Career Decision-Making and Mortality Salience

By

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Career Decision-Making and Mortality Salience

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Abstract

Although career indecision has been a topic of considerable interest among vocational psychologists, researchers have yet to reach a general consensus on any single framework that best explains the nature of this elusive construct (Gati et al., 2011). Given that college students face an exceedingly unstable labor market, there is a growing need for innovative methods that can facilitate the career decision-making process for this population (Savickas, 2012). The current study utilized a between-group posttest only true experimental design to explore how an existential framework could explain the interaction effects of mortality salience and one’s personal need for structure within the career decision-making process. Participants were 214 undergraduate students who were at least 18 years of age and enrolled full-time at a college in the United States. A two-way analysis of multi-covariance indicated that this interaction effect did not distinguish changes in career indecision levels for college students. Implications for vocational psychologists, strengths and limitations of the study, and suggestions for future research are provided.
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Chapter 1

Introduction

Since the turn of the century, scholars have come to recognize that the labor market has become increasingly chaotic, unstable, and anxiety provoking (Savickas, 2012). The field of vocational psychology has emphasized the need for holistic and innovative approaches to career counseling conceptualizations and methodologies as a means to help people adapt to this reality (Savickas, 2000). This is especially relevant for college students given that these individuals are tasked with making career decisions today that hold less promise for financial stability tomorrow. The career decision-making process is one that often invokes anxiety for many undergraduate students. Career indecision has become a common problem for this population, making it a central topic of concern among researchers and career counselors (Gati et al., 2011). An abundance of research has sought to better understand the relationship between career indecision and anxiety in order to help support the career needs of college students. However, scholars have yet to reach a general consensus on any single framework that best explain the nature of these interrelated constructs (Gati et al., 2011). This echoes the need for more holistic conceptualizations in vocational psychology. Though many aspects of anxiety have been studied in relation to career indecision, the role of death anxiety has yet to be explored. A better understanding of this construct in the context of career decision making would serve to clarify the nature of anxiety and career indecision by identifying causal influences that shape this relationship for college students. In turn, this would allow for more holistic approaches that can bolster career counseling models and client conceptualizations that incorporate these causal influences. This clarity must be ascertained if psychologists and career counselors are to
continue supporting undergraduate students as they face a great deal of uncertainty in this economic climate.

**Students and Career Indecision**

Career indecision among college students was once considered to be a dichotomous construct (Jone & Chenery, 1980). Over time, research promoted the idea that multidimensional conceptualizations of career indecision were more accurate and more functional. For example, Holland and Holland (1977) conducted research that demonstrated how a developmental perspective could help categorize individuals experiencing different levels of career indecision. As different types of career indecision garnered attention throughout literature, so did the motivational forces that were being attributed to these categorizations. Anxiety quickly became a construct of interest. Kimes and Troth (1974) found that college students who were completely undecided on their career choice were more prone to anxiety than those who had decided a career path. In turn, this promoted research that identified how different types of anxiety were affiliated with different categorizations of career indecision. Hartman, Fuqua, and Blum (1985) presented a theoretical model to identify relationships between trait anxiety, state anxiety, and career indecision factors. Lounsbury, Tatum, Chambers, Owens, and Gibson (1999) expanded on this framework by demonstrating how personality traits could reliably mediate these relationships. As conceptualizations of anxiety and career indecision evolved, Krumboltz (1992) came to recognize how the underlying negative connotation of career indecision was becoming problematic. He argued that having positive frameworks of career indecision would be more useful for career counselors and vocational psychologists who are applying interventions. Nevertheless, the dysfunctional aspects that often accompanied career indecision could not be
ignored. The need for holistic approaches that could integrate and utilize these considerations continued to grow.

In service of promoting the movement for holistic approaches and improving client conceptualizations in career counseling, Yalom’s (1980) existential theory has recently garnered attention as a viable framework in conceptualizing the career development process. Cohen (2003) advocated for a career counseling framework that utilizes the four existential themes (i.e., freedom, death, isolation, and meaninglessness) to help improve career counseling conceptualizations. Sterner (2012) extended this claim by integrating existentialism with Super’s (1990) life-span life-space theory, emphasizing its viability from a developmental perspective. Despite the calling for empirical support, vocational psychology literature has failed to produce many studies that utilize these concepts. However, Miller and Rottinghaus (2014) have recently generated empirical evidence showing how existential themes directly pertain to the relationship between career indecision and anxiety among college students. By identifying how presence of meaning in life mediates career indecision and anxiety, these authors have demonstrated the utility of an existential framework that can be used to promote holistic approaches and improve client conceptualizations for this population.

Considering the numerous aspects of anxiety that have been explored in literature pertaining to career indecision, it is surprising that death anxiety (a major tenet in existential theory) has yet to be studied in this domain. Existential theory has long been criticized in psychology for being an individualistic approach to counseling conceptualizations, limiting research implications for generalizability. Moreover, critics have argued that this individualistic approach to counseling conceptualizations may conflict with clients who hold a collectivistic cultural background, raising concerns about cross-cultural viability and sensitivity.
Nevertheless, evidence suggests that vocational psychology could benefit from the integration of existentialism in career counseling conceptualizations. Thus, vocational psychology would likely benefit from a theory that utilizes existentialism and offers empirical support for generalizability via cross-cultural studies.

**A Different Perspective**

Terror management theory (Greenberg, Pyszczynski, & Solomon, 1986) can offer unique insight on how an individual’s relationship with death effects the career decision making process for college students. This social psychology theory explains how human behavior and decision making processes are often motivated by an unconscious need to manage death anxiety via cultural values and self-esteem. Over 300 experimental studies have offered empirical support for terror management theory in predicting how trait characteristics and state characteristics influence decision making processes throughout a wide range of human behaviors (Landau et al., 2007). These studies have been conducted by independent researchers in at least 15 different countries, including collectivistic cultures such as Japan and Iran (Landau et al., 2007). Moreover, a large portion of this research has been used in studying college student populations. For example, Vess, Routledge, Landau, and Arndt (2009) conducted a terror management theory study utilizing college students to identify ways that death anxiety and personal need for structure can predict how people perceive meaning in their lives.

The purpose of this study is to examine terror management theory by exploring relations between death anxiety, meaning in life, and career indecision among college students in the United States. This study will also examine how personal need for structure influences the relationships between death anxiety, meaning in life, and career indecision among this population. Understanding a person’s relationship with death may help promote holistic
approaches to career counseling. Moreover, a better understanding of how culture, personality, and meaning in life effect influence the relationship between career indecision and anxiety could improve client conceptualizations for career counselors. In turn, this research can allow for future career interventions that can better support the needs of today's college student.

This study will use a between-group posttest only true experimental design to examine relations between death anxiety, presence of meaning in life, and career indecision among a sample of college students while controlling for demographic information and personal need for structure. Career indecision describes the degree of difficulty or the inability for an individual to make a career decision (Hartman, Fuqua, & Blum, 1985). Death anxiety refers to the anxiety that can be attributed to one's vulnerability and susceptibility to death, resulting from the knowledge of one's mortality (Greenberg, Pyszczynski, & Solomon, 1986). Meaning in life refers to the belief about one's significance regarding the nature of existence (Steger et al., 2006). Personal need for structure describes one's preference for interpreting information in ways that minimize ambiguity and confusion (Neuberg & Newsom, 1993). The following research questions will be addressed:

1. Do mortality salience and personal need for structure predict the presence of meaning in life or career indecision for college students?

   Hypothesis 1a: Mortality salience and Personal need for structure will predict presence of meaning in life.

   Hypothesis 1b: Mortality Salience and Personal need for structure will predict career indecision.

2. Do mortality salience and personal need for structure predict a positive or inverse correlation with meaning in life and career indecision?
Hypothesis 2a: Mortality salience and personal need for structure will predict a positive correlation with meaning in life. Individuals who have higher preferences in personal need for structure will have greater perceptions of meaning in life when mortality is salient in comparison to the control group. Individuals who have lower preferences in personal need for structure will have weaker perceptions of meaning in life when mortality is salient in comparison to the control group.

Hypothesis 2b: Mortality salience and personal need for structure will predict an inverse correlation with career indecision. Individuals who have higher preferences in personal need for structure will be more decisive about their career path when mortality is salient in comparison to the control group. Individuals who have lower preferences in personal need for structure will be more indecisive about their career path when mortality is salient in comparison to the control group.

This chapter has asserted that vocational psychology needs a better understanding of the relationship between career indecision and anxiety among college students. Additionally, this chapter has suggested that this can be accomplished through a better understanding of how navigating death anxiety influences the career decision making process. Chapter 2 will further discuss the current literature pertaining to career indecision and death anxiety. Additionally, Chapter 2 will discuss how existentialism pertains to the development of holistic approaches to career client conceptualizations. Following the literature review, Chapter 3 will detail the methods to be utilized in the study. Chapter 3 will also elaborate on the procedures employed in the study and the statistical analyses planned. Once data has been collected, Chapter 4 will
provide information on the results of the study, and Chapter 5 will provide a thorough discussion of these results, implications of the relationship between death anxiety and career indecision, limitations of the study, and implications for career counseling.
Chapter 2

Review of the Literature

Introduction to the Problem

Career indecision describes the degree of difficulty or the inability for an individual to make a career decision (Hartman, Fuqua, & Blum, 1985). Among the college student population, this is commonly referred to as a state of being undecided on any one particular career path or college major (Sepich, 1987). Career indecision is often a major concern for college students given how most of these individuals are facing a transitional period that will heavily influence the rest of their lives. Some studies report as many as 50% of college students have difficulty selecting and committing to a particular career direction (Gianakos, 1999). Researchers have also found that higher attrition rates occur for undecided career students in comparison to decided students. This problem has become a central topic of concern for career counselors, causing career indecision among college students to become one of the most studied constructs in the field of vocational psychology (Gati et al., 2011). Moreover, a large portion of this research has sought to better understand the relationship between anxiety and career indecision.

Given that admission requirements have continued to increase and that competition among college students applying to academic programs has become fierce, students often feel pressure to choose and commit to a specific degree program and/or career path at earlier stages in their identity. It is not surprising that anxiety is among the leading mental health issues facing college students. According to a recent national survey conducted by the American College Health Association (2014), nearly one in six college students had either been treated for anxiety or diagnosed with an anxiety disorder. Although numerous theories have been used in attempts
to conceptualize the relationship that exists between anxiety and career indecision, scholars have yet to reach a general consensus on any single framework that best explain the nature of these interrelated constructs (Gati et al., 2011). This is especially relevant given that scholars agree on the current need for more holistic and contextualized perspectives on how an increasingly unstable labor market is changing the way people develop their vocational identities. This instability likely contributes to anxiety many college students associate with the career decision making process. By gaining a better understanding of the relationship between career indecision and anxiety, career counselors can better support college students navigating career indecision.

**Career Indecision**

Career indecision was once viewed as a dichotomous construct, where students had either committed to a career decision or undecided on a career decision (Jones & Chenery, 1980). There was little acknowledgement of differences among undecided students at this time. Developmental orientations became popular in navigating assessments and interventions that aimed at matching undecided students with a career path. As scholars have come to a deeper understanding of career indecision, research has presented career indecision as a multidimensional construct (Fuqua, Seaworth, & Newman, 1987).

Marcia (1966) created one of the first multidimensional models to describe how different motivational influences and ego identities can describe undecided and decided individuals. By collecting data from 86 college students, Marcia (1966) found empirical support for the ego identity status model, which is comprised of four identity statuses that explain how one's self-esteem is influencing identity development and goal oriented behaviors. Moreover, these statuses can be used in the context of career decision making processes. Identity achievement describes students who have experienced pressure associated with indecision and have made a
career choice after considering multiple career options. The moratorium status describes students who are experiencing pressure associated with career indecision, lack commitment to a career track, but are actively struggling to commit to a career choice. Foreclosed status individuals have not experienced pressure associated with career indecision, but have already made a career decision. Identity diffusion status individuals include students who may or may not have experienced pressure associated with career indecision, have a lack of commitment towards a career track, and are not actively struggling to choose a career track (Marcia, 1966). These four distinct ego identity status categories describe how different students navigate the career decision making process from a developmental perspective. The model demonstrates how different motivations influence the career decision making process based on one's vocational identity development, clarifying career indecision as a multidimensional construct.

Holland and Holland (1977) conducted research with 1,005 high school students and 692 college students that assessed personality, decision-making abilities, interests, and vocational attitudes in order to help clarify the characteristics of students who were either decided or undecided about their career choice. These characteristics allowed the authors to identify three categories of undecided students. The first category was comprised of students who did not feel pressure to make a decision at that particular time. The second was comprised of students who were slightly developmentally delayed, interpersonally delayed, and anxious. The third was comprised of students who more severely immature, interpersonally incompetent, anxious, and isolated. The authors concluded that career indecisiveness for college students under the age of 25 are likely related to normal developmental issues that are likely to be resolved over time. Though only a small percentage of individuals meet the criteria for undecidedness pertaining to any special negative characteristics (i.e., the third group of students), counselors can identify
indecisive students with special needs through the use of diagnostic scales (Holland & Holland, 1977). In assessing and categorizing different types of career undecidedness among college and high school students, levels of anxiety were an important construct to consider.

Goodstein (1965) was among the first to expand on the notion that career indecision was simply the result of delaying the career decision making process by avoiding commitment. He hypothesized that the relationship between anxiety and career indecision could be broken down into two conditions. He suspected that some undecided students experience anxiety because they lacked the information or skills one needs in order to choose a career path. By utilizing career interventions that helped students acquire this information, these students would then be able to make a decision and reduce their anxiety. However, it was also hypothesized that other students might experience anxiety due to personal or interpersonal conflicts associated with processing and acting on any single career decision (Goodstein, 1965). These students were experiencing choice anxiety and may need career services that offer more than the acquisition of career information. Although it was difficult to ascertain when anxiety might be an antecedent to career indecision or a product from it, scholars would come to agree that a better understanding of this relationship would allow for better career interventions.

Clarifying Career Indecision

As the concept of career indecision became more refined, studies came to identify anxiety as more of an antecedent to career indecision. Kimes and Troth (1974) found that based on a sample of 829 college students, those who were completely undecided on their career choice were significantly more prone to anxiety than those who had chosen a career path. Their analysis also revealed that an inverse relationship existed between trait anxiety and career satisfaction. Thus, undecided students who tend to be highly anxious might experience more
difficulty in choosing a career than undecided students who are less prone to anxiety (Kimes and Troth, 1974). These implications suggest that career counselors could screen undecided students on for trait anxiety to identify and determine appropriate interventions for this population. As career indecision became better understood as a multifaceted construct, identifying relationships between career indecision and different types of anxiety would also benefit career counseling models. These distinctions could allow scholars to test for causal inferences in describing this relationship.

The Need for Causality

In order to gain a better understanding of how career counselors can best assist students in reducing anxiety associated with the career decision making process, Mendonca and Siess (1976) conducted a process and outcome study with 32 university students struggling with career indecision. The students were assigned to one of five different training conditions: an anxiety management group, a problem solving group, a combination of anxiety management and problem solving, a placebo group, and a no-treatment group. The result of the experiment confirmed that the mixed group (anxiety management and problem solving) was effective and produced significantly greater outcomes than any single method with respect to vocational exploratory behavior, career planning behavior, and problem-solving behavior. However, none of the treatment conditions demonstrated a reduction in anxiety, which suggests that anxiety plays more of an antecedent role in its relationship to career indecision (Mendonca & Siess, 1976). Thus, the lack of information or skills to attain information pertaining to career decision making are not the only factors that cause vocational decision making difficulties. One's ability to inhibit anxiety is also a predictor for career indecision.
Hawkins, Bradley, and White (1977) investigated anxiety as the primary factor in distinguishing avoidance tendencies that stifled the career decision making process, resulting in career indecision. By using a sample of 427 college students, the authors used 10 independent variables to assess how general anxiety, major choice anxiety, and vocational choice anxiety could predict vocational decidedness. Stepwise multiple regression revealed that 9 of the 10 scales were related to vocational decidedness, with major choice anxiety accounting for the greatest amount of variance pertaining to changes in dependent measures assessing career decision making progress. The authors suggest that some students remain undecided as a means of security in order to avoid taking risks. These students may have problems with self-esteem, be more dependent on others, have difficulty with concentrating on problems, struggle with general anxiety, or have heightened anxiety related to career decisions in comparison to decided students (Hawkins, Bradley, & White, 1977). These findings are profound in that it demonstrates how distinct types of anxiety and attitudes influence career indecision differently. Hence, the attitudinal differences associated with anxiety has important implications in conceptualizing the career decision-making process for college students.

Researchers continued to explore the multidimensional components of career indecision and anxiety throughout the 1980s (Fuqua, Seaworth & Newman, 1987). Berger-Gross, Kahn, and Weare (1983) used an experimental model to further explore the influences of different types of anxiety in college students. The authors divided 381 undergraduate students into a control group that received a marketing questionnaire and an experimental group that was administered a career planning questionnaire. Both questionnaires included a state anxiety measure and a career decision-making assessment. The results provided empirical support for the relationship between state anxiety and career indecision. Students in the experimental group experienced an
increase in anxiety levels upon thinking about career planning in comparison to the control. Hence, exposure and response to career planning issues elevate levels of state anxiety. This supported previous research suggesting that anxiety perpetuates avoidance of career development tasks, which leads to more anxiety about career decisions (Berger-Gross et al., 1983). In addition to clarifying the interaction between anxiety and career indecision, Berger-Gross et al. (1983) described little awareness by their subjects about the source of their anxiety, which speaks to the need of career counseling methods that can identify and alleviate anxiety-arousing cues that impact career decision making. Furthermore, this demonstrates how unconscious anxiety is likely to be a factor that is warrant of consideration in conceptualizing career indecision.

Hartman, Fuqua, and Blum (1985) presented a theoretical model to expand on these implications. These scholars described when anxiety is likely an antecedent or a consequence of career indecision. Trait anxiety is useful in predicting chronic indecision that was characteristic of those who would eventually struggle with career indecision. State anxiety was a function of developmental indecision, viewed as a consequence of career decision skill deficits. Kaplan and Brown (1987) supported this model by assessing indecisiveness, anxiety, self-efficacy, and task performance skills with an undergraduate student population. Moreover, Fuqua and Newman (1989) later found a positive correlation between trait anxiety, state anxiety, and career indecision factors associated with career choice barriers and limited career information. Empirical evidence continued to support this model as culturally diverse samples were used to demonstrate that there were no differences in causality between majority groups and ethnic groups (Eckhaus Gribben, 1992).
Krumboltz (1992) supported the notion that undecided individuals experience indecision as a result of being prone to anxiety and situational factors that serve as decision barriers. He coined the term "zeteophobia" for describing anxiety associated with career decision making. However, whereas most scholars perceived career indecision as a serious problem that hindered the career decision making process, Krumboltz (1992) argued that the consequences of career indecision are not always negative and that it should not be treated as if it were a mental disorder. Furthermore, the negative connotation that is affiliated with career indecision are likely to induce anxiety unnecessarily. As career counselors and vocational psychologists use more positive connotations with career indecision and highlight functional aspects, such as having options and being open-minded, this can enhance our conceptualization models.

As scholars gained a better understanding of chronic indecision and trait anxiety as antecedents for career indecision, they continued to explore how personality characteristics could help decipher how and why college students might experience career indecision differently. For example, Lounsbury, Tatum, Chambers, Owens, and Gibson (1999) examined how the five factor model of personality related to career decision making for 249 undergraduate students. Results demonstrated that career decidedness was negatively correlated with neuroticism, confirming that students who are prone to experiencing distress, anxiety, and tension are also more likely to be undecided about their career choice. Lounsbury, Hutchens, & Loveland (2005) conducted a similar study that utilized the five factor model with 248 junior high school and high school students. While looking across different age ranges, positive correlations were found to be significant between decidedness and emotional stability. They concluded that students might become more emotionally stable as they age, resulting in less anxiety and worry over career decision-making. However, it is also possible that these students might have already made a
career decision, making them less anxious and worried than younger students (Lounsbury et al., 2005). A better understanding of how personality factors influence the way students experience or react to anxiety could help career counselors assist students in navigating their own particular career decision making processes.

Investigating ways that state anxiety, trait anxiety, and personality traits influence the career decision making process allowed researchers to clarify distinctions between career indecision and indecisiveness. Whereas career indecision is now accepted as a normal stage through which most students experience at some point in their lifetime (Germeijs & Verschueren, 2007), indecisiveness speaks to the chronic inability to make decisions throughout different contexts and situations (Saka, Gati, & Kelly, 2008), making it more similar to a personality construct. Thus, indecisiveness is best understood as a chronic state that stems from emotional difficulties and personality (Germeijs & Verschueren, 2007). As distinct constructs, career indecision and indecisiveness offer different implications, severity, and relevance to an individual's career decision making process.

Di Fabio, Palazzeschi, Asulin-Peretz, and Gati (2013) conducted a study with 361 undergraduate students to further explore how personality traits and emotional intelligence are associated with career indecision and indecisiveness. A stepwise multiple regression analysis revealed that high emotional intelligence was the best predictor of low indecision across genders, more so than indecisiveness. Furthermore, indecisiveness was better explained by personality traits pertaining to emotional stability rather than emotional intelligence. This supports the notion that one's reaction to anxiety, or inability to manage it, is associated with chronic indecisiveness. Given that personality traits seem to be better predictors of indecisiveness, this
suggests that personality constructs are good predictors of how anxiety influences career indecision.

**Something Different**

In recent years, there has been a growing need for establishing innovative career counseling models that place a greater emphasis on meaning, purpose, and value in the career development process (Thorngren & Feit, 2001). In order to do so, scholars have argued that vocational psychology should promote more holistic and contextualized approaches to career counseling (Savickas, 2000). Career counselors can use these models to optimize client conceptualizations that consider multifaceted career constructs in supporting the career decision making process of college students. Moreover, there is still a need to close the gap existing between the world of research in vocational psychology and how it can be applied in career counseling interventions to facilitate the career decision making process.

An existential framework can be useful in conceptualizing the multifaceted dynamics of an individual's vocational identity, how one's identity relates to anxiety, and how this relationship can effect career indecision. Cohen (2003) has proposed a four-stage existential theoretical model of career-decision making that would be useful in conceptualizing the relationship among these constructs. Consistent with Yalom's (1980) four existential psychological concerns (i.e., freedom, death, isolation, and meaninglessness), by understanding career decision making as a boundary situation (i.e., major life decision), this model proposes that clients are motivated towards making decisions that provide opportunities to find personal meaning and authentic existence in the working world (Cohen, 2003). Furthermore, an important component of this model highlights the significance of individual tendencies to avoid responsibility in their attempts to find personal meaning and authentic expression. Awareness of freedom and
responsibility may lead to career indecision depending on the context of their vocational choices. Thus, Cohen (2003) calls for research that can address the contextual factors and barriers that may influence the career decision-making process in order to establish a more comprehensive existential framework in vocational psychology.

Maglio, Butterfield, and Borgen (2005) also advocates for the relevance and utility of existential considerations in contemporary approaches to career counseling. These authors’ contribute to the contextualization of an existential framework in career counseling by addressing three qualitative studies that help bridge the gap between theoretical ideas and clinical applications for career counseling clients. Of particular relevance, the authors expand on how the roles of death and nonbeing can impact an individual's vocational identity and levels of uncertainty. Given that Western industrialized cultures place a great deal of importance on one's vocational identity, being unemployed can be interpreted as a state of nonbeing. In certain cases, an individual's relationship with their unemployment status can be considered analogous to an individual's relationship with nonexistence and death. Not surprisingly, 15% of unemployed individuals specifically referenced suicidal thoughts and nonbeing (Maglio, Butterfield & Borgen, 2005). Given the recent rise in American unemployment rates and uncertainty in the labor market, changes in the working world and workers have challenged the traditional understanding of career. This inevitably contributes to the angst that many students experience while engaging in their career decision making process. Gaining a deeper understanding of how an individual’s relationship with nonexistence might influence their career decision making process would enhance the contextualization and utility of existential frameworks in career counseling.
Existentialism has garnered attention in counseling literature due to the growing need for versatile and innovative career counseling methods. Recently, scholars have argued that integrating existentialism with other psychological models would likely provide a more comprehensive and holistic approach to understanding the career decision making process. For example, Sterner (2012) advocates for innovative conceptualizations in today's career counseling process that utilize existentialism to help address career client concerns pertaining to the increasingly complex economic climate. By using Super’s (1990) life-span life-space theory, he demonstrates how an existential perspective can be used in identifying key assumptions that influence decisions throughout career development stages. In accordance with leading existentialists that view one’s search for meaning as the primary motivation for decision making (Frankl, 1984; Yalom, 1980), these key assumptions can better inform career counselors on how to guide this motivation with specific career interventions. For example, specific career interventions such as mindfulness meditation and the De-Role Exercise were constructed from an existential framework (Sterner, 2012). Hence, as we continue to integrate an existential framework with other psychological theories, this will likely close the gap between vocational psychology research and applied career counseling methods. This would generate innovative career interventions that can better serve the needs of college students and career indecision.

Despite the substantial body of literature that advocates for existential career counseling methods, little empirical research has been conducted in this area. However, a recent study conducted by Miller and Rottinghaus (2014) has provided initial empirical support for an existential framework in this domain. By examining the role of meaning in life with regards to career indecision and anxiety in a sample of 229 university students, a regression analysis revealed that presence of meaning in life mediated the relationship between career indecision and
state anxiety. These implications are profound in that they confirm the need for more interventions and assessment strategies aimed at exploring the sense of meaning in career counseling for college students. Currently, there are a limited number of formal assessments that aimed at addressing meaning in the context of vocational concerns pertaining to career decision making (Miller & Rottinghaus, 2014). This is problematic given that this research suggests it may be helpful to explore how certain career choices may inform one's overall sense of meaning regardless of whether or not a client is actively searching for meaning.

In addressing the limitations of their study, Miller and Rottinghaus (2014) note how this cross-sectional design cannot establish causal directions. Utilizing control group designs would be an important step in supporting client conceptualizations pertaining to an existential framework. Moreover, this sample was mostly comprised of junior and senior psychology majors at a Midwestern university. There is a need for future research that attempts to obtain diverse samples of college students who are in alternate fields of study and alternate geographical locations.

Though previous research has examined presence of meaning in life, few studies have conducted research on how the search for meaning in life might influence the career decision making process. Therefore, examining how the search for meaning in life might motivate students differently might illuminate an important role in career indecision and anxiety. The authors also argue that given how findings support the inclusion of meaning into an existential model, it is imperative that future studies test the importance of other existential ideas, such as death anxiety. By including existential ideas like death anxiety in future studies pertaining to the career decision-making process, vocational psychologists and career counselors will gain a better understanding of their relevance in client conceptualizations. Hence, vocational psychology
would likely benefit from a theory that has received empirical support in demonstrating how this existential construct influences human behavior and decision making processes in numerous facets.

**Terror Management Theory**

For years, philosophers, psychologists, and existentialists have sought to understand what makes human beings a unique species in order to explain why people do what they do when they do it. Inspired by the work of Ernest Becker (1973) and Charles Darwin (1859), social psychologists Greenberg, Pyszczynski, and Solomon (1986) devised terror management theory to describe how human behavior and decision making is influenced by knowledge of one's mortality. Greenberg and colleagues align with Darwin (1859) in that human beings are like every other living organism in that we possess instincts that act in the service of self-preservation. They also align with Becker (1973) in that human beings possess unique intellectual capacities inevitably granted us the awareness that our lives can and will occur at some point in time. Terror management theory argues that this fundamental conflict birthed a need for psychological fortitude to buffer the looming anxiety and potentially overwhelming terror of death.

Culture and self-esteem serve to provide this psychological fortitude in a number of different ways that shape human behavior and decision making processes in attempts to avoid a continual fearful confrontation with the fact of mortality (Landau, Solomon, Pyszczynski, Greenberg, 2007). This is done through the collective construction and maintenance of cultural worldviews that allow human beings to deny the notion that physical death ends in absolute annihilation (Landau et al., 2007). Cultural worldviews refer to socially constructed and widely shared belief systems about the nature of reality that imbue life with meaning. These
perspectives provide opportunities for death transcendence when one upholds cultural standards of value derived from the dominant culture imparting the socially constructed cultural worldview. As one upholds the cultural standard of value, this allows the individual to feel like a valuable contributor to the meaningful worldview, resulting in the creation and maintenance of self-esteem. When an individual feels that he or she is a significant being within a world of meaning, this reinforces the notion that their existence will transcend beyond physical death either through some literal form of immortality via the supernatural (e.g., heaven, reincarnation, nirvana, etc.), or symbolic form of immortality via enduring accomplishments (e.g., writing a book that will forever change the way human beings behave towards one another, creating a loving family and children that make the world a better place, choosing a career path that allows one to produce an adequate amount of meaningful work and financial security, etc.) (Solomon, Greenberg, & Pyszczynski. 2015)

In short, terror management theory identifies how people manage the uniquely human problem of the potential for terror resulting from death awareness (i.e., the inevitability of physical death) by maintaining faith in a cultural worldview, which serves to generate opportunities for one to strive for self-esteem by living up to the standards of value prescribed by that worldview (Solomon, Greenberg, & Pyszczynski. 2015). Terror management theory was devised to explain why people have an innate need to feel good about themselves (i.e., need self-esteem), why people have an innate need to believe that out of all the conceptions of reality that exist, theirs happens to be the one that accurately reflects an objective reality, how these vast varieties of worldviews relate to self-esteem, and how striving to uphold these worldviews make it hard for people to get along with others who do not share their beliefs about the nature of reality (Pyszczynski et al., 2006). Moreover, these explanations need not require people to
consciously experience death anxiety or physiological arousal of any kind. The central principles of terror management theory are summarized and empirically validated through two hypotheses. The first tenet is known as the anxiety buffer hypothesis, which states that the potentially paralyzing anxiety of peoples’ awareness of their mortality is managed by dual mechanisms of cultural worldviews and self-esteem (Schmeichel et al., 2009). The second tenet of terror management theory is the mortality salience hypothesis, which argues that if a dual-process model exists in the service of self-preservation from death related concerns via protecting one's cultural worldviews and striving for self-esteem within that worldview, then heightening the salience of mortality will intensify commitment to, and defense of, these psychological constructs (Landau et al., 2006).

A Dual Process Model

Given that cultural worldviews serve as death anxiety buffers, these terror management needs constantly guide human behavior regardless of whether or not an individual is consciously concerned with their own death on a day-to-day basis (Rosenblatt et al., 1989). Hence, one does not need actively think about his or her death in order for death anxiety to influence behaviors or decision making processes. To explain the psychological processes by which the conscious and unconscious awareness of death influences one's behavior via defending his or her cultural worldview and self-esteem, Pyszczynski, Greenberg, and Solomon (1999) propose a dual process model of human motivation. This dual process model explains how humans strive for psychological equanimity by suppressing and repressing death awareness via two distinct defensive responses (i.e., responses activated by thoughts of death that are either conscious or on the fringes of consciousness). Proximal defenses entail the suppression of death-related thoughts, pushing the problem of death into the future and out of the conscious mind. These
defenses are rational, threat-focused, and become activated when thoughts of death are in current conscious attention (Pyszczynski, Greenberg, & Solomon, 1999). For example, when an individual is reminded about how their smoking habit is detrimental to their physical health, causing them to actively think about their own mortality, a proximal defense could be that they devise a plan to quit smoking, or a proximal defense could be that they remind themselves of every smoker they've ever known who lived long happy lives. Both responses serve to confront the core problem of death and suppress the knowledge of their mortality into the distant future via denying one's vulnerability and susceptibility to hazardous events. They can also vary in functionality, given that actively following a plan to extinguish an unhealthy behavior is more functional or than passively choosing to not confront one's unhealthy behavior. Nevertheless, both responses hold the same purpose in that they attempt to sustain psychological equanimity (i.e., buffer death anxiety) in ways that directly pertain to literal (e.g., physical) self-preservation.

Distal terror management defenses are much broader. These responses pertain to self-esteem striving and sustaining faith in one’s cultural worldview to buffer death anxiety by preventing death thoughts from entering focal attention (i.e., consciousness). These defenses are experiential, not related to the problem of death in any semantic or rational way, but still serve an important function in that they allow one to sustain psychological equanimity by repressing death thought awareness (Pyszczynski, Greenberg, & Solomon, 1999). For example, when the individual who is reminded about the detriments of their smoking habit suppresses death thought awareness via proximal defense responses, a distal defense might be that they no longer find themselves associating with other individuals who smoke, or a distal defense could be that they find themselves primarily associating with other smokers. Both responses serve to sustain faith in one's cultural worldview (i.e., seek approval from others who affirm a smokers worldview) so
they can feel like a valuable contributor within their meaningful worldview (i.e., strive for self-esteem by living up to the cultural standards of value associated with a smoker identity or non-smoker identity). The decision making process guiding these responses aren't necessarily related to the problem of death (e.g., physical health) in any semantic or rational way. Nevertheless, they are both motivated by social constructed standards of value that shape one's cultural worldview, determining opportunities for self-esteem striving and how one pursues psychological equanimity in the service of symbolic (e.g., social) self-preservation.

**Measuring the Unconscious**

An experimental design called the mortality salience manipulation was created to demonstrate how the induction of death thought awareness has a causal effect on human behavior and decision making processes (Fritsche, Jonas, Fischer, Koranyi, & Berger, 2007). The most common mortality salience induction method involves asking participants to write a paragraph response to two open-ended prompts: “Please briefly describe the emotions that the thought of your own death arouses in you” and “Jot down, as specifically as you can, what do you think will happen to you as you physically die and once you are physically dead?” These requests are presented to the experimental group, along with other materials pertaining to other psychological constructs. In order to establish that no mood state differences exist between this experimental group and a given control group, control subjects are often asked to answer similar questions that may induce some anxiety. A common control group method involves asking participants to write a paragraph response to two open-ended prompts: “Please briefly describe the emotions that the thought of experiencing severe dental pain arouses in you” and “Jot down, as specifically as you can, what do you think happens to you as you experience severe dental pain?” These requests are presented to the control group, along with the same materials.
presented to the experimental group that do not include the mortality salience induction. Studies have consistently found that this methodology controls for state anxiety differences between mortality salience induction experimental groups and dental pain induction control groups (e.g., Fritsche, Jonas, Fischer, Koranyi, & Berger, 2007). Hence, this allows researchers to test how decision making processes and behavioral responses differ as a result of death thought accessibility and not simply from a worrisome or painful event.

Over 300 experimental studies have offered empirical support for terror management theory and how mortality salience influences behavioral changes pertaining to personality, prejudice, self-esteem striving, social judgment, creativity, health, sex and other bodily activities, aggression, altruism, risk-taking, justice, national identification, religious conviction, politics, aesthetic preferences, desire for children, conformity, learning preferences, and close relationships (Landau et al., 2007). These studies have been conducted by independent researchers in at least 15 different countries, including collectivistic cultures such as Japan and Iran (Landau et al., 2007), suggesting that terror management theory provides a functional explanation for how culture, self-esteem, death anxiety, and death awareness motivates human behaviors and influences decision making processes.

**Bridging the Gap**

To better understand the relationship between death awareness and explicit perceptions of meaning in life, Vess, Routledge, Landau, and Arndt (2009) conducted research examining how one's preference for a structured understanding of the world and one's identity influence this relationship. One's personal need for structure refers to the preference for interpreting information in ways that minimize ambiguity and confusion (Neuberg & Newsom, 1993). Individuals who have a high personal need for structure typically possess a relatively inflexible
orientation toward information processing and rely on preexisting schemas to simplify the complex information pertaining to the social world. Individuals who have a low personal need for structure are typically more flexible toward information processing, less reliant on preexisting schemas, and are motivated to seek out information that is novel and ambiguous (Vess et al., 2009). Given that prior research has shown that high personal need for structure individuals tend to defend clear knowledge structures in response to mortality reminders (Landau et al., 2004), these scholars hypothesized that high personal need for structure individuals would have stronger perceptions of meaning in life as a response to death awareness to affirm meaning (i.e., defend their cultural worldview). They also hypothesized that low personal need for structure individuals would experience deficits in perceptions of meaning in life as a response to death awareness. However, rather than experiencing existential meaninglessness, the authors argued that these individuals simply affirm meaning in ways that do not rely on pre-existing schemas, such as exploration for novel ideas and experiences to imbue meaning in life. After conducting a series of different mortality salience manipulations, the results supported these hypotheses, suggesting that one's personal need for structure moderates the relationship between death awareness and perceptions of meaning in life (Vess et al., 2009).

Since a vast array of research studies have been conducted around the world to highlight the relevance of death awareness, scholars have begun to advocate for the integration of terror management theory implications in applied counseling settings (Lewis, 2014; Vance 2014). Death anxiety appears to influence a great deal of human behaviors in numerous cultural settings. Given that career indecision has been linked to various types of anxiety, it is surprising that no one has investigated how death anxiety may influence career decision making. Furthermore, death awareness is an important component of Yalom's (1980) existential theory,
which has begun to garner attention in the field of vocational psychology. There is an existing need for empirical research that offers a better understanding of how existential components apply to career counseling conceptualizations. Considering the body of vocational literature that has identified ways that career indecision, meaning in life, anxiety, and personality are important constructs pertaining to the career decision making process for undergraduate students, terror management theory may offer insight on how vocational psychology can continue to promote more holistic and contextualized approaches in career counseling settings.
Chapter 3

Method

Given the high prevalence of anxiety among undergraduate students and its affiliation with career indecision, a better understanding of this relationship is critical for improving career client conceptualizations and interventions. The current study examined how mortality salience influences meaning in life and the career decision making process for undergraduate students. Extending terror management theory research on how mortality salience and personal need for structure mediate these relationships will offer implications on how career counselors can better understand death anxiety in efforts to promote career maturity. This chapter will describe the methods used for the current study. Participants, study procedures, research hypotheses, and instruments will be discussed.

Current Study

The current study consists of a between-group posttest only true experimental design. Through the use of a mortality salience survey manipulation, this research will build upon the work of Miller and Rottinghaus (2014) by further exploring the relationships among career indecision, meaning in life, and anxiety with an emphasis on the unique influence of anxiety associated with death thought awareness. Although presence of meaning in life appears to mediate the relationship between career indecision and anxiety, causal direction remains uncertain (Miller & Rottinghaus, 2014). The purpose of this study is to test terror management theory by relating death anxiety to presence of meaning in life and career indecision for college students in the United States. Given that Vess, Routledge, Landau, and Arndt (2009) identified ways that personal need for structure mediates the relationship between death anxiety and meaning in life, this study tests how personal need for structure predicts relationships between
death anxiety, meaning in life, and career indecision among undergraduate students. The following research questions will be addressed:

1. Do mortality salience and personal need for structure predict the presence of meaning in life or career indecision for college students?

   Hypothesis 1a: Mortality salience and personal need for structure will predict presence of meaning in life.

   Hypothesis 1b: Mortality salience and personal need for structure will predict career indecision.

2. Do mortality salience and personal need for structure predict a positive or inverse correlation with meaning in life and career indecision?

   Hypothesis 2a: Mortality salience and personal need for structure will predict a positive correlation with meaning in life. Individuals who have higher preferences in personal need for structure will have greater perceptions of meaning in life when mortality is salient in comparison to the control group. Individuals who have lower preferences in personal need for structure will have weaker perceptions of meaning in life when mortality is salient in comparison to the control group.

   Hypothesis 2b: Mortality salience and personal need for structure will predict an inverse correlation with career indecision. Individuals who have higher preferences in personal need for structure will be more decisive about their career path when mortality is salient in comparison to the control group. Individuals who have lower preferences in personal need for structure will be more indecisive
about their career path when mortality is salient in comparison to the control group.

Sample and Participant Selection

The participants in this study consisted of 278 undergraduate students who were at least 18 years of age, born in the United States, and enrolled full-time at a college in the United States. Amazon’s Mechanical-Turk (MTurk) system was used to request participants who meet the study’s criteria (i.e., full-time degree seeking students at a national university who are American citizens). MTurk has become an increasingly popular data collection system that provides quick and inexpensive access to high-quality behavioral research participants. Behavioral research regarding the use of MTurk has shown that participants are truthful and consistent when providing demographic information (Rand, 2011). Participants are as reliable as non-MTurk samples and are more representative of the general population than traditional student samples (Buhrmester, Kwang, & Gosling, 2011). In the MTurk system, participants register as “workers,” and provide their payment information to Amazon. Researchers (i.e., “requesters”) post “HITs” (i.e., the study announcement) for the “workers” to complete. All data collected through MTurk are anonymous. Upon recruitment, all consenting individuals received $2.00 for participating in this study based upon hypothesized time to complete the set of questionnaires (10-15 minutes).

All 278 participants correctly answered the validity items (e.g., Please answer mostly false for this question). However, 23 participants were excluded due to incomplete survey data and 41 participants were excluded due to an inadequate amount of time spent on the survey tasks. This yielded a sample of 214 participants. Students ranged in age from 18 to 41 years ($M = 23.93, SD = 4.496$). With regard to racial demographics, the majority of the sample described
themselves as Caucasian (63.6%). African American individuals made up 12.6% of the sample, 10.2% were Latinos, 8.8% were Asian American, 1.4% self-identified as bi-racial or multi-racial, and less than 1% of the sample described themselves as “Other.”

**Procedures**

Prior to beginning recruitment for this study, Institutional Review Board (IRB) approval was obtained. Following acceptance to the study, individuals with an MTurk account were solicited to participate in a study investigating how personality characteristics relate to attitudes, judgments, and career decisions. Individuals who were interested in the study were required to fill out a questionnaire with items targeted to identify individuals who meet the participation criteria (i.e., American citizenship and full-time enrollment in a national university). Eligible participants were directed to the survey via a Qualtrics link where they were given the chance to review an information statement and indicate consent by choosing to continue on to the current study survey (See Appendix A).

Participants were then randomly assigned to one of two different survey packets. Both surveys contained the same instruments pertaining to the constructs of interest (i.e., demographic data, personal need for structure, presence of meaning in life, and career indecision), as well as a short vignette in the same sequence. Following informed consent, participants completed forms assessing demographic information (Appendix B) and personal need for structure (Appendix C). In addition to these measures, individuals assigned to the experimental group completed a mortality salience induction task (Appendix D). This involves asking participants to write a paragraph response to two open-ended prompts: “Please briefly describe the emotions that the thought of your own death arouses in you” and “Jot down, as specifically as you can, what do you think will happen to you as you physically die and once you are physically dead?”
Individuals assigned to the control group were given parallel task pertaining to dental pain (Appendix E) in place of the mortality salience induction task. This serves as a generally aversive topic used frequently in TMT research (Landau et al., 2006), which involves asking participants to write a paragraph response to two open-ended prompts: “Please briefly describe the emotions that the thought of experiencing severe dental pain arouses in you” and “Jot down, as specifically as you can, what do you think happens to you as you experience severe dental pain?” Participants are then asked to provide a short paragraph response to each question. In both surveys, these prompts were administered after the personal need for structure scale and prior to the innocuous vignette delay. Prior research has established that reviewing an innocuous vignette after a salience manipulation serves as an adequate delay exercise, ensuring that thoughts of death are highly accessible but outside conscious awareness (Vess et al., 2009).

Upon completing the salience manipulation task, participants were asked questions pertaining to the innocuous vignette (Appendix F) prior to completing forms assessing meaning in life (Appendix G), and career indecision (Appendix H). Once completed, the reviewed the survey data to ensure it was completed in its entirety. In turn, $2.00 was disbursed into the MTurk collection account of each individual participant who completed the entire survey.

Measures

Validity Indicators. A series of 4 validity indicators were dispersed throughout the survey. These indicators consisted of questions asking for specific responses to items (e.g., “Please answer “Moderate” for this question.”). Participants were required to correctly answer all of these items. In the current study, all participants correctly answered each validity indicator.

Personal Need for Structure Scale. The Personal Need for Structure Scale (Neuberg & Newsom, 1993; Thompson et al., 2001) is a 12-item measure designed to assess the extent to
which an individual feels the need to simplify and structure their world into a less complex and more manageable form. There are three subscales including: Preference for Orderliness (PO), Discomfort with Unpredictability (DU), and Disdain for Ambiguity (DA). Items are answered using a 6-point Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree) with higher scores indicating a greater preference for order, certainty, and unambiguous knowledge (Thompson et al., 2001). Items 2, 5, 6, and 11 are reverse scored. The total PNS score is obtained by adding the values of items 1-12, producing a total score range of 12 to 72 points.

Preference for Orderliness measures the desire to process information in an orderly way (e.g., “I enjoy having a clear and structured mode of life”). Discomfort with Unpredictability measures the desire to process information that indicates what will happen in the future (e.g., "I hate to be with people who are unpredictable"). Disdain for Ambiguity measures the desire to process information that can be considered objective (e.g., “I don’t like situations that are uncertain”).

Neuberg and Newsom (1993) established the internal consistency of the scale using a large independent study of 2,900 undergraduate students \((a = .77)\). Test-retest reliability was also confirmed over a 12 week period for the entire scale \((r = .76)\). Convergent and discriminant validity was tested by comparing total PNS scores to total scores on measures assessing conceptually related constructs: the Routinization Scale, the Rigidity Scale, the Intolerance of Ambiguity Scale, and the Uncertainty Orientation Inventory. M.M. Thompson et al. (2001) also validated the PNS scale with an undergraduate sample population, computing the internal consistency \((a = .84)\) and correlations ranging from .40 to .60. Mean PNS scores were calculated for the current study (see Table 4.1) and the measure demonstrated good internal consistency reliability \((a = .86)\). For the purpose of this study, the median PNS sample score was
used to group participants in either “High” or “Low” categories prior to the analysis. Please see Appendix C for the complete PNS measure.

**Meaning in Life Questionnaire.** The Presence of Meaning in Life subscale (MLQ-P) of Steger et al.’s (2006) Meaning in Life Questionnaire is a 5-item measure designed to assess the extent to which one currently experiences his or her life as meaningful. This measure asks participants to indicate how true a statement is pertaining to presence of meaning in life (e.g., “I have a good sense of what makes my life meaningful”). Items are answered using a 7-point Likert scale ranging from 1 (absolutely untrue) to 7 (absolutely true). The total MLQ-P score is obtained by adding the values of the 5 items (the 5th item is reverse scored), producing a total score range of 5 to 35 points. A higher score on the MLQ-P subscale represents a greater sense of subjective meaning in one’s life.

The MLQ-P has been widely used in studies with college populations (Kashdan & Steger, 2007). Steger et al. (2006) established convergent validity for the Meaning in Life Questionnaire with the Purpose in Life Scale and the Life Regard Index. Based on a sample of 402 college students, the MLQ-P demonstrated excellent internal consistency ($\alpha = .82$) and appeared stable over 4 weeks with test-retest reliability coefficients of .70 (Steger et al., 2006). Subsequent studies utilizing the MLQ-P subscale with college students have demonstrated good internal consistency and reliability (Miller & Rottinghaus, 2014). Mean MLQ-P scores were calculated for the current study (see Table 4.1) and the measure demonstrated good internal consistency reliability ($\alpha = .92$). Please see Appendix C for the complete PNS measure.

**Career Decision Scale.** Career indecision is measured by a subscale on the Career Decision Scale (CDS; Osipow, Carney, & Barak, 1976) and designed to identify the degree of difficulty or the inability to make a career decision. Since its inception, the CDS has become a
scale primarily used with college student populations to assess an individual's degree of indecision (Winer, 1992). Chartrand and Robbins (1990) argue that it is the best known instrument for the assessment of career indecision. This measure asks participants to indicate how true a statement is pertaining to career indecision (e.g., “I can’t make a career choice right now because I don’t know what my abilities are”). The subscale contains 16 items measuring career indecision on a 4-point Likert scale (1= not at all like me, 4 = exactly like me). Score are obtained by adding the values of the 16 items, producing a total score range of 16 to 64 points. A higher score on the indecision scale indicates a greater level of career indecision. Hartman, Fuqua, and Hartman (1983) reported a high internal consistency estimate for the career indecision subscale (a = .88). Osipow, Carney, and Barak (1976) calculated test-retest reliability ranging from .82 to .90 over a 6 week interval with college student populations. Subsequent studies utilizing the Career Indecision subscale with college students have demonstrated good internal consistency and reliability (Miller & Rottinghaus, 2014). Mean Career Indecision scores were calculated for the current study (see Table 4.1) and the measure demonstrated good internal consistency reliability (a =.90). Please see Appendix H for the complete CDS measure.

**Data Analysis**

First, the data were screened using a series of validity indicators. Next, a multivariate outlier analysis was conducted alongside assessment of skewness and kurtosis for the data. Results were analyzed using a two-way multi-covariate model to explore relationships between the experimental group and the control group among total scores for the PNS, MLQ-P, and CDS measures while controlling for demographic data. A separate regression model was used to further explore the nature of relationships between the experimental group and the control group among total scores on the PNS, MLQ-P, and CDS measures while controlling for demographic
data. Descriptive statistics regarding participant demographics are provided above. The following hypotheses were tested:

Hypothesis 1a: Mortality salience and personal need for structure will predict a college student’s presence of meaning in life. This hypothesis will be tested using the PNS scale, and MLQ-P scores. A MANCOVA analysis is conducted to identify an interaction effect while controlling for age, first generation college student status, year in school, and parental level of education.

Hypothesis 1b: Mortality salience and personal need for structure will predict a college student’s career indecision. This hypothesis will be tested using the PNS Scale and CDS scores. A MANCOVA analysis is conducted to identify an interaction effect while controlling for age, first generation college student status, year in school, and parental level of education.

Hypothesis 2a: Mortality salience and personal need for structure will predict a positive correlation with meaning in life. Individuals who have higher preferences in personal need for structure will have greater perceptions of meaning in life when mortality is salient in comparison to the control group. Individuals who have lower preferences in personal need for structure will have weaker perceptions of meaning in life when mortality is salient in comparison to the control group. This hypothesis was tested using the PNS and MLQ-P scores. A regression analysis is conducted to identify this effect while controlling for age, first generation college student status, year in school, and parental level of education.

Hypothesis 2b: Mortality salience and personal need for structure will predict an inverse correlation with career indecision. Individuals who have higher preferences in personal
need for structure will be more decisive about their career path when mortality is salient in comparison to the control group. Individuals who have lower preferences in personal need for structure will be more indecisive about their career path when mortality is salient in comparison to the control group. This hypothesis was tested using the PNS and CDS scores. A regression analysis is conducted to identify this effect while controlling for age, first generation college student status, year in school, and parental level of education.
Chapter 4

Results

This chapter describes and summarizes the statistical analysis used to evaluate the research questions and hypotheses established in the previous chapters. First, data screening procedures are discussed. Next, each hypothesis will be addressed in the order presented in the previous chapter. For Hypothesis 1, a two-way analysis of multi-covariance examines the relations of the mortality salience and personal need for structure interaction effect on the presence of meaning in life and career indecision while controlling for demographic information (i.e., age, first generation college student status, year in school, and parental level of education). Following these results, a series of linear regressions will further explore the nature of how the mortality salience and personal need for structure interaction effects the presence of meaning in life and career indecision. Lastly, interaction effects examining the potential moderating effects of demographic information will also be explored.

Data Screening

Prior to the main analysis, all the variables of interest were examined for missing values, outliers, and normality distribution. A power analysis was conducted to ensure the sample size was adequate for the analysis of multi-covariance. A Mahalanobis procedure (Sapp, Gregas, & Scholze, 2007) for an analysis of multi-covariance was conducted and no outliers were found in the data. Skewness and kurtosis for all the dependent measures also revealed a normal distribution of scores. Furthermore, a Shapiro-Wilk’s test (Shapiro & Wilk, 1965) was conducted and indicated that the dependent variables were normally distributed. Results from the MANCOVA indicated no significant differences between groups with regard to the Personal Need for Structure scale (PNS), Presence of Meaning in Life scale (MLQ-P), and Career
Indecision scale (CDS). Table 4.1 provides descriptive statistics for the outcome measures utilized in the study.

Table 4.1

Means, Standard Deviations, and Correlations for Outcome Measures

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PNS</td>
<td>214</td>
<td>46.66</td>
<td>9.09</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. MLQ-P</td>
<td>214</td>
<td>23.67</td>
<td>6.88</td>
<td>.10</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>3. CDS</td>
<td>214</td>
<td>47.69</td>
<td>9.09</td>
<td>.09</td>
<td>.37**</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. *p < .05, **p < .01. Personal Need for Structure (PNS; 1= strongly disagree, 6= strongly agree), Presence of Meaning in Life (MLQ-P; 1= absolutely untrue, 7= absolutely true), Career Indecision (CDS; 1= not at all like me, 4= exactly like me).

Hypothesis 1

A two-way analysis of multi-covariance was conducted to test hypothesis 1, which examined if the interaction of mortality salience and personal need for structure (PNS) predicts the presence of meaning in life (MLQ-P) and career indecision (CDS) for college students while controlling for age, first generation college student status, year in school, and parental level of education. Hypothesis 1a stated that mortality salience and personal need for structure will predict a difference in how college students perceive meaning in their current lives. The results of the descriptive statistics and analysis for this measure are reported in Table 4.2 and 4.3. The overall group mean on the MLQ-P was 23.67 ($SD=6.88$). The mean for the mortality salience experimental group was 23.00. The mean for the dental salience control group was 24.30 ($SD=6.54$). The mean for the high personal need for structure group was 24.29 ($SD=7.08$). The mean for the low personal need for structure group was 23.00 ($SD=6.62$). As indicated in the table, the $F$-ratio for the interaction effect did not meet significance, $F(1, 214)=1.42$, $p > .05$. Thus, there were no significant mean differences in presence of meaning of life explained by the mortality
salience and personal need for structure interaction. Additionally, neither main effects of
mortality salience nor personal need for structure were significant.

Table 4.2

Descriptive statistics for Mortality Salience and Personal Need for Structure on Presence of Meaning in Life

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>214</td>
<td>23.67</td>
</tr>
<tr>
<td>Condition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mortality Salience</td>
<td>104</td>
<td>23.00</td>
</tr>
<tr>
<td>Control Group</td>
<td>110</td>
<td>24.30</td>
</tr>
<tr>
<td>PNS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>111</td>
<td>24.29</td>
</tr>
<tr>
<td>Low</td>
<td>103</td>
<td>23.00</td>
</tr>
</tbody>
</table>

Note. *p < .05, **p < .01. PNS= Personal Need for Structure

Table 4.3

Analysis of Multi-covariance for Presence of Meaning in Life

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Squares</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality Salience</td>
<td>57.57</td>
<td>1</td>
<td>57.57</td>
<td>1.23</td>
</tr>
<tr>
<td>PNS</td>
<td>49.55</td>
<td>1</td>
<td>49.55</td>
<td>1.06</td>
</tr>
<tr>
<td>MS x PNS</td>
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<td>66.21</td>
<td>1.42</td>
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<tr>
<td>Age</td>
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<td>1</td>
<td>167.88</td>
<td>3.59</td>
</tr>
<tr>
<td>Year in School</td>
<td>28.36</td>
<td>1</td>
<td>28.36</td>
<td>.61</td>
</tr>
<tr>
<td>Generation</td>
<td>13.75</td>
<td>1</td>
<td>13.75</td>
<td>.29</td>
</tr>
<tr>
<td>Parent Ed</td>
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<td>5.82</td>
<td>0.13</td>
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<tr>
<td>Error</td>
<td>9626.08</td>
<td>206</td>
<td>46.73</td>
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</tr>
<tr>
<td>Total</td>
<td>130000.00</td>
<td>214</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *p < .05, **p < .01. PNS Structure, Age= Number of years, Year in School= Freshman = Personal Need for Sophomore Junior Senior and 5th year, 1st Generation= First generation college student status, Parental Ed= Parents’ highest level of education

Estimated Marginal Means of MLQ-P Scores

Figure 1. Estimated Marginal Means of Presence of Meaning in Life Scores
Hypothesis 1b stated that mortality salience and personal need for structure will predict a difference in how college student’s career indecision. The results of the descriptive statistics and analysis for this measure are reported in Table 4.4 and 4.5. The overall group mean on the CDS was 47.69 ($SD = 9.09$). The mean for the mortality salience experimental group was 48.28 ($SD = 7.18$). The mean for the dental salience control group was 47.14 ($SD = 8.74$). The mean for the high personal need for structure group was 48.30 ($SD = 9.28$). The mean for the low personal need for structure group was 47.04 ($SD = 8.88$). As indicated in the table, the $F$-ratio for the interaction effect did not meet significance, $F(1, 214) = .312$, $p > .05$. Thus, there were no significant mean differences in presence of meaning of life explained by the mortality salience and personal need for structure interaction. Additionally, neither main effects of mortality salience nor personal need for structure were significant.

Table 4.4

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>214</td>
<td>47.69</td>
</tr>
<tr>
<td>Condition</td>
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<td></td>
</tr>
<tr>
<td>Mortality Salience</td>
<td>104</td>
<td>48.28</td>
</tr>
<tr>
<td>Control Group</td>
<td>110</td>
<td>47.14</td>
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<tr>
<td>PNS</td>
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<td></td>
</tr>
<tr>
<td>High</td>
<td>111</td>
<td>48.30</td>
</tr>
<tr>
<td>Low</td>
<td>103</td>
<td>47.04</td>
</tr>
</tbody>
</table>

Note. *p < .05, **p < .01. PNS= Personal Need for Structure
Table 4.5

**Analysis of Multi-covariance for Career Indecision**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Squares</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality Salience</td>
<td>77.18</td>
<td>1</td>
<td>77.18</td>
<td>.94</td>
</tr>
<tr>
<td>PNS</td>
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<td>1</td>
<td>47.97</td>
<td>.59</td>
</tr>
<tr>
<td>MS x PNS</td>
<td>25.49</td>
<td>1</td>
<td>25.49</td>
<td>.31</td>
</tr>
<tr>
<td>Age</td>
<td>203.53</td>
<td>1</td>
<td>203.53</td>
<td>2.49</td>
</tr>
<tr>
<td>Year in School</td>
<td>13.61</td>
<td>1</td>
<td>13.61</td>
<td>.17</td>
</tr>
<tr>
<td>Generation</td>
<td>182.46</td>
<td>1</td>
<td>182.46</td>
<td>2.23</td>
</tr>
<tr>
<td>Parent Ed</td>
<td>278.55</td>
<td>1</td>
<td>278.55</td>
<td>3.40</td>
</tr>
<tr>
<td>Error</td>
<td>16858.06</td>
<td>206</td>
<td>81.84</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>504342.00</td>
<td>214</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. \*p < .05, \**p < .01. PNS= Personal Need for Structure, Age= Number of years, Year in School= Freshman Sophomore Junior Senior and 5\textsuperscript{th} year, 1\textsuperscript{st} Generation= First generation college student status, Parental Ed= Parents’ highest level of education*

**Figure 2. Estimated Marginal Means of Career Indecision Scores**

**Hypothesis 2**

Hypothesis 2a stated that mortality salience and personal need for structure will predict a positive correlation with meaning in life. Hypothesis 2b stated that mortality salience and personal need for structure will predict an inverse correlation with career indecision. Given the previous findings that mortality salience and person need for structure do not yield a significant interaction effect pertaining to presence of meaning in life and career indecision, regression analyses addressing these relationships were not warranted.
Chapter 5

Discussion

Given the prevalence of career indecision among college students, it is imperative that researchers and career counselors aim to better understand how anxiety influences the career decision making process. Innovative modalities, such as an existential framework, may hold promise in this pursuit. The present study was developed to explore how terror management theory might identify a causal relationship between death anxiety and career indecision. This chapter will discuss the results of the study presented in the previous chapter and their potential implications. First, findings of the research hypotheses will be discussed. Next, research and practical implications of the study will be addressed. Lastly, the limitations of this study and recommendations for future research will be presented.

Results of the Hypotheses

Hypotheses 1 and 2

With regard to hypotheses 1 and 2, which examined how mortality salience and personal need for structure relate to a college student’s meaning in life and career indecision, neither meaning in life nor career indecision appeared to be influenced by an interaction effect. More specifically, the collective variance on the MLQ-P and CDS scores could not be predicted by the collective categories of high PNS scores, low PNS scores, the artificial inflation of death anxiety, and the artificial inflation of state anxiety. This result contradicts previous literature that suggests personal need for structure and mortality salience can predict how an individual is either inclined to perceive life to be filled with meaning or search for novel experiences that imbue life with meaning (Vess et al., 2009). This suggests the need for a deeper understanding of how cultural and developmental factors mediate relationships between mortality salience, personal need for
structure, and perceptions of meaning in life over time. These findings also suggest that mortality salience and personal need for structure may not predict career indecision for a college student population. Though mortality salience may not directly influence a college student’s career indecision, career indecision may make a college student more prone to death anxiety, which could help explain the relationship between career indecision, death anxiety, and their collective influences on the career decision-making process over time. It is possible that the hypotheses were not supported as a result of the experiment’s design as a field study. Given that participants were able to take the surveys online, the mortality salience potency could have been compromised if participants were too distracted by extraneous stimuli. Moreover, such distractors could have prevented participants from adhering to instructions and focusing on tasks within a reasonable timeframe (e.g., participants could have taken more than 20 minutes to complete the survey due to interruptions).

**Clinical Implications**

The results of the current study suggest that mortality salience may not directly influence a college student’s career decision. Yet, the degree to which career indecision relates to existential concerns over time remains uncertain. Despite career indecision being a normal stage of the career decision-making process for many college students, career indecision is often regarded as a construct that emerges when problems occur in the career decision-making process (Fabio et al., 2013). Thus, it is important for career counselors to remain cognizant of the fact that even though career indecision may relate to anxiety in a maladaptive context, this does not make career indecision inherently dysfunctional. Moreover, it is important to consider this in light of previous findings that have demonstrated relations among career indecision, meaning in life, and death anxiety (Miller & Rottinghaus, 2014). Despite the lack of significant findings in
the current study, terror management theory may still offer viable theoretical and clinical implications for vocational psychology.

Savickas (2012) argues that work world of the 21st century provokes feelings of anxiety and insecurity due to the increasingly unstable labor market of the information age. In light of the relationship between career indecision and anxiety, more holistic methods and conceptualizations are needed in order to help college students adapt to this new and unpredictable reality. Understanding the nature of fear and the role it plays in the career decision-making process is an important component of client conceptualizations that can be easily overlooked or underappreciated. Although the notion that people often make decisions driven by fear may not align with many humanistic perspectives, denying this fact can often do a disservice for career counseling clients.

Terror management theory argues that human beings are evolutionarily designed to deny the fact that death is inevitable and can happen at any point in time (Landau et al., 2007). It is argued that as our hominin ancestors began to achieve consciousness as we know it today, the ever-present awareness of our finite mortality began to manifest into existential concerns that inevitably required an adaptive response. Thus, culture was birthed to buffer and navigate the emotional threat of these existential conundrums. In adherence to social constructionism, Solomon, Greenberg, and Pyszczynski (2015) describe culture as a humanly constructed shared set of beliefs about the nature of reality designed to imbue the world with meaning, purpose, order, and stability. Human beings constantly strive for psychological equanimity (i.e., avoid and deny existential anxiety) by embracing cultural beliefs and value systems.

Assuming that our human ancestors unconsciously birthed a symbolic reality and utilized social constructs to craft identifies that comprise different “selves” as a natural response to
combat death, this appears to have worked out quite well for our species. Having a multitude of identities allows for both literal and symbolic self-preservation. In the information age, one’s vocational identity is an incredibly important component of one’s sense of self-worth (i.e., self-esteem). In American society, when an adult lacks a vocational identity, they receive constant reminders that they may not be fulfilling or living up to the standards established by the dominant culture. Hence, American adults inevitably become psychologically exposed to literal existential threats and vulnerabilities (e.g., I don’t have a job that pays me money that allows me to pay for food, shelter, health care, etc.) as well as symbolic existential threats and vulnerabilities (e.g., I don’t have a job that pays me money that allows me the standardized power of social influence, so my thoughts, feelings, opinions, and desires reflect how my “self” does not really make a difference in the world). Particularly, the functionality of this type of unconscious dialogue offers a profound testament to the potential for vocational frameworks that utilize constructionist and narrative interventions, such as Life Designing (Savickas, 2012).

It is necessary for career counselors and vocational psychologists to have a sound understanding of how and why human beings make meaning in their social worlds when offering vocational guidance (Cohen, 2003). Terror management theory offers evolutionary and psychodynamic rationales that can serve to better contextualize vocational guidance rituals. For example, terror management theory could depict Life Designing as a process by which counselors help build psychological fortitude (i.e., symbolic empowerment) in clients. Savickas (2012) describes how this psychological fortitude is facilitated via Construction (i.e., a client’s narrative informs the counselor on how the individual has constructed the self as a valuable contributor within their cultural worldview), Deconstruction (i.e., the counselor identifies the maladaptive components of a client’s narrative that make them prone to the existential angst of
not being a valuable contributor in a meaningful world), Reconstruction (i.e., the counselor synthesizes a client’s micronarratives to craft opportunities for the client to embrace more adaptive identity conceptualizations that can enhance one’s self value within their cultural worldview), Coconstruction (i.e., the client and counselor collaboratively construct a new narrative that empowers the client to strive for vocational opportunities), and Action (i.e., the client continues to build self-sustaining psychological fortitude by demonstrating a relationship between their intentions and actions in the world of work). In turn, this type of existential framework can help vocational psychologists better recognize, understand, explain, navigate, and potentially neutralize that nature of client defenses (i.e., resistance) they often encounter in practice.

**Strengths and Limitations**

This study has several notable strengths. First, this study utilized a post-test only control group design, thereby controlling for many threats to internal validity. History and maturation are controlled by randomization of the mortality salience and dental salience control groups, the lack of pre-testing instruments, and the limited timeframe by which the data were collected (i.e., one week). Moreover, instrumentation, attrition, testing effects, and regression are all controlled due to the nature of a post-test only control group experimental design. Selection and selection-maturation effects are also controlled by randomization in this study. Although most post-test only control group designs are prone to external validity threats, another strength of this study is that participants were pooled from a national data collection system, which heightens the probability that the analysis results are generalizable. Furthermore, the number of participants in the current study provided a sufficient amount of power for the analysis. Another strength of the current study is that it also controls for reactivity of the participants. Since the participants were
not informed on the nature of the study’s intent to induce and observe reactions to mortality salience, we can assume that the subjects were uninfluenced by social desirability effects.

Despite these strengths, a number of limitations must be addressed when interpreting the findings of this study. Though participants were pooled from a national data collection system to enhance the generalizability of the findings, external validity remains a weakness for any post-test only experimental design. Moreover, since the participants were not confined by a region, this lack of specificity should also be considered when interpreting the current findings. Another weakness of this study pertains to the lack of a pre-test control. Although the lack of a pre-test does control for sensitization factors that could influence a posttest, not having a pre-test measure heightens the proneness to a type II error occurrence. Furthermore, despite history being controlled by randomization, timing should also be considered when interpreting the findings of this study. Even though subjects who did not spend an adequate amount of time taking the survey were excluded from the study, the amount of time spent on completing the instruments could not be assessed for every individual participant. Hence, it is possible that not all participants completed the survey in one sitting, which would compromise the experimental effects of a mortality salience primer on the dependent measures. Lastly, though validity indicators, MTurk pre-selection screenings, and participant selection precautions were taken to ensure the credibility of this study’s sample population, any online study is still prone to the potential for subjects falsifying their identities.

**Future Directions for Research**

In accordance with recent literature advocating for holistic and contextual approaches to career counseling, the results of this study suggest a need for research that can identify the viability of particular existential frameworks in vocational psychology. Given that very few
CAREER DECISION-MAKING

studies have sought to establish causal influences within an existential framework, future studies would benefit from utilizing true experimental designs to clarify how such frameworks operate in a field setting. Although previous literature has identified relations between career indecision, meaning in life, and anxiety, vocational psychology would benefit from an existential model that can identify the extent to which career indecision among college students might affect or be effected by different forms of anxiety. Moreover, researchers would benefit from exploring and identifying distinct cultural factors that might moderate these effects. Process and outcome research that tests the viability of interventions specific to existential frameworks within a career counseling setting would also be beneficial.

Future research would also benefit from further exploring cultural and developmental factors that could be influential on mortality salience and personal need for structure interaction effects on presence of meaning in life for college students. For example, these constructs may be more influential for a 20-year-old junior at a major state university who is studying psychology, but less influential for a 25-year-old non-traditional college student at a small private university who is studying electrical engineering.

Theorists have claimed that terror management theory can be used to help standardize and structure the opaque nature of existential psychotherapy in clinical settings (Lewis, 2014; Vance, 2014). Though the current study was unable to establish a causal relationship between death anxiety, meaning in life, and career indecision, future research should continue to explore the extent to which terror management theory can account for ways these constructs pertain to a person’s vocational identity. Researchers would not only benefit from assessing different causal relationships among these constructs while using different modalities to measure these relationships. Assessing how these constructs relate to different populations (e.g., college
students) while controlling for different cultural factors among these populations (e.g., traditional vs non-traditional college students) would also be beneficial. Furthermore, using different experimental modalities (e.g., death thought awareness paradigm) to assess the unconscious influences of these constructs across different samples could clarify the viability of terror management theory in applied career counseling settings.

Conclusion

The current study examined terror management theory by exploring relations between death anxiety, meaning in life, and career indecision among college students in the United States. By examining the interaction effect of mortality salience and personal need for structure on the presence of meaning in life and career indecision for college students, the current study aimed to enhance existential conceptualizations pertaining to the career decision-making process. Results of this study suggest that neither mortality salience nor personal need for structure directly influenced career indecision or presence of meaning in life. Nevertheless, this study provides a number of clinical implications in applying an existential framework to a career counseling setting. It has been argued that an existential framework can offer a deeper understanding of career indecision by addressing causal relationships between existential concerns and a college student’s career decision making process. Given the rapid changes caused by globalization and technology in the 21st century, the nature of human existence in the world today has become incredibly relevant. In turn, the function of existential concerns in the 21st century has been neglected by vocational psychology. Researchers and clinicians are urged to further explore the nature and relevance of these existential concerns to better serve the vocational needs of college students and support these individuals throughout the career decision-making process.
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satisfaction over one year. *Journal of Happiness Studies, 8*(2), 161-179.

doi:10.1007/s10902-006-9011-8


doi:10.1177/0146167207301017


doi:10.1037/a0016417


Appendix A

Information Statement

The Department of Educational Psychology at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.

We are conducting this study to gain a better understanding of your career path. This will entail your completion of a survey assessing various personality, attitude and judgment questionnaires. Your participation is expected to take approximately 15-20 minutes to complete. The content of the survey should cause no more discomfort than you would experience in your everyday life.

Although participation may not benefit you directly, we believe that the information obtained from this study will help us gain a better understanding of one’s personality and career identity. Your participation is solicited, although strictly voluntary. We will not be collecting any personal information as part of this project and, thus, your personal information will not be associated in any way with research findings. The information that we do gather will be kept on an encrypted flash drive that only the researchers will have access to. It is possible, however, with internet communications, that through intent or accident someone other than the intended recipient may see your responses, but without any personal identifying information they will be unable to identify whose information they would be looking at.

Upon completion, MTurk will compensate you for your participation in this study.

If you would like additional information concerning this study before or after it is completed, please feel free to contact us by phone or mail.

Completion of the survey indicates your willingness to take part in this study and that you are at least 18 years old. If you have any additional questions about your rights as a research participant, you may contact the primary investigator via email or write the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, email irb@ku.edu.

Sincerely,

Dan Franco, MS
Doctoral Candidate
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University of Kansas
Dfranco1@ku.edu

Brian P. Cole, PhD
Assistant Professor
Department of Educational Psychology
University of Kansas
bricole@ku.edu
Appendix B

Demographic Form

MTurk Account: ________________

Age (List # of years): ______

Gender (Circle): Male Female

Ethnicity (Circle): White/Caucasian Black/African-American Hispanic/Latino Asian/Pacific Islander Native American Biracial Other

Cumulative GPA:______

Academic Year in School (Circle): Freshman Sophomore Junior Senior 5th Year or more

Average Family Income (Circle): Up to $25,000 $25,001-$50,000 $50,001-$75,000 $75,001-$100,000 $100,101-$125,000 $125,001-$150,000 Over $150,000

Student-Status (Circle): Traditional Non-Traditional & Non-Transfer Traditional Transfer Non-Traditional & Transfer

Enrollment this semester (List # of credits enrolled):______

Please list the specific type of degree you are pursuing: (e.g., Bachelor of Arts): ________________

Please list the specific degree track you are pursuing: (e.g., Psychology): ________________

Are you a 1st generation college student (Circle)? Yes No

Are you considering graduate school/postgraduate studies (Circle)? Yes No Possibly Don’t Know

Please list the highest level of education attained by your parent(s) or primary guardian(s) (Circle): GED High School diploma Associate’s degree Bachelor’s degree Graduate
Appendix C

The Personal Need for Structure Scale

Instructions
Read each of the following statements and decide how much you agree with each according to your attitudes, beliefs, and experiences. It is important for you to realize that there are no "right" or "wrong" answers to these questions. People are different, and we are interested in how you feel. Please respond according to the following 6-point scale:

<p>| | | | | | |</p>
<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>Moderately Disagree</td>
<td>Slightly Disagree</td>
<td>Slightly Agree</td>
<td>Moderately Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

1. It upsets me to go into a situation without knowing what I can expect from it.  
2. I'm not bothered by things that interrupt my daily routine.  
3. I enjoy having a clear and structured mode of life.  
4. I like to have a place for everything and everything in its place.  
5. I enjoy being spontaneous.  
6. I find that a well-ordered life with regular hours makes my life tedious.  
7. I don't like situations which are uncertain.  
8. I hate to change my plans at the last minute.  
9. I hate to be with people who are unpredictable.  
10. I find that a consistent routine enables me to enjoy life more.  
11. I enjoy the exhilaration of being in unpredictable situations.  
12. I become uncomfortable when the rules in a situation are not clear.
Appendix D

The Projective Life Attitudes Assessment

This assessment is a recently developed, innovative personality assessment. Recent research suggests that feelings and attitudes about significant aspects of life tell us a considerable amount about the individual’s personality. Your responses to this survey will be content-analyzed in order to assess certain dimensions of your personality. Your honest responses to the following questions will be appreciated.

1. PLEASE BRIEFLY DESCRIBE THE EMOTIONS THAT THE THOUGHT OF YOUR OWN DEATH AROUSES IN YOU.

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

2. JOT DOWN, AS SPECIFICALLY AS YOU CAN, WHAT YOU THINK WILL HAPPEN TO YOU AS YOU PHYSICALLY DIE AND ONCE YOU ARE PHYSICALLY DEAD.

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

___________________________________________________________________________
Appendix E

The Projective Life Attitudes Assessment

This assessment is a recently developed, innovative personality assessment. Recent research suggests that feelings and attitudes about significant aspects of life tell us a considerable amount about the individual’s personality. Your responses to this survey will be content-analyzed in order to assess certain dimensions of your personality. Your honest responses to the following questions will be appreciated.

1. PLEASE BRIEFLY DESCRIBE THE EMOTIONS THAT THE THOUGHT OF EXPERIENCING SEVERE DENTAL PAIN AROUSES IN YOU.

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

2. JOT DOWN, AS SPECIFICALLY AS YOU CAN, WHAT DO YOU THINK HAPPENS TO YOU AS YOU EXPERIENCE SEVERE DENTAL PAIN?

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

___________________________________________________________________________
Appendix F

The personality portion of the survey is over. Now, we would like you to complete a few different attitude tasks. As was stated earlier, research suggests that attitudes and perceptions about even very common everyday items may be related to basic personality characteristics. To further examine this idea, we would like you to complete the opinion questionnaires on the following pages with your most natural response. Please follow the instructions provided and complete the questionnaires in the order they are presented. That is, do not skip around.

Opinion Questionnaire 1: Literature

Please read the following short passage from a novel and answer the questions below it.

The automobile swung clumsily around the curve in the red sandstone trail, now a mass of mud. The headlights suddenly picked out in the night—first on one side of the road, then on the other—two wooden huts with sheet metal roofs. On the right near the second one, a tower of course beams could be made out in the light fog. From the top of the tower a metal cable, invisible at its starting-point, shone as it sloped down into the light from the car before disappearing behind the embankment that blocked the road. The car slowed down and stopped a few yards from the huts.

The man who emerged from the seat to the right of the driver labored to extricate himself from the car. As he stood up, his huge, broad frame lurched a little. In the shadow beside the car, solidly planted on the ground and weighed down by fatigue, he seemed to be listening to the idling motor. Then he walked in the direction of the embankment and entered the cone of light from the headlights. He stopped at the top of the slope, his broad back outlined against the darkness. After a moment he turned around. In the light from the dashboard he could see the chauffeur’s black face, smiling. The man signaled and the chauffeur turned off the motor. At once a vast cool silence fell over the trail and the forest. Then the sound of the water could be heard.

The man looked at the river below him, visible solely as a broad dark motion flecked with occasional shimmers. A denser motionless darkness, far beyond, must be the other bank. By looking fixedly, however, one could see on that still bank a yellowish light like an oil lamp in the distance. The big man turned back toward the car and nodded. The chauffeur switched off the lights, turned them on again, then blinked them regularly. On the embankment the man appeared and disappeared, taller and more massive each time he came back to life. Suddenly, on the other bank of the river, a lantern held up by an invisible arm back and forth several times. At a final signal from the lookout, the man disappeared into the night. With the lights out, the river was shining intermittently. On each side of the road, the dark masses of forest foliage stood out against the sky and seemed very near. The fine rain that had soaked the trail an hour earlier was still hovering in the warm air, intensifying the silence and immobility of this broad clearing in the virgin forest. In the black sky misty stars flickered.

How do you feel about the overall descriptive qualities of the story?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>not at all</td>
<td>somewhat</td>
<td>very</td>
<td>descriptive</td>
<td>descriptive</td>
<td>descriptive</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do you think the author of this story is male or female?

_______ male  _______ female
Appendix G

The Meaning in Life Questionnaire

Instructions
Please take a moment to think about what makes your life feel important to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below:

<table>
<thead>
<tr>
<th>Absolutely Untrue</th>
<th>Mostly Untrue</th>
<th>Somewhat Untrue</th>
<th>Can’t Say True or False</th>
<th>Somewhat True</th>
<th>Mostly True</th>
<th>Absolutely True</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

1. I understand my life’s meaning.
2. My life has a clear sense of purpose.
3. I have a good sense of what makes my life meaningful.
4. I have discovered a satisfying life purpose.
5. My life has no clear purpose.
Appendix H

Career Decision Scale (CDS)

This questionnaire contains some statements that people commonly make about their educational and occupational plans. Some of the statements may apply to you; others may not. Please read through them and indicate how closely each item describes you in your thinking about a career or an educational choice by circling the appropriate number on the answer sheet. An example is given below:

I am excited about graduating and going to work.  

<table>
<thead>
<tr>
<th>Exactly like me</th>
<th>Very much like me</th>
<th>Only slightly like me</th>
<th>Not at all like me</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

If you are excited about going to work and feel no hesitation about it you would circle “4” to indicate that the description is exactly the way you feel. If the item is very close, but not exactly the way you feel – for example, you’re generally excited about going to work after you graduate, but are experiencing some minor concerns about it – you would circle the number “3.” You would circle “2” if the item describes you in some ways, but in general it is more unlike that like your feelings; for example, if you are generally more concerned than excited about work after graduation. Finally, you would circle “1” if the item does not describe your feelings at all; that it, you are experiencing a great deal of concern and no excitement about graduation and work.

Please be sure to give only one response to each item and answer every item.

**REMEMBER -- 4 is exactly like me, 3 is very much like me, 2 is only slightly like me, and 1 is not at all like me.**

<table>
<thead>
<tr>
<th>CIRCLE ANSWER</th>
<th>Like Me</th>
<th>Not Like Me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have decided on a major and feel comfortable with it. I also know how to go about implementing my choice.</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>2. If I had the skills or the opportunity, I know I would be a but this choice is really not possible for me. I haven’t given much consideration to any other alternatives, however.</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>3. Several careers have equal appeal to me. I’m having a difficult time deciding among them.</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>4. I know I will have to go to work eventually, but none of the careers I know about appeal to me.</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>
5. I’d like to be a _____________________, but I’d be going against the wishes of someone who is important to me if I did so. Because of this, it’s difficult for me to make a career decision right now. I hope I can find a way to please them and myself.

6. Until now, I haven’t given much thought to choosing a career. I feel lost when I think about it because I haven’t had many experiences in making decisions on my own and I don’t have enough information to make a career decision right now.

7. I feel discouraged because everything about choosing a career seems so “iffy” and uncertain; I feel discouraged, so much so that I’d like to put off making a decision for the time being.

8. I thought I knew what I wanted for a career, but recently I found out that it wouldn’t be possible for me to pursue it. Now I’ve got to start looking for other possible careers.

9. I want to be absolutely certain that my career choice is the “right” one, but none of the careers I know about seem ideal for me.

10. Having to make a career decision bothers me. I’d like to make a decision quickly and get it over with. I wish I could take a test that would tell me what kind of career I should pursue.

11. I know what I’d like to major in, but I don’t know what careers it can lead to that would satisfy me.

12. I can’t make a career choice right now because I don’t know what my abilities are.

13. I don’t know what my interests are. A few things “turn me on” but I’m not certain that they are related in any way to my career possibilities.

14. So many things interest me and I know I have the ability to do well regardless of what career I choose. It’s hard for me to find just one thing that I would want as a career.

15. I have decided on a career, but I’m not certain how to go about implementing my choice. What do I need to become a ______________ anyway?

16. I need more information about what different occupations are like before I can make a career decision.

17. I think I know what to major in, but I feel I need some additional support for it as a choice for myself.