither Agree or Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>

1. I could easily imagine how career counseling could be beneficial for me.
2. Having to see a counselor to talk about career related concerns is a sign of indecisiveness.
3. If I were having trouble choosing a major, I would not hesitate to schedule an appointment with a career counselor.
4. If I was in a career transition, I would value the opportunity to see a career counselor.
5. If a career related dilemma arose for me, I would be pleased to know that career counseling services are available.
6. With so many different ways to get help on career related decisions, I see career counseling as relatively important.
7. Talking to a therapist regarding career issues is a sign of weakness.
8. I fear the negative stigma associated with seeing a career counselor.
9. In all likelihood, a career counseling experience would be quite depressing.
10. My feelings about counseling in general would make me hesitate to see a career counselor.
11. Working with a trained career counselor might be a helpful way to feel more confident about career decisions.
12. Career counseling can be an effective way to learn what occupation is best suited for my interests.
13. If I was seeing a career counselor, I would not want anyone to know about it.
14. Seeing a career counselor to discuss career issues is a very private matter that should not be discussed with anyone.
15. Career counseling is a valuable resource in making a career choice.
16. I would be too embarrassed to ever schedule an appointment with a career counselor.

---

<sup>6</sup> Taken from Rochlen, Mohr & Hargrove (1999)

## **ACKNOWLEDGEMENTS**

I dedicate this dissertation to my father, Norman Schwatken. Although you are no longer a part of this world, you have been so influential to me and have been my biggest supporter throughout my entire life and now, culminating in the completion of my doctoral degree. You were a rock when others were absent, you were a beacon of light when I could not see the end in sight, you were always the best role model possible even when times were tough for you. So thank you, for all you have done and for helping me to get to this point. I appreciate you. I love you. And I hope to continue making you proud in all of my future endeavors.