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EXPLORING THE IMPACT OF FIRST-GENERATION STATUS AND FAMILY  
COHESION ON THE CAREER THOUGHTS OF COLLEGE STUDENTS

by

Roneferiti MaIshia Fowler

A Dissertation

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Philosophy

Major: Counseling Psychology

The University of Memphis

August 2012

## **Dedication**

Dedicated in loving memory of Mr. H. Gentry Fowler, Ms. Edith “Doll” Fowler, Mr. Warren L. Buford, Mr. Edward L. Buford and Ms. Hattie LaDonna Henry. “We did it.” I love you...then, now and always.

## Acknowledgements

God, first and foremost, I thank you for your many blessings, for I know that without you nothing is possible, but with you ALL things are possible. My life is proof of that. To my father, the late Mr. H. Gentry Fowler, thank you for always believing in me. You left no room for me to doubt my options or abilities, and I am forever grateful for that. When you told me I could be anything, I believed you...and believing you taught me to believe in myself. You taught me the meaning of advocacy when you marched for me...now I get to “march” for you. To my grandmother, the late Edith “Doll” Fowler, no one would ever believe how far your 8<sup>th</sup> grade education has gotten me. You were my very first “teacher” and gave me my foundation, both in education, and in life. To my Grandmother, Mrs. Auggie Buford, thank you for your prayers, words of encouragement and for always teaching us by example, the value of hard work.

To my mother, Rosie M. Fowler, words cannot express how much I appreciate your love and support. “Thank you” will never be enough. This is not just mine, this is “ours.” To Ms. Gentrinia Fowler, you have always supported me in your own way, and I will always love you for that. To my Aunt Donna, thank you for professing that I was “Dr. Fowler” ALL of my life...therefore the title is not new...this simply makes it “official.”

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confidently say we did our part in at least partially answering the “\$64 thousand dollar question.” To Dr. Samantha Daniel, I appreciate you sharing your ‘statistical genius,’ encouragement and most of all, your patience throughout this journey. Dr. Matthew Martens, Dr. Mardi Smith, and Dr. Donald English, I will always appreciate your many words of wisdom.

To my friends who have stuck by me every step of the way, I thank you and I love you for your patience, understanding, and ability to work around my schedule for the past five years. Another special thanks to Mr. Reggie A. Glenn for your support and encouragement because it has meant the world to me. There were many times when I wanted to give up or could not figure things out and your words of encouragement sustained me...and when all else failed, you reminded me to “lean not” on my own understanding. It means more than you know. To Mr. Jalen Jamiere Fowler, please know that you are the reason I stayed in the fight. I often felt like giving up, but refused to give in because I was determined to give you an example of what others decided to often label as “impossible.” With GOD, there is nothing you can’t do. Never forget that.

As a first generation college student, I was the first in my family to receive a Bachelor’s degree, Master’s degree, and now a Ph.D., but I am the last to wonder “if” it is possible. I would like to extend a special thanks to the participants in this study, particularly those who are the first in their families to attend college. It is my hope that you will now become the first to open doors to new educational and career possibilities for yourselves and future generations in your families as well.

## Abstract

Fowler, Roneferiti MaIshia. Ph.D. The University of Memphis. August/2012. Exploring the impact of first-generation status and family cohesion on the career thoughts of college students. Major Professor: Douglas C. Strohmer, Ph.D.

The impact of first-generation status and family cohesion on the career thoughts of college students was investigated. While prior research had examined the differences between first-generation and non-first-generation college students, few studies have focused on the career decision-making of first-generation college students. No research to date had specifically explored the relationship between first-generation status, family cohesion, and negative career thoughts of college students. While making a career decision is often a difficult task, it was expected that given their parents' lack of experience with college, first-generation college students would likely experience more barriers in career thinking than other students. In addition, the role of family cohesion was examined. Participants from the study consisted of 105 undergraduate students attending a large public university in the southeast region of the United States. Hierarchical multiple regression analysis was utilized to analyze the data. The hypothesis that first-generation students would account for a significant amount of variance in career thoughts was strongly supported. First-generation status accounted for 60% (59.7%) of variance related to negative career thoughts, which was measured by the Career Thoughts Inventory (CTI). The hypothesis that after accounting for variance related to first-generation status, significant additional variance would be accounted for by family cohesion was also supported. Family cohesion accounted for an additional (1.6%) of variance, which was measured by the Family Adaptability and Cohesion Evaluation scale. Limitations, clinical implications and directions for future research are discussed.

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## **Chapter1**

### **Introduction**

Being “the first” is often perceived as virtuous, honorable or noteworthy, but it can also be a very arduous task (Inkelas, Daver, & Vogt, 2007). Between 1992 and 2000, 22% of students who entered post-secondary education in the United States were first-generation college students (Lippincott & German, 2007). In 2011, at the southeastern university where this study was conducted, almost half of undergraduate students were first-generation college students. Research suggests that first-generation college students are more likely to be ethnic minorities, to be from lower socio-economic backgrounds, to have greater financial need, and to have greater outside commitments including work and family obligations than their non-first-generation peers (Billson & Terry, 1982; Bui, 2002; Engle, 2007; Hartig & Steigerwald, 2007; Horn & Nuñez, 2000; Inkelas et al., 2007; McCarron & Inkelas, 2006; Thayer, 2000). In addition, these students reportedly encountered more academic difficulties, i.e., having lower academic performance, taking fewer credit hours and having lower persistence rates. Of particular concern is the fact that these students exhibited lower persistence rates and as a result, have higher levels of attrition or “drop out” rates (Brooks-Terry, 1988; Chen, 2005; Dennis, Phinney, & Chuateco, 2005; Horn & Nuñez, 2000; McCarron & Inkelas, 2006; Pike & Kuh, 2005; Ramos-Sanchez & Nichols; 2007). Given this concern, the purpose of this study was to examine variables related to greater attrition among first-generation college students.

## **Difficulty in Being First**

While attending college may be thought by many as a rite of passage, it also marks a significant separation from the past for those who are the first in their families to do so (Hsiao, 1992). As one first-generation college student participating in a program funded through the U.S. Department of Education for first-generation college students explained “I’m the oldest of six children. My father dropped out of high school and my mother only completed the eighth grade. I’m very close to my family. My mother makes most of the decisions because my father does not live with us. I decided my junior year of high school that I wanted to go to college and not pursue cosmetology like most of the women in my family. I’m the first one in my family to go to college. I feel like my mother supports me but I am always afraid that I will make a decision that will upset her. She wants me to major in business or accounting; something she feels will make a lot of money. I want to become a teacher, but I don’t feel like she’ll support that. I also don’t want to aim too high and end up disappointing my family. I’ve changed my major three times already, and I don’t want to have to change it again...I am just not sure what to do...”(F. Overstreet, personal communication, June 16, 2009). Like many first-generation college students, this student expressed many of the pressures in being first; lack of information, family pressures, insecure self-efficacy, and concerns about making an independent long-term career decision.

This scenario illustrates the possible effects of two important variables believed to contribute to lower completion rates in college for students who are the first in their families to attend college students. First, they come from families that are not familiar with the rigors of college, and who often have unrealistic expectations for their college

experience. This lack of family knowledge and unrealistic expectations may cause these students to experience greater career decision-making problems, and as a result, less success in college. Thus, one focus of this study was to determine the relationship between first-generation student status and greater career decision-making problems. Also as illustrated in the scenario above, many first-generation students find it hard to challenge or deviate from family expectations. Students who are very close to their families, and who rely heavily on them for support may find making career decisions for themselves difficult. Given this, the second focus of this study was to determine the relationship between family cohesion and career decision-making problems.

### **First-Generation College Students**

A college education is considered to be the key to achieving economic success and social mobility in American society (Engle, 2007). For many, a college degree often represents the single most important rung in the educational attainment ladder in terms of economic benefits. This is one reason why more and more individuals are choosing to attend college, including an increasing number of first-generation college students (Pascarella & Terenzini, 1991). The definition of a first-generation college student varies throughout the literature. Some assert that first-generation college students are those whose parents never attended college (Billson & Terry, 1982; Lohfink & Paulsen, 2005; Pascarella, Wolniak, Pierson, & Terenzini, 2003). Billson and Terry (1982) were among the first to provide a definition for this group that distinguished that first-generation students were those whose parents had no education beyond high school, or had never been to college. This definition is considered throughout the literature as the “traditional” definition of a first-generation college student. Others define a first-generation college

student as a student whose parents attended college but have not received a bachelor's degree. Auclair et al. (2008) notes that Dennis et al. (2005) Pike and Kuh (2005), and Ishitani (2003) utilize this definition. The traditional definition will be utilized to describe first-generation college students in the current study. "Non-first-generation college students" will be used to identify those students whose parents have any educational experience beyond high school.

The increase in college attendance is not surprising considering that the financial wealth of individuals has long been attributed to educational access and degree attainment. According to Day and Newburger (2002), the lifetime income level of individuals in the United States with four or more years of higher education is nearly twice that of individuals with high school diplomas.

A majority of first-generation students attend college because they hope to transcend the socioeconomic levels of their families (Bui, 2002; Day & Newburger, 2002; Engle, 2007; Inkelas et.al, 2007; King, 2007; McCarron & Inkelas, 2006). Oftentimes, the motivations for these students are related to financial security, finding a steady job and being able to provide their own children with better opportunities (Day & Newburger, 2002; Engle, 2007; Nuñez & Cuccaro-Alamin, 1998). Unfortunately, a disproportionately low number of first-generation students succeed in college (Pike & Kuh, 2005). Warburton, Bugarin, and Nuñez (2001) report that there is a 15% gap between the 3-year persistence rates of first and second-generation students (73% and 88% respectively). While obtaining a college education can be a path towards upward mobility for first-generation college students, research suggests it also creates a number of challenges.

## **Challenges of First-Generation College Students**

While access to higher education has expanded dramatically in recent years, research suggests that first-generation college students often encounter more challenges than their non-first-generation peers. Many first-generation college students demonstrate lower levels of academic preparation, lower educational aspirations, less encouragement and support to attend, and have fewer resources to pay for college (Billson & Terry, 1982; Bui, 2002; Dennis & Osorio, 2006; Engle, 2007; Hartig & Steigerwald, 2007; Horn & Nuñez, 2000; Inkelas et al., 2007; McCarron & Inkelas, 2006; O'Brien, 1999; 2001, Ramon-Sanchez & Nichols, 2007; Thayer, 2000). Engle (2007) emphasized that these are just some of the factors that have been shown to negatively affect the chances of first-generation college students succeeding in college.

Two of the most significant challenges faced by first-generation college students are that these students come from families with no experience with college and many come from families with higher levels of cohesion (which can result in less freedom in career decision-making) and are therefore more likely to experience greater career decision-making problems. The sections that follow will present a review of literature related to first-generation status, lack of family knowledge about college, family dynamics and how these factors impact the career decision-making of first-generation college students.

### **Lack of Knowledge About College**

A significant amount of information pertaining to the terminology and general functioning of the higher education setting, including knowledge of the campus environment and access to human and financial resources, is transmitted through parents

(Inkelas et al., 2007; McCarron & Inkelas, 2006). Students who are first in the families to attend college cannot benefit from the experience of college-educated parents and as a result, are less likely to understand what skills, attitudes, and abilities are necessary to successfully navigate the college experience, and consequently the capability to persist (Acker-Ball, 2007; Horn & Nuñez, 2000; McCarron & Inkelas, 2006). Research has established that first-generation college students are often negatively affected by the fact that their parents had less integration into the professional workforce, as well as less familiarity with the college process (Duggan, 2001; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; Warburton et al., 2001). Thus, one important variable in this study is first-generation status. In addition, the impact of families' lack of experience with college could be even more significant for many first-generation college students who rely on their families' input when making decisions.

Families who are very close may naturally attempt to assist students in making decisions. Unfortunately, these families often lack necessary information to help the student to make optimal career decisions (Billson & Terry, 1982; Dennis et al., 2005; McCarron & Inkelas, 2006). This may be especially true for first-generation college students from close-knit families. In exploring career decisions, it is important to consider the impact that the thoughts and opinions of family members have on students. The next section addresses family dynamics and how higher levels of cohesion may affect the career decision-making of first-generation college students.

## **Level of Cohesion**

Cohesion refers to the emotional bonding that family members have with one another (Olson, 2000, 2010). According to Olson and Gorall (2006), there are five levels of cohesion ranging from very low (disengaged/disconnected), low (somewhat connected), moderate (connected), high (very connected) and very high (enmeshed/overly connected). Olson and Gorrall explain that families must be able to find an equilibrium between separateness and togetherness. In enmeshed family systems, there is too much consensus and emotional closeness within the family, and too little independence. Families that demonstrate higher levels of cohesion may discourage efforts toward individuation through communication patterns that are psychologically and emotionally inhibitive. These communication patterns seem likely to make career exploration difficult for students who come from enmeshed families. Moreover, this could be particularly problematic for first-generation college students who already have doubts or are experiencing difficulty making career decisions. It also seems likely that in families with higher levels of cohesion there may be constraints on the maximum distance the family allows a student to move to attend college, as well as the major and the career options a student is encouraged to pursue. Further separation or views that are not shared views of the family could also be regarded as a threat to the family system. As Bratcher (1982) notes, these dynamics are largely out of conscious awareness and may never be addressed because the individual simply acts in accordance to the family's wishes.

Since the thoughts and opinions of family members could potentially continue to influence the decision-making of students once they are in college, it is important to

explore how levels of cohesion impact students' career decision-making. Close-knit family systems and the reliance on others in making decisions affect one's way of thinking, as well as the options one is willing to consider. Many of these students have not had the opportunity to make their own choices or have grown accustomed to seeking the input of others in various decisions. As a result, these students often exhibit decision-making problems that will further complicate their ability to make and commit to career decisions. One very troubling possible consequence of lack of family knowledge about college, first-generation status, and higher levels of family cohesion is increased difficulty making career decisions due to problematic career thoughts. The following section will address career thoughts and how they impact career decision-making.

### **Career Thoughts**

Individuals' thoughts and beliefs about themselves and their career options may affect their ability to make decisions (Paivandy, Bullock, Reardon, & Kelly, 2008). The messages first-generation college students receive from others may impact both educational and vocational development by encouraging some occupational interests, choices and behaviors while discouraging others. These messages could be received from various sources including friends, family, educational institutions and society; all of which can shape or influence individuals' thoughts about career (Brown & Pinterits, 2001). While messages received from others may influence career decisions, the perceptions that individuals hold may be even more pertinent, particularly, if these thoughts are negative. Negative thoughts can also prevent an individual from thinking in a systematic and organized manner about the problem and making a rational decision; while, the absence of pessimistic or "negative thoughts" promotes a better integration of



knowledge about the self and potential occupations (Saunders, Peterson, Sampson, & Reardon, 2000). Negative career thoughts refer to barriers encountered in information processing which interferes with an individual's ability to engage effectively in the career decision-making process (Peterson, Sampson, & Reardon, 1991). Negative career thoughts (i.e. "I'll never find a field of study or occupation I really like," "If I change my field of study or occupation, I will feel like a failure," "There are so many occupations to know about I will never be able to narrow down the list to only a few") (Sampson, Peterson, Lenz, Reardon, & Saunders, 1996a), may also interfere with effective career decision-making and subsequently result in less than successful or satisfactory employment (Johnson, 2008). Research has established that reducing negative career thoughts allows individuals to effectively process information needed for exploration, problem solving, and decision-making (Sampson, Lenz, Reardon, & Peterson, 1999). One current theory that directly addresses the issue of career thoughts and decision-making is Cognitive Information Processing (CIP)(Peterson et al., 1991). The following section will discuss Cognitive Information Processing Theory as a theoretical framework for understanding the career problem solving and decision-making of first-generation college students.

### **Cognitive Information Processing Theory**

Cognitive Information Processing (CIP) emphasizes the cognitive processes involved in career decision-making and integrates the influence of psychological factors in the career decision-making process (Sampson, Peterson, Lenz, Reardon, & Saunders, 1996b). CIP focuses on how career choices are made rather than the selection of a specific career choice (Peterson et al., 1991).

The CIP model emphasizes meta-cognitions, which are the thoughts, appraisals, expectations and expectancies, which guide cognitive functioning (Peterson et al., 1991; Sampson et al., 1996b). It is believed that these cognitions may either facilitate or impede career decision-making depending upon their content (Peterson et al., 1991; Sampson et al., 1996b). CIP suggests that meta-cognitions allow for the recognition of the need for information, permit the selection of appropriate problem solving strategies, and enhance awareness of the ability to be a problem solver in the decision-making process (Peterson et al., 1991). CIP proposes that effective career decision-making and problem solving results from effectively processing information related to self-knowledge, occupational information and decision-making skills (Sampson et al., 1996b). On the other hand, poor meta-cognitive skills such as problematic career thoughts and negative thinking about assumptions, attitudes, behaviors, beliefs, feelings or plans distort career decisions and negatively impact career decision-making (Sampson et al., 1996b).

CIP proposes two key constructs; the pyramid of information processing domains, and the CASVE cycle (Sampson et al., 1996b). The processing domains related to career decision-making can be conceptualized in terms of a pyramid to understand the relationship between self-knowledge, occupational knowledge, decision-making skills and executive processing. The knowledge domains includes self-knowledge and occupational knowledge at the base of the pyramid, followed by the decision-making skills domains including the CASVE cycle in the middle, and the executive processing domain which contains metacognitions at the top of the pyramid.

The CASVE cycle is an acronym for the five cognitive processing dimensions; communication (awareness of a disparity between current and preferred situation),

analysis (assessment of options), synthesis (narrowing plausible alternatives), valuing (evaluating the positives and negatives of remaining options), and execution (formulation and implementation of a plan) which forms a model for problem solving and decision-making. From a CIP perspective, negative thinking in any of these eight areas could impair one's ability to solve problems and to make career decisions (Sampson et al., 1999).

The Career Thoughts Inventory (CTI; Sampson et al., 1996a) can be utilized to indirectly measure three concepts that apply to the negative career thoughts of first-generation college students; decision-making confusion, commitment anxiety and external conflict. The first concept, decision-making confusion, is thought to occur when individuals have difficulty initiating or sustaining decision-making as a result of disabling emotions and/or a lack of understanding on the decision-making itself (Sampson et al., 1996b). An example of this concept is: "Choosing an occupation is so complicated, I just can't get started." Applying this concept to the career issues of students in this study, students whose parents did not attend college may have difficulty beginning or sustaining career decisions due to their lack of information about careers. Additionally, those students who indicate higher levels of cohesion in their families may also experience difficulty initiating or sustaining decisions because of their dependence on family in making decisions.

The second concept, commitment anxiety, reflects the inability to make a commitment to a specific career choice while experiencing generalized anxiety about the outcome of the decision-making process while this anxiety perpetuates indecision (Sampson et al., 1996b). An example of this concept is, "If I change my field of study or

occupation, I will feel like a failure.” Anxiety about the ability to succeed in an unfamiliar career field may be especially prevalent among first-generation students. This anxiety may create career indecision and constrain career exploration and further impact career indecision. Railey and Peterson (2000) note that anxiety and indecision may lead to behaviors that complicate decision-making especially after several alternatives have been developed. These students also experience anxiety when attempting to let go of a familiar career choice for a better, yet unfamiliar career choice (Sampson et al., 1996b). For those students who are from highly cohesive or enmeshed families, this anxiety may also be perpetuated by the encouragement of family to pursue a particular career choice, oftentimes one that the family is more comfortable or familiar with, while avoiding others.

The third concept, external conflict, refers to the inability to balance the importance of one’s own self-perceptions with the importance of input from significant others, resulting in a reluctance to assume responsibility for decision-making. An example of this is; “I’m always getting mixed messages about my career choice from important people in my life” (Sampson et al., 1996). External conflict reflects factors in one’s environment that impact decision-making. Both students from families with higher levels of cohesion and first-generation college students may be especially impacted by the thoughts and opinions of others in making career decisions. These students often fear not making the best career decisions and are be more inclined to make career decisions based on what will please others rather than what they would prefer.

It is important to gain an understanding about the relationship between first-generation status, levels of family cohesion and negative career thoughts. Studying these

relationships from the perspective of Cognitive Information Processing theory can provide understanding about these relationships and will hopefully help to establish a means for modifying the obstructive career thoughts of first-generation college students.

### **Significance of the Study**

Given that most first-generation college students will enter into careers that are very different from those of their family members; it seems likely that these students will need more guidance in making career decisions than those whose parents have earned a degree. While prior research has contributed information about first-generation college students with respect to their academic preparation, transition to post-secondary education and progress towards degree attainment, research has focused very little attention on the career thoughts of these students (Pascarella, Welniak, Pierson, & Terenzini (2003). Although researchers have explored the relationship between family factors such as cohesion and college students, no study to date has explored how higher levels of cohesion and first-generation status affects the career decisions of college students.

### **Purpose of the Study**

This study was conducted for several reasons. First, first-generation status has been associated with increased academic difficulty, increased attrition rates and increased difficulty in career decisions. One aim of this study was to determine how first-generation status impacted career decision-making for college students. This study adds to existing research that has investigated career decision-making among this population. Second, this study was conducted because it is imperative that practitioners providing academic and/or career services to first-generation students are cognizant of the potential

influence of family dynamics (higher levels of cohesion) on students' career thoughts and career decision-making. Finally, because prior studies had not explored the association between first-generation status, family dynamics and how these factors could impact negative career thoughts, this study was conducted to explore these relationships and the importance of considering factors associated with parental and family influence when implementing career decision-making interventions.

A clearer understanding of the relationship between first-generation status, higher levels of cohesion and negative career thoughts would help facilitate the selection of the most effective interventions (i.e., career counseling assistance) for these students. Acquiring such an understanding would help facilitate the career decision-making process and would contribute to the existing literature on first-generation college students. It would also provide additional information about the impact of families on the decision-making process.

### **Research Questions and Hypothesis**

Given the rationale provided above, the following research questions and hypotheses have been established.

Question 1: How much variance in negative career thoughts, as measured by the Career Thoughts Inventory (CTI), is accounted for by first-generation status? Based on this question, the following hypothesis was established. Hypothesis 1: First-generation status will account for significant variance in negative career thoughts. First-generation college students will have more negative career thoughts as measured by the Career Thoughts Inventory (CTI, a measure of negative career thoughts) than non-first-generation students.

Question 2: After accounting for variance related to first-generation status, how much additional variance in negative career thoughts, as measured by the Career Thoughts Inventory (CTI), is accounted for by family cohesion? Hypothesis 2: After accounting for variance related to first-generation status, significant additional variance in negative career thoughts will be accounted for by family cohesion. Further, this relationship will be negative with negative career thoughts (as measured by the CTI) decreasing as the family cohesion ratio score increases (as measured by the FACES IV).

## **Chapter 2**

### **Literature Review**

Some of the most important decisions that individuals ever face are career decisions (Paivandy et al., 2008). Paivandy et al. (2008) define “career decisions” as choices individuals make about occupations, education, training and employment. The influence of the family on career decision-making has long been recognized as an important factor by vocational theorists (Osipow, 1983). Although many researchers have focused on family’s influence on children and high school students, several researchers assert that the quality of the relationship in the family of origin is associated with the career development of college students as well (Blustein, Walbridge, Friedlander & Palledino, 1991; Herdon & Hirt, 2004; Johnson, Buboltz, & Nichols, 1999; Kenny, 1990; Kinnier, Brigman, & Noble, 1990; Lopez & Andrews 1987; Penick & Jepsen, 1992). While parents who have college degrees often begin to familiarize their children at an early age with college life and expectations, parents who do not have college experience are less likely to provide similar guidance to their children (Bui, 2002; Chen, 2005; Martinez, Sher, Krull, & Wood, 2009; Warburton et al., 2001). This may create a disadvantage for first-generation college students.

The main purpose of this chapter is to provide a broad overview of some of the unique characteristics of first-generation college students and to explore family cohesion and the negative career thoughts that impact and lead to problems with career decisions among this population. There is currently a paucity of research exploring first-generation college students and career decision-making. There is also a lack of research exploring how the relationship between family cohesion and career decision-making may differ for



first-generation and non-first-generation college students. Understanding these relationships may help to improve career-counseling interventions and allow current retention programs, colleges and universities to better assist these students with career concerns.

This chapter provides a review of the literature on issues pertaining to the relationships between first-generation status, family cohesion variables and negative career thoughts among college students. It is presented in four major sections that include first-generation college students, family cohesion, negative career thoughts and career decision-making. This chapter concludes with a summary of the literature as it relates to the present study.

### **First-Generation College Students**

A college education is considered to be the key to achieving economic success and social mobility in American society (Engle, 2007). Engle (2007) explains that higher levels of educational attainment are related to higher incomes and lower rates of unemployment. Given that the earnings gap between high school and college graduates only widens over time, as well as the fact that in the United States, the lifetime income levels of individuals with four or more years of higher education is nearly twice of individuals with high school degree (Day & Newburger, 2002) it is not surprising that more and more individuals view a college degree as a necessity rather than an option.

For most middle class American youth, college is simply the next step after high school. In many families, it is merely tradition. It is not a question of whether or not they will go; but where (Phinney, Dennis, & Osorio, 2006). This is, however, not the case for many other college students. These students are the first in their families to

attend college. Research suggests that first-generation college students often encounter more challenges than their non-first-generation peers (Billson & Terry, 1982; Bui, 2002; Dennis et al., 2005; Engle, 2007; Hartig & Steigerwald, 2007; Horn & Nuñez, 2000; Inkelas et al., 2007; McCarron & Inkelas, 2006; O'Brien, 1999; Ramon-Sanchez & Nichols, 2007; Thayer, 2000). The next section will address some of the challenges of first-generation college students.

### **Challenges of First-Generation College Students**

First-generation college students are more likely to be ethnic minorities and to come from lower socio-economic backgrounds than non-first-generation college students (Billson & Terry, 1982; Bui, 2002; Engle, 2007; Hartig & Steigerwald, 2007; Horn & Nuñez, 2000; Inkelas et al., 2007; McCarron & Inkelas, 2006; Thayer, 2000). Research suggests that students whose parents did not attend college face more challenges if they do attend college because they are generally less academically prepared, more likely to delay entering college, and more likely to attend part-time and discontinuously (Ishitani, 2003; Phinney et al., 2006; Terenzini et al., 1996). These students also tend to work a greater number of hours both on and off campus, giving more priority to jobs than classes when conflicts arise, and have more family obligations than non-first-generation students (Acker-Ball, 2007; Billson & Terry; Chen, 2005; Hsiao, 1992; Krantz, 2004; Nuñez & Cuccaro-Alamin, 1998; Padron, 1992; Richardson & Skinner, 1992).

Lippincott and German (2007) explained that “first-generation students are often not adequately prepared for college; not only academically, but also emotionally, particularly if they are coming from a working class background” (p. 90). The authors explain that when exposed to the middle and upper class values and aspirations of the typical college campus, these students often question whether they belong. As Lippincott

and German (2007) further explained, “first-generation students often struggle with issues of identity, social acceptance and self-esteem as they aspire to renascent the blue-collar values and occupations of their families and enter the white-collar world” (p.90). These students often live between two different worlds and enter college with less preparation and clarity about career decisions than their non-first-generation counterparts.

### **Early Research on First-Generation College Students**

Due to the increased need for more education in various occupational sectors, more and more students are attending college. While the numbers of those enrolling in college are steadily increasing, persistence rates of first-generation students slowly gained the attention of higher education researchers nearly four decades ago (Auclair et al., 2008). Although there has been an increase in enrollment, there has unfortunately been a lower rate of degree completion among first-generation college students (Auclair et al., 2008; Chen, 2005; Ishitani, 2003, 2006). Once researchers began examining student attrition rates, they also discovered that first-generation college students tend to leave college at higher rates than those students whose parents have at least some college education (Auclair et al., 2008; Billson & Terry, 1982; Stanfield, 1973).

In a 1973 article, Stanfield explained that first-generation college students were overrepresented among those who left college for good, particularly during or just after their first year in school. Similarly, Billson and Terry (1982) explained that “student persistence had long been associated with parental education levels” (p. 3). At the time of their study, they noted that very few studies had focused specifically on the dynamics of the interaction between parental education and student persistence and sought to examine that relationship.

In their 1982 study, Billson and Terry cite Spady (1970) who stated:

We do not know exactly how and why parental experience with higher education serves to make their children, at whatever age, such a highly vulnerable group. Thus, although the move toward democratization of American higher education is clear, it appears as well that the legacy of parental aspirations and expectations may reinforce the stratification selection mechanisms that operated in the past. (pp.68-69)

Billson and Terry (1982) argued that the legacy that Spady (1970) referred to may have created hidden barriers to the ability of children with parents without experience with higher education, to use education as a pathway toward upward mobility. Their study was designed to identify some of these barriers and to explore how those barriers worked to make first-generation students more vulnerable to attrition.

The researchers utilized surveys to collect data from students at two different colleges; one private liberal arts college and another, a state-supported liberal arts college. The data for this study was collected from 701 students; both students who were currently enrolled as well as students who had left the schools prior to graduation. Interviews were also conducted with those students who remained enrolled in an effort to obtain additional information to help explain the process through which family influences interacted with educational experience. They found that first-generation college students in their study appeared to have equally high aspirations regarding the level of education they expected to attain as non-first-generation college students. However, because first-generation college students were more integrated into the world of work off campus, they were more likely to leave college to continue or to accept full time employment. Parent's education was also found to be a factor that influenced the retention of first-generation students.

While a number of studies have revealed differences in retention rates of first-generation and non-first-generation college students, other studies report the contrary. Zalaquett (1999) explored the ethnicity, grade point average and retention characteristics of 202 students whose parents had never attended college, 244 students whose parents had some college experience, and 394 students whose parents graduated from college. Although, as other sources have found, analysis showed that a significantly higher percentage of minority students were first-generation students, there were no significant differences found between the grade-point average (GPA) and retention rates of first-generation college students and those whose parents had some experience or had graduated from college. Given the varying findings in the literature addressing first-generation college students and the impact that parental experience with college has on these students retention, it is important to further explore this factor.

### **Lack of Parental Experience with College**

Nearly 20% (19.5%) of the population of individuals in the United States who are age 25 and older attended college but did not obtain a degree (U.S. Census Bureau, 2006). Nationally representative educational statistics show that among students whose parents had bachelor's degrees or higher, 10.0% withdrew from college over the first year of enrollment at 4 year institutions, but among students whose parents had high school diplomas or lower, 23.4% withdrew (Horn & Carroll, 1998). It is estimated that one third of college entrants' parents do not have college degrees. Warburton et al. (2001) indicated that there are a large number of students who are particularly at risk for attrition simply on the basis of their parents' educations.

Unfortunately, parents who did not attend college are often unable to provide their children with the guidance and mentoring needed in the college admissions process and with college-related information (Fallon, 1997). First-generation college students are often affected by the fact that their parents have had less integration into the professional workforce and less familiarity with the college-going process (Duggan, 2001; Terenzini et al., 1996; Warburton et al., 2001). In a study conducted by Warburton et al. (2001), first-generation students reported that they perceived themselves as being less prepared, lacking in basic knowledge about college and expressed more worries more about financial concerns.

McGregor, Mayleben, Buzzanga, Davis, & Becker (1991) studied the internal resources of first-generation college students and found that non-first-generation students had higher self-esteem scores than did students in the first-generation comparison group. These researchers suggested that having had parents who completed college made it easier for non-first-generation college students to adjust to the demands of their environment. The advantage of having parents who could guide them in their transition to college likely led to higher confidence in and positive beliefs about their ability to succeed and adjust at a 4-year university. Given the challenges that first-generation college students experience, it is reasonable to conclude that beliefs about their abilities can be negatively affected, resulting in lower academic performance, and as literature states, increased drop-out rates.

### **Comparison Studies of First and Non First-Generation Students**

In an attempt to examine some of the differences between first-generation and non-first-generation college students, several studies have compared these students in an effort to establish the affect that first-generation status had on issues such as academic

attainment, degree completion and attrition. The U.S. Department of Education conducted a longitudinal study examining the experiences of first-generation students after entering college (Chen, 2005). The report used data from the Post-Secondary Educational Transcript Study (PETS) of the National Educational Longitudinal Study of 1988 (NELS:88) but focused on a subset of the NELS 1992 12<sup>th</sup> graders (25% of the NELS 1992) graders who enrolled in postsecondary education between 1992 and 2000 and had complete postsecondary transcripts available. These students represented 22% of those who entered college between 1992 and 2000, indicating that the first-generation college students were less likely than other students to attend college within 8 years after high school. It is reported that roughly 4 in 10 or 43% of first-generation students in this study who entered college during this time period left without a degree by 2000. Twenty-four percent graduated with a bachelor's degree. Conversely, the opposite pattern was observed for students whose parents were college graduates. Among students whose parents were college graduates, 68% of these students had completed a bachelor's degree while 20% left without a degree.

The same report also revealed that choosing an undergraduate major appeared to pose a greater challenge for first-generation students. First-generation students in this study were more likely to choose a major in a vocational or technical field, whereas their counterparts whose parents had a bachelor's or advanced degree were more likely to choose a major in science, mathematics, engineering, humanities, arts or social science. One factor associated with a student's choice of major included weak academic preparation, which may deter first-generation students from choosing certain "high-skill" fields, such as mathematics and science (Chen, 2005). It is possible that the perceived

low-earning potential may dissuade first-generation students from fields such as humanities, arts, and social sciences (Chen, 2005).

College dropout rates are considerably higher for first-generation college students in comparison to their non-first-generation peers (Ishitani, 2003; NCES, 2001). It is reported that approximately 25% of students drop out of college by the end of their first year, but the attrition rate increases to nearly 50% for first-generation students (Ishitani, 2003; NCES, 2001).

Ishitani (2003) investigated longitudinal effects of being a first-generation student on attrition. Results indicated that first-generation students were more likely to leave college than their non-first-generation counterparts over time. After controlling for factors such as race, gender, high school GPA, and family income, the risk of attrition among first-generation students was 71% higher than that of students with both college-educated parents in the first year. These findings suggest that parent's experience with college likely has a great affect on the retention of first-generation college students. The next section will highlight how parent's lack of experience with college affects first-generation students.

### **Parental Influence on Educational Aspirations**

McCarron and Inkelas (2006) utilized the survey data from the National Educational Longitudinal Study (NELS: 88/2000) to determine if parental involvement had a significant influence on the educational aspirations of first-generation students as compared to the educational aspirations of non-first-generation college students. Their study also investigated whether the educational aspirations of first-generation students differed from their actual educational attainments. For this study, 1,879 first-generation



students working towards degrees at either two-year or four-year colleges, were chosen from the pool of participants that took part in the 2000 data collection. A comparison group of non-first-generation students who had at least one parent who earned a bachelor's degree was selected randomly from the NELS: 88/2000 sample. Results indicated parental involvement was a viable predictor of post-secondary aspirations.

In terms of actual attainment, results showed that 62.1% of the total sample of first-generation college students did not attain their original educational aspirations by 2000. Only 29.5% of the first-generation sample attained a bachelor's degree by 2000, whereas 40.2% aspired to it as high school sophomores in 1992. In comparison, 55.9 % of the sample of non-first-generation college students attained a bachelor's degree. These findings suggest that although many first-generation students have intentions of obtaining a degree, many of them fall short. McCarron and Inkelas (2006) contended that because results of this study indicated a positive relationship between parental involvement and educational aspirations, it is incumbent upon practitioners to better understand the role of parents and parents' ability to boost students' aspirations. Research findings support the notion that parents' educational status affects the retention rates of first-generation college students.

Researchers have noted that the family is a conduit for educational attainment for several reasons. First, families are the initial identified sources of academic potential in that the family is the first unit to develop and nurture a student's capacity of learning. Secondly, families set the parameters of educational standards within the home environment. Third, parents are influential in creating the context in which events are evaluated and provide the background for examining meaning in life and the world.

Finally, parents provide students with the social and environmental influences that impact the way in which students view education. This can take place through school choice, the encouragement of various potential career options, and the encouragement of higher overall educational aspirations (Herdon & Hirt 2004).

Trusty (1998) examined the role of socio-economic status and parental involvement. Results indicated that regardless of the impact of socio-economic status, parental involvement influenced educational expectations. Trusty explained that parents are an important resource for preventing loss of students' aspirations due to a low socio-economic background; this finding is particularly important given that first-generation college students are more likely to come from these backgrounds. While the family has been identified as important to the success of college students and their educational attainment, it is also important to consider how lack of family encouragement and support can affect students.

### **Family Support**

While many first-generation students receive the support of their families in pursuing a degree, research suggests that not all families are supportive of students' aspirations for higher education. Some first-generation college students may also experience alienation from family members as they pursue educational goals beyond those of their immediate family. Their families may feel "inferior" or may feel that the student is "better" than other family members because they are pursuing a college degree. Families may view college as a waste of time and resources (Krantz, 2004; Richardson & Skinner, 1992). The home atmosphere may not be conducive to study and there may be familial demands placed on the student that are in direct conflict with the educational

demands of the student (Padron, 1992). First-generation college students are more likely to come from blue-collar, socio-economically challenged family systems who relied on public education that did not adequately prepare the student for post-secondary education (Richardson & Skinner, 1992).

A significant challenge that many first-generation students face is their departure from the working pattern established in their homes (Nuñez & Cuccaro-Alamin, 1998). The process through which first-generation students adapt to college has been described by Inkelas et al. (2007) as “disjunction,” or a breaking of family tradition, because the college experience was not in their family’s background. These students are essentially departing from the working pattern already established in their homes and their participation in the workforce is often expected in order to assist in the economic wellbeing of the family unit. This failure to contribute can impact the amount of positive reinforcement they receive from their families to pursue a college education (Acker-Ball, 2007; Nuñez & Cuccaro-Alamin, 1998). This may be especially salient for those first-generation college students who live at home (Acker-Ball, 2007; Hsiao, 1992; Nuñez & Cuccaro-Alamin, 1998). Conversely, although many families support their family members’ decision to attend college, they may view post-secondary attainment as a family accomplishment, not just one of the first-generation student pursuing the degree. Families often attempt to provide guidance and input about majors and career decisions (London, 1989; Lopez & Andrews, 1987; Martinez et al., 2009). Though this information is often well intended, unfortunately many of these family members lack the necessary information to provide guidance in terms of these decisions. The next section will discuss family’s effects on students’ career decision-making.

## **Family's Effect on Career Decisions**

Many students experience struggles related to choosing a major, finding a job, and considering graduate school (Martinez et al., 2009). Some first-generation college students often find it confusing to know what they can do with a particular major, while others struggle with deciding on a major. This may be especially true for first-generation college students as their parents may have strong beliefs about the 'usefulness' of certain degrees, which can greatly impact the decisions of those students who rely on the assistance and approval of their families when making decisions (Martinez et al., 2009).

Unfortunately, a lack of knowledge about majors and careers and inadequate parental guidance poses a barrier that may especially impact first-generation students from poor families. Students and families who come from lower socio-economic backgrounds who see college as "a way out" will lean more towards choosing careers that will lead to more financial stability, whereas others who may doubt their academic abilities may feel that some careers are not attainable and therefore pursue careers with lower expectations (Gibbons, 2004). Two problems exist. On the one hand, many of the students who express aspirations of more professional careers do not know what is required for a particular major and may not have the academic abilities to perform well enough to pursue careers in those fields. On the other hand, it is possible that students who could potentially do well in a particular career do not consider such careers as viable options because they doubt their abilities.

Many first-generation college students enter college with aspirations of pursuing professional careers because of the financial stability or the reputation of the career. This may be especially true for those who are ethnic minorities. Arbona (1990) explained that ethnic minorities often aspire to prestigious occupations whether or not they are plausible

realities. Reid (2001) reported that African American high school students in her sample indicated interest in high prestige rather than low or moderate prestige occupations, whether or not they were realistic options for these students based on their academic abilities.

Another factor that impacts many first-generation students' career decision-making is the fact that many of these students arrive at college and become overwhelmed with the various options of majors and career paths (Gibbons, 2004). Without family members with prior knowledge of what is required for a particular career, many students often find that they either do not have the interest or necessary skills to pursue certain careers. Oftentimes, this is after they have already taken classes in this occupational field. For those students who have strong ties to family, making these career decisions is often difficult because their families have no experience with college or the decisions that attending college entails such as choosing a major, developing an academic plan of study and making long-term career decisions. These students are also more likely to leave college before obtaining a degree (Billson & Terry, 1982; Bui, 2002; Hartig & Steigerwald, 2007; Horn & Nuñez, 2000; Inkelas et al., 2007; McCarron & Inkelas, 2006; Thayer, 2000). Research exploring parental and family support and the retention of first-generation college students has produced findings that offer two different perspectives on how these factors affect student retention.

While researchers have reported that parental support and the support of family has been identified as a positive factor that contributes to the retention of many first-generation college students (Arellano & Padilla, 1996; Solberg & Villerreal, 1997) other researchers suggest that too much support from parents can lead to dependency on the

family and negatively impact career decision-making. Lopez and Andrews (1987) explained that the process of committing to a career is one that requires less parental support and more psychological separation from parents. They contend that over involvement on the part of parents may impede career decision-making, resulting in negative consequences in career development. For example, Kinner et al. (1990) found a link between greater individuation from parents and less career indecision. These findings suggest that a lack of independence from family may serve as a barrier to career decision-making.

As previously noted, studies on first-generation college students and career decision-making have looked at the impact that parent's level of education has as well as how parental involvement influence the retention of these students. While these studies explore whether or not these students are impacted by family influence, these studies have not examined specifically *how* these familial relationships or family dynamics affect decision-making. Several researchers have taken an interest in the role of family, and have speculated that family dynamics and other attachment relationships make an important contribution to various aspects of career development (Blustein, Pauling, DeMania, & Faye, 1994; Blustein, Preziosi, & Schultheiss, 1995; Lopez & Andrews, 1987). While attachment refers to the emotional bonding that develops between individuals, cohesion also encompasses the degree to which family members are concerned and committed to the family as well as how supportive members are towards one another (Goldenberg & Goldenberg, 2008). The next section addresses how levels of family cohesion may negatively impact career exploration and decision-making.

## **Family Cohesion**

While researchers have explored how family may impact student's career decisions (Acker-Ball, 2007; Gibbons, 2004; London, 1989) it is also necessary to explore how students from families with higher levels of cohesion and less differentiation may be impacted by the inability to make independent career decisions. This may be particularly important for first-generation students who come from families with higher levels of cohesion because these students are more likely to lack resources as well as the independence from family necessary for career exploration and making independent career decisions.

Family cohesion is a process that is considered to be important to family functioning and has been found to be related to both positive and negative outcomes (Baer, 2002). Some of the positive outcomes could be greater academic achievement, increased motivation, and higher levels of self-efficacy, which could be attributed to the supportive family unit. Conversely, extremely high levels of cohesion could lead to difficulty making independent decisions, restrictions on career options, limited self-exploration, and disregarding personal preference for what is deemed acceptable by the family. Olson, Sprenkle, and Russell (1979) define family cohesion as a component of family support that describes the amount of emotional togetherness and bonding experienced in families. Enmeshment, which indicates an extreme level of cohesion, is defined by Barber and Buehler (1996) as family patterns that facilitate psychological and emotional fusion among family members, potentially inhibiting the individuation process.

**The Circumplex Model.** The Circumplex Model is a model that serves as a framework for understanding the dynamics that exist between family members. Olson et al. (1983) developed this model to provide a conceptual framework of the family system that could be utilized in research, theory and practice. This model is comprised of three key concepts for understanding family functioning; cohesion, flexibility and communication (Olson, 2006). Olson explains that family cohesion refers to the emotional bonding that family members have towards one another. Flexibility refers to the quality and expression of leadership and organization, role relationship and relationship rules in a family. Communication refers to the positive communication skills that are utilized in a couple or family (2006). In terms of measuring cohesion and flexibility, extreme levels are suggested to denote family dysfunction. The Family Adaptability Cohesion and Evaluation Scale (FACES-IV) is utilized to measure these dimensions (Olson, 2006, 2010).

In a validation study of the FACES-IV, Olson (2006) hypothesized that balanced cohesion was positively related to family functioning and enmeshment was believed to be negatively related to family functioning. The included 487 participants consisting of 124 college students and the remaining sample of non-students, Olson found that balanced cohesion was positively related to family functioning and enmeshment was negatively related to family functioning across all validation scales. These findings further support previous literature that suggests that higher extremes of cohesion are negatively related to healthy family functioning.

As previously noted, family cohesion ranges from very low or disengaged, to very high or enmeshed. Olson (1983) explains that these extreme levels are problematic



for most families. From this perspective, it is inferred that while closeness in family can be positive, those families that are extremely cohesive may discourage efforts towards individuation and inhibit the decision-making processes of these students.

Bell, Allen, Hauser, and O'Connor (1996) suggested that higher levels of cohesion (enmeshment) in the family system has been linked to adolescents' difficulties in mastering career development tasks. As Bell et al. (1996) explained, parental relationships in which parents are not overly involved and allow for sufficient autonomy while maintaining supportive relationships, may be optimal for young adults making career decisions. Research on family dynamics and how they impact educational attainment is necessary to understand how family dynamics can also impact college students' career decisions. As researchers have suggested, extreme levels of cohesion are "unhealthy" for a family system. This is also referred to as "dysfunction" (Lopez & Andrews, 1987; Minuchin, 1974). These inhibitive family relationships may pose serious threats to effective career decision-making.

**Family Dynamics.** Family dysfunction has been defined by Minuchin (1974) as family relationships that are excessively close and enmeshed or extremely distant or disengaged. Lopez and Andrews (1987) noted that family dysfunction may present in many forms and may be operationalized as parent-child over involvement, parent-child role reversal, and perceived parental fear of separation. Such family dynamics may inhibit a student's career expectations as well as his or her ability to perform a vocational search and career exploration Ryan, Solberg, and Brown (1996).

Ryan et al. (1996) contended that in "dysfunctional" families (those that do not function optimally), one's opportunities for career exploration may be blocked, verbal

persuasion may be a source of discouragement and one may experience anxiety at the prospect of leaving the family and finding a career. They explored family dysfunction, parental attachment and career search self-efficacy utilizing a sample of 220 community college students. This study explored the relationship between students' levels of attachment to both parents separately as well as the degree of overall family dysfunction. They found that for the total sample, attachment to the mother and father and degree of family dysfunction combined to account for 14% of the variance in career search self-efficacy. Data analyses were conducted separately for men and women. The results indicated that for women, attachment to the mother and degree of family dysfunction combined to account for 17% of the variance in career search-efficacy. For men, attachment to the mother was the only significant predictor and accounted for 9% of the variance in search self-efficacy. This study's findings support the literature that notes a negative relationship between family dysfunction and career search self-efficacy.

**Career Decision-Making and Family Influence.** The influence of family on career decision-making has long been recognized as an important factor by many vocational theorists (Osipow, 1983). While the family's influence on career development has been acknowledged, clear statements about the relationship of family interaction to effective career decision-making have eluded vocational theorists and researchers (Lopez & Andrews, 1987). According to Lopez and Andrews (1987), a young adult's choice or indecision can be conceptualized as the outcome of a larger set of transactions between the student and their family. It is believed that while some family interactions enhance this transformation from dependent child to autonomous young adult, others inhibit it, creating a climate that both promotes and maintains indecision.

Lopez and Andrews (1987) explain that the achievement of a personal identity requires both awareness and a balance between one's own values, needs, and aspirations, and those of others. It is plausible that those first-generation college students, who have greater ties to family, may possess higher levels of cohesion or relationships with their families. Consequently, these students may not have a sense of their own needs and aspirations and rely on family members to make decisions for them. In career matters, Lopez and Andrews suggest that an individual must address important questions about work and education, assume responsibility for gathering and utilizing pre-decision information and ultimately arriving at an independent judgment regarding their career choice.

From a family system's perspective, one may infer that the family patterns that contribute to increased problems with career decision-making could reflect problems within the larger family network (Lopez & Andrews, 1987). Those who are proponents of a family systems perspective emphasize the importance of considering family members' interactional patterns and their emotional interdependencies in understanding individual maladjustment. Unfortunately, traditional vocational theories have not accounted for the on-going reciprocal influence of parent-child interactions. While family factors have been considered in career research, most often, they have been viewed primarily as antecedent influences on career choice (Lopez & Andrews, 1987). Lopez and Andrews (1987) noted that despite a longstanding acknowledgement of the family's influence on career development clear statements on the relationship of family interactions to effective career decision-making is a component that has been often left unexplored in research. Although there has been more research on this topic conducted

in recent years (e.g., Acker-Ball, 2007; Blustein, 1994; Blustein et al., 1995; Gibbons, 2004; Martinez et al., 2009) such research among first-generation college students is still warranted.

**Family Involvement in Career Decisions.** Bratcher (1982) emphasized that a major concern in family systems systematic thinking is the extent to which an individual can resist the family's tendency to impose its rules on the individual. Bratcher (1982) noted that from a family system's perspective, a major factor in one's decision-making is the extent to which an individual can resist the family's tendency to impose its rules on the individual. The individual that is able to formulate his or her own way of thinking about work and developing his or her own beliefs and values without rebelling is in a much better position to consider what they want to do with their lives and how they want to find fulfillment through a career choice. Lopez and Andrews (1987) suggest that failure to establish an adequate identity may lead to role confusion in which the individual experiences an overreliance on others for guidance and support. Moreover, they indicate that with vocationally indecisive college students, there is typically an over-involvement of parents and students over career and educational matters. It is plausible that such dynamics could result in a student feeling that he or she cannot make a career decision.

What would one benefit from by avoiding making a career decision? It is plausible that career indecision provides the family with a conduit for postponing the important transformation of adult separation (Lopez & Andrews, 1987; Santos & Coimbra, 2000). Lopez and Andrews (1987) explained that career indecision not only renders the student "helpless" to decide on and implement career plans but also draws

parents into greater involvement with their offspring. In families in which the existing young-adult boundary is weak, career decision-making is negatively impacted by less differentiation or emotional separation from the family. In such families, this separation is often perceived as threatening the family's equilibrium. It is also possible that difficulty in making career decisions reflects an effort to cope with unresolved multigenerational issues as the student who is indecisive about a career is afraid of disappointing one or both parents by making a particular career choice (Lopez & Andrews, 1987). Bowen (1983) indicated that the indecisive student might regard him or herself as the sole member of the family that can satisfy the unfulfilled needs of parents. The expectation of successful degree and career attainment often becomes an "obligation" the student feels that he or she "owes" to the family. This parent-child role reversal or "overburdened role" is one in which the young adult is attempting to take care of parents through his or her own decision-making (Lopez & Andrews, 1987).

### **Career Thoughts**

**Career Decision-Making.** Some of the most important decisions that individuals ever face are career decisions and choices (Paivandy et al., 2008). Paivandy et al. (2008) define "career decisions" as choices individuals make about occupations, education, training, and employment. Lopez and Andrews (1987) explain that arriving at a career decision is often an anxious task for many college students. Lopez and Andrews reported that in 1987 that an estimated 25% of all students entering colleges and universities do so without having decided on a career. It is plausible this number has increased rather than decreased over time.

Kleiman et al. (2004) acknowledge that career decisions are complex and that making them requires attention and effort. While some individuals are able to make

career decisions relatively easily, many others face difficulties during or prior to the decision-making process. Moreover, these difficulties may prevent these individuals from making any decision at all or decrease their chances of making an optimal decision (Gati, Krusz, & Osipow, 1996; Kleiman et al., 2004). In order to understand what affects individuals' decision-making, it is necessary to consider the influence that cognitions or perceptions have on career decision-making.

**Cognitive Influences on Career Decision-Making.** When exploring issues that may contribute to problems in decision-making among first-generation college students, it is also important to consider the influence cognitive factors have on career decision-making. Individuals' thoughts and beliefs about themselves and their career options may affect their ability to make decisions (Paivandy et al., 2008). Research suggests that individuals with positive thoughts relating to career decision-making tend to make effective decisions. On the other hand, individuals who have negative cognitions relating to career decision-making tend to experience difficulty and display avoidance behaviors when facing a decisional dilemma (Paivandy et al., 2004). In addition, negative career thoughts have been found to be inversely related to both choosing a field of study and career decidedness (Osborn, 1998; Paivandy et al., 2008; Peterson et al., 2000). The next section will discuss negative career thoughts and how these thoughts can affect career decision-making.

### **Negative Career Thoughts**

It is believed that individuals often have automatic thoughts, or thoughts that the person is unaware of yet are followed by unpleasant feelings, such as guilt, that these individuals were very much aware (Sharf, 2008). Beck notes that individuals form sets of

beliefs based on the internal communications within themselves. He also suggested that it is from these important beliefs, that individuals formulate rules or standards for themselves, called “schemas” or thought patterns that determine how experiences will be perceived or interpreted (Sharf, 2008).

Previous research suggests that problematic thoughts or beliefs may arise during various stages of the early decision-making processes (Kleiman et al., 2004; Sampson et al., 1996b; Saunders et al., 2000). It is believed that these thoughts could decrease an individuals’ self-esteem while increasing anxiety and perceived external locus of control (Kleiman, 2004). As Saunders et al. (2000) explained, negative thoughts can prevent an individual from thinking in a systematic and organized manner about the problem and making a rational decision; conversely, the absence of dysfunctional or pessimistic thoughts promotes a better integration of knowledge about the self and potential occupations.

**Cognitive Information Processing Theory.** The research reported in this dissertation explored the relationship between negative career thoughts and career decision-making and first-generation status among a sample of undergraduate college students. In order to explore negative career thoughts among these students, Cognitive Information Processing (CIP) theory (Sampson et al., 1996b) was be used to gain a better understanding of how such thoughts can affect career decision-making. Cognitive Information Processing (CIP) is a theoretical approach to career development and career services. CIP provides a theoretical framework for understanding career problem solving and decision-making. It is the theoretical framework that was utilized in developing the Career Thoughts Inventory (CTI; Sampson et al., 1996b), which was used as an

instrument in this study. CIP's conceptual basis was based on theoretical concepts derived from cognitive psychology. In CIP, negative cognitions have a detrimental impact on both behavior and emotions (Sampson, et al., 1999). One of the basic premises of CIP is that career choice results from an interaction of cognitive and affective processes (Peterson et al., 1991).

CIP postulates that career decision-making has eight cognitive dimensions; self-knowledge, occupational knowledge, executive processing, communication, analysis, synthesis, valuing, and execution. From a CIP perspective, negative thinking in any of these eight content dimensions could impair an individual's ability to solve career problems and to make career decisions. The following section will define these three processing domains as well as the five cognitive subcomponents that form a model of problem solving and decision-making (Sampson et al., 1996b).

The first three concepts; self-knowledge, occupational knowledge, and executive processing are the processing domains involved in making a career decision (Sampson et al., 1996b). Self-knowledge refers to individuals' perceptions of their values, interests and skills. Occupational knowledge refers to the knowledge of individual occupations, job titles, tasks, salaries and having a schema for how the world of work is organized. Finally, executive processing refers to self-talk, self-awareness, control and monitoring, which are the meta-cognitions used to control the selection and sequencing of cognitive strategies used in career problem solving. (Sampson et al., 1999). The other five concepts refer to decision-making skills, those information processing skills that individuals use to solve problems and make decisions including the subcomponents of communication, analysis, synthesis, valuing, and execution.



Five of these eight dimensions represent the process that an individual goes through in order to make a career decision. As noted in the previous chapter, the CASVE cycle is a acronym used to describe the career decision-making process from a CIP perspective. The CASVE cycle and its concepts are described in the following section. Each of these components are described and applied to the career decision-making of first-generation college students.

**The CASVE Model of Decision-Making.** The CASVE cycle is a five-phase model that represents the process of decision-making. Given that many first-generation college students lack information about college and careers as well as guidance from parents due to their parents' lack of college experience, these informational gaps could also decrease their ability to engage in effective decision-making. Those students who indicate higher levels of cohesion in their families may also lack decision-making skills. It is possible that these students may also experience difficulty initialing or sustaining decisions because of their general dependence on family in making decisions.

During the communication phase, individuals' acknowledge that a gap exists between where they are, and where they would like to be. Experiencing negative career thoughts during this phase could make it difficult for a student to start the decision-making process. In the analysis phase, individuals process their self-knowledge, options and their approach to making overall decision and the decision-making process. First-generation students may not feel that they know enough about themselves or careers to make a good decision.

During the synthesis phase, individuals utilize their knowledge of themselves and broaden their range of options. Negative or obstructive career thoughts during this phase

may cause students who are first in their families to attend college to feel there are too many choices to narrow them down to make a decision. Experiencing dysfunctional thoughts at this stage may increase anxiety about committing to a career decision.

During the valuing phase, these options are examined and narrowed down to the most realistic options. Given that this phase is also influenced by what one values, narrowing these decisions may also include deciding what impact these options may have on the individual, significant others, family or overall society. This may be particularly salient for those students from families with higher levels of cohesion. Negative thinking during this phase could encourage students to consider the impact their decision may have on others over their own values.

Once individuals then decide on a first choice and progress into the execution phase. During the execution phase, individuals take action towards pursuing their choice and return to the communication phase to determine if this is an acceptable choice. Negative thoughts during this stage could keep a student from following through on their plan, which could mean making a decision based on the choices of family, constraining their career decisions or putting off taking action on making a decision (Sampson et al., 1996b).

From a CIP perspective, negative career thinking has been identified as a personal perspective that inhibits one's ability to make appropriate career choices through effective career decision-making (Sampson et al., 1996b). Cognitive therapy's theoretical concepts specify that negative thoughts or cognitions can have a detrimental impact on both behavior and emotions. Metacognitions are the thoughts, appraisals, expectations and expectancies which guide cognitive functioning (Peterson et al., 1991;

Peterson et al., 1996). Metacognitions are believed to have a strong impact on career problem solving, however, because these cognitive processes are ingrained in an individual as a result of their experiences with problem solving, they are also difficult to change (Sampson et al., 1996b). It is believed that these cognitions may either facilitate or impede career decision-making depending upon their content (Peterson et al., 1991; Peterson et al., 1996).

While it is noted that negative thinking in career problem solving and decision-making cannot be measured directly, it can be inferred from an individuals' endorsements of statements that reflect a variety of negative career thoughts. This premise served as the underlying assumption in the development of the Career Thoughts Inventory (CTI) (Sampson et al., 1999). The CTI was developed to assess for the degree to which individuals have these thoughts and also assesses for whether these thoughts could be attributed to problems with decision-making, anxiety or environmental factors.

**Career Thoughts Inventory.** All items on the CTI reflect negative thinking that inhibits effective career problem solving and decision-making. This measure is designed for use with high school students, college students, and individuals who are seeking employment. It may be used with high school students who may be choosing a postsecondary field of study or with college students who may be choosing a major or seeking employment. It can also be used to assist adults who are choosing an occupational change due to unemployment, underemployment, or reentering the labor market after a substantial period of non-paid work such as child rearing. The CTI was utilized because undergraduate college students may fall into a variety of the aforementioned categories.

The CTI can be used as a screening measure, needs assessment, and as a learning resource to allow practitioners to identify, challenge and subsequently alter the problematic thinking that may impair an individual's ability to effectively solve career problems and make career decisions. In the current study, it was used as a needs assessments measure to identify dysfunctional thinking among undergraduate students. The CTI has been used in a variety of research studies including minorities and college student populations. Two of these studies will be discussed in the following section.

**Relevant Research Utilizing the CTI.** Williams (2004) investigated the relationship between racial identity and career thoughts for African American high school seniors. Williams explained that an individual's overall career development may be greatly influenced by parental input, parents career aspirations and parental expectations. In this study, Williams utilized a sample of 557 African American students and investigated the importance of race in the career development of these students, as well as their perceptions and thoughts about careers and career choices. Four hypothesis were tested:

- (1) Those individuals at a higher stage of racial identity development will have less negative career thoughts overall,
- (2) Those individuals at a higher stage of racial identity development will have less decision-making confusion,
- (3) Those individuals at a higher stage of racial identity development will have less commitment anxiety, and
- (4) Those individuals at a higher stage of racial identity development will have less external conflict.

Results of this study suggested that individuals in the early development stages of racial identity development had moderate to high scores with respect to decision-making

confusion, external conflict, commitment anxiety and negative career thoughts overall. The researcher concluded that in this study, the less developed one's racial identity, the greater the likelihood of a higher degree of negative thoughts about career and career choice. Based on this research, it is reasonable to presume that, students who have a less developed sense of identity in general, as a result of higher levels of cohesion and fewer opportunities for differentiation from the family, will have a greater the degree of negative career thoughts.

Hartley (2009) explored career indecision, negative career thoughts and the vocational interest structure of 243 undergraduate first-generation and non-first-generation college students. Among the students in this sample, 50.6% were female, 49.4% were male, 21.0% were African American, 1.2% were American Indian, 1.6% were Asian American, 65.4% were Caucasian, 6.2% were Hispanic American, and 4.5% identified as "other" or preferred not to respond.

Participants completed the Occupational Alternatives Question to assess for career indecision, the Career Thoughts Inventory to assess for negative career thoughts and the Self-Directed Search to determine vocational interest structure. A multivariate analysis of variance (MANOVA) was utilized to determine if differences existed between first-generation college students and other students enrolled in a career-planning course in terms of career indecision, negative career thoughts, and structure of vocational interests. Results showed that no significant differences emerged between first-generation college students and non-first-generation college students. Next, the researcher examined whether first-generation college student status contributed to career indecision, negative career thoughts, and structure of vocational interests among college

students enrolled in a career-planning course, by performing a hierarchical multiple regression. This test was performed to determine the unique contribution of first-generation status in explaining variance in each dependent variable. “Indices of vocational interests” was entered in the first step, followed by negative career thoughts and finally, first-generation status. First-generation status did not account for significant variance on any dependent variables. After controlling for structure of vocational interests, negative career thoughts accounted for 7.6% of the variance in career indecision. After controlling for all three variables, first-generation college student status accounted for 0.4% of incremental variation in career indecision.

Next, vocational interests, career indecision, and first-generation college student status were entered respectively. Structure of vocational interest accounted for 2.4% of the variance in negative career thoughts, career indecision accounted for 7.5% of incremental variation in negative career thoughts and first-generation college student status accounted for 0.1% of incremental variation in negative career thoughts.

Finally, a MANOVA was performed with the first-generation and non-first-generation groups as well as Occupational Alternatives Question scores and Satisfaction with Choice to determine the relationship between first-generation college student status and career decision state. This analysis also revealed no significant differences between the first-generation and non-first-generation students.

Hartley (2009) explains that one possible explanation for non-significant differences in the data was the fact that data were collected in a career planning course. It is possible that the population of students had similar levels of career indecision, negative career thoughts and structures of vocational interests, which prompted their seeking a

career course. Hartley also noted that a majority of the participants, 53.1%, were classified as seniors, which means that having completed three years of coursework and gaining additional college experiences makes this group a much more homogeneous group than students of lower classifications with respect to their career development. Additionally, it is noted that students who are enrolled in a career-planning course may have higher amounts of career motivation than their non-enrolled peers. This is another reason this sample may not have captured the students who have increased risk factors for dropping out of college. Data in this study were collected from a criterion sample of college students enrolled in introductory career development courses. Hartley noted that replication of this study with a different population would be important to expand the research on first-generation college students. Hartley also suggested that future research on first-generation college students examine more diverse psychological variables including family dynamics, which was one aim of the current study.

Although the Career Thoughts Inventory has been utilized with college students to examine dysfunctional career thoughts (Dodge, 2001; Johnson, 2008; Keim, Strauser, & Ketz, 2002; Osborne, Howard, & Leierer, 2007; Paivandy et al., 2008), Hartley's (2009) study is one of the few to examine the negative career thoughts of first-generation college students. Given that the participants in her sample consisted of a criterion sample of college students enrolled in introductory career development courses, it is important to note that this population does not reflect the average college student who has had no exposure to a career course.

In this study, the CTI was utilized to assess career thoughts among a population of undergraduate college students to determine if there were differences in the amount of

negative career thoughts among a sample of first-generation and non-first-generation college students. The FACES-IV was used to measure levels of cohesion so the impact of family dynamics could be examined. Together, these measures were used to explore the overall impact of first generation status and family dynamics on the career thoughts of college students.



## Chapter 3

### Methodology

The methods chapter will be divided into three subsections. First, the characteristics of the participants will be described, followed by a description of the instruments used, and finally, procedures utilized to collect the data in this study will be presented.

#### Participants

Undergraduate students attending a large, public university in the southeast region of the United States were invited to participate in the current study. According to the university's fall 2011 student enrollment information, the university population was comprised of 17,966 undergraduate students; Caucasian  $N = 8725$  (48.6%), African American  $N = 7478$  (41.7%), "Other"  $N = 722$  (4.0%), Hispanic  $N = 461$  (2.6%), Asian  $N = 440$  (2.4%), and Non-Resident Alien = 140 (.07%). The average High School GPA reported for students entering the university was 3.11. The Average ACT Composite score was a 21.9. According to this university's office of institutional research, 44% of undergraduate students (44.3%  $N = 6,738$ ) reported they were first-generation college students, 31% of undergraduate students (31.2%  $N = 4,740$ ) indicated that one parent attended college, and 24% (24.3%  $N = 3704$ ) indicated that both parents attended college (Office of Institutional Research, 2011,). In order to participate, participants had to be at least 18 years of age and a currently enrolled undergraduate student at the time of the study.

Participants in this study were 105 undergraduate students. The mean age of participants in the sample was 24.82 ( $SD = 6.353$ ) with ages ranging between 18 and 49

years. The sample included 40 males (38.1%) and 65 females (61.9%). The self-identified racial composition of the group included 58.1% (61) participants who identified as African American, 15.2% (16) who identified as Caucasian, 10.5% (11) who identified as Biracial, 6.7% (7) who identified as Latino or Hispanic, 5.7% (6) who identified as Asian/Asian American, 1.0% (1) who identified as multiracial, and 2.8% (3) participants preferred not to answer. In terms of educational classification, 19 identified themselves as freshmen (18.1%), 34 as sophomores (32.4%), 20 as juniors (19.0%), and 32 as seniors (30.4%).

According to Stevens (2002), in order to achieve a power of .80 with an  $\alpha = .05$ , utilizing a multiple regression, 105 participants were needed for this study (15 participants per variable (7), to ensure that the power of the F test statistic would be at or above 80% or .8. Given that one of the assessment inventories required a fee for each copy, the survey was closed once the required 105 complete surveys were collected. Submitted surveys were consistently reviewed for incomplete responses and immediately discarded. Twenty-six surveys were eliminated based on no completed questions beyond "I agree to participate in this study." Forty-one surveys were eliminated because participants terminated after partially completing the demographics portion of the survey. Fifteen surveys were attempted but eliminated after review showed that less than 50% of questions on the first assessment (FACES-IV) were attempted, which means that none of the questions on the second assessment (CTI) were attempted due to premature termination. A total of 105 completed surveys were included in the analyses of this study. All protocols and guidelines of the Institutional Review Board were followed.

First-generation status was determined based on participants' demographic responses to parent's highest level of education completed. Based on this demographic information provided, 63 participants (60%) reported either or both parents' highest level of education as "some college, "completed college" or "advanced degree" and were considered non-first-generation college students. Forty-two participants (40%) reported either or both parents' highest level of education as "some high school" or "completed high school." For the purpose of this study, 42 participants were considered first-generation college students and 63 were considered non first-generation college students.

### **Procedure**

Participants were recruited in a variety of ways. Following obtaining approval from the university's Institutional Review Board (IRB), the primary means for recruiting participants was through an office that gathers information and data about the university's students. The office provided two randomized lists of email addresses for first-generation and non-first-generation college students based on their enrollment information. In order to maintain consistency in this study in utilizing the traditional definition of a first-generation college student (no college experience for either parent), this criteria was specified before the lists were generated. An announcement of the study was emailed to these students describing the study as an investigation of family dynamics and career decision-making among undergraduate students. A direct link to the survey was provided in the email so participants were able to gain direct access to the survey. Given the initial low response rate from the e-mail request, additional avenues previously approved by IRB for recruiting participants were utilized. Invitations to participate in the study were e-mailed to student organizations on campus, instructors teaching a course

designed to acclimate students to the university, and a student support services program that provides services to students from disadvantaged backgrounds. Participants were also recruited via the university's social media network page on facebook.com where an invitation to participate in the study was posted on the website.

Survey information was collected through SurveyMonkey. SurveyMonkey is a website that provides online data collection software that helps to track and organize survey responses. As requested by Psychological Assessment Resources (PAR), the company that owns the rights to one of the assessments utilized in this study, the survey was password protected in an attempt to monitor access to the survey. Additionally, a copyright notice and a statement requiring that students not print the survey was also presented on the first page of the study and included as part of the consent form.

Participants were prompted to read the consent form on the first screen of the survey. This form explained their responsibilities and rights as a participant. They were asked to indicate their agreement to participate in the study by clicking next to the text which read: "By clicking 'I agree to participate' below I signify that I understand this informed consent and am willing to participate in the survey. I also signify that I am at least 18 years of age." This page also included a statement that noted: "If you do not agree to participate or are not at least 18 years of age, please discontinue the survey by closing the page." Participants were informed that their participation was voluntary and that they were free to withdraw at any time. All participants were presented with a demographic questionnaire, followed by the FACES-IV then the CTI. At the end of the survey, all participants had the opportunity to enter their university email address to receive a \$2.00 electronic Amazon.com gift card that could be used for one music

download or towards any Amazon.com purchase, as compensation for participating in the study. E-mail addresses were recorded and stored separately from the survey's responses to protect participants' confidentiality. Of the 105 participants, 79 followed through with requesting compensation, 26 declined.

## **Measures**

**Demographic Questionnaire.** Participants completed a demographic questionnaire developed by the principal investigator to elicit background information such as age, sex, race, participant level of education, parental level of education and socioeconomic status. The information provided about parental level of education was used to define the first-generation status variable and to provide descriptive information about the sample.

## **Family Cohesion**

**The Family Adaptability and Cohesion Evaluation Scale (FACES IV;** Olson, Gorall, & Tiesel, 2006) was used to measure the degree of family cohesion. The FACES-IV is a self-report assessment that measures the dimensions of family cohesion and flexibility. Cohesion refers to the emotional bonding that family members have with one another. Families that are too cohesive are considered to be enmeshed, and those who are too distant are disengaged and less functional (Olson, 1986).

The FACES IV assessment package contains a total of six scales. Four of these scales make up the FACES-IV. The FACES IV scales are; *Balanced Cohesion, Balanced Flexibility, Disengaged, Enmeshed, Rigid, and Chaotic*. The FACES IV contains 42 items. Participants responded using a numerical Likert-Scale (1 = *Strongly Disagree*, 2 = *Generally Disagree*, 3 = *Undecided*, 4 = *Generally Agree*, and 5 = *Strongly Agree*).

*Balanced Scales.* The FACES IV consists of six scales that measure either balanced or unbalanced cohesion and flexibility. The two balanced Scales” are *Balanced Cohesion* and *Balanced Flexibility*. Balanced levels of cohesion (low to high levels) are considered most conducive to healthy family functioning (Olson & Gorall, 2006). These scales are linear, and therefore allowed interpretation of this curvilinear concept in a linear model. For each of these scales, the higher the score, the more positive (Olson et al., 2010). Examples of Balanced cohesion questions are: “Family members are involved in each other’s lives and “Family members feel very close to each other.”

*Unbalanced Scales.* The four unbalanced scales are *Disengaged*, *Enmeshed*, *Rigid* and *Chaotic*. The *Disengaged* and *Enmeshed* scales assess the high and low extremes of cohesion (Olson, 2010). Examples of the Unbalanced cohesion (disengaged / low extreme) questions: (e.g., “Family members are on their own when there is a problem to be solved,” “Family members mainly operate independently”), unbalanced cohesion questions, (enmeshed/ high extreme) (e.g., “Family members feel pressured to spend most free time together,” “We resent family members doing things outside the family”).

One of the noted conceptual and empirical challenges of the cohesion and flexibility dimensions is that they are hypothesized to be curvilinear. From this perspective, too much or too little cohesion or flexibility is unhealthy, while moderate levels are healthier (Olson, 2010). Olson explains that one step in resolving this challenge has been to create separate scores for the healthy or “balanced,” and unhealthy or “unbalanced” cohesion and flexibility. A second step was the creation of the Cohesion Ratio scores.

## **Measuring Cohesion**

The *Cohesion Ratio* score is a score that assesses the ratio of healthy and unhealthy cohesion. Utilizing the *Balanced scale* on cohesion, this ratio score compares the relative amount of balanced versus unbalanced cohesion in a family system. The higher the ratio score of balanced to unbalanced, the more healthy the family system is thought to be. Thus, the lower the ratio is below 1, the more unbalanced the family system is in terms of levels of family cohesion, whereas the higher the ratio score is above 1, the more balanced the family system. Empirically, this *Cohesion Ratio* score is calculated by dividing the *Balanced Cohesion* score by the average of the two unbalanced scales, *Disengaged* and *Enmeshed* (Olson, 2010).

$$\text{Cohesion Ratio} = \text{Balanced Cohesion} / (\text{Disengaged} + \text{Enmeshment})$$

In terms of data analysis, The FACES-IV yields raw scores that are converted into percentile scores. These percentile scores were utilized to interpret both balanced and unbalanced levels of cohesion.

## **Validation Studies**

In a validation study of the FACES-IV and Circumplex Model, Olson et al. (2007) utilized convenience and snowball sampling. One hundred and twenty-five participants were recruited from a Mid-western metropolitan university (convenience sample) and asked to have others they knew to complete the protocol (snowball sample). Olson et al. (2007) reported that a majority of the sample (90%) were Caucasian with a smaller percentage that were Asian American (7%) and Hispanic (2%). Olson et al. (2007) reported that alpha reliability analysis was conducted to examine the internal

consistence of the six FACES-IV scales: Disengaged = .87, Enmeshed = .77, Rigid = .82, Chaotic = .86, Balanced Cohesion = .89. Balanced Flexibility = .84, therefore these internal consistency reliabilities are considered acceptable for research purposes.

In a validity study conducted by Franklin, Streeter, and Springer (2001), the researchers report that Tiesel and Olson (1997) administered the FACES IV to 2,359 individuals from nine different states along with the General Functioning scale of the McMaster Family Assessment Device (Epstein, Baldwin, & Bishop, 1983), the Health/Competence scale of the Self Report Family Inventory (Hampson, Hulgus, & Beavers, 1991), the Family Satisfaction scale (Olson & Wilson, 1983) and the Family Communication scale (Barnes & Olson, 1989) to help assess the validity of the measure. It is reported that Cronbach's alpha for the assessment measure ranged from .65 to .79. Test-retest reliability was assessed at approximately 3-week intervals and produced coefficients ranging from .83 to .93. Results of a factor analysis showed that the items loaded on four distinct factors Enmeshed, Disengaged, Chaotic and Rigid, producing coefficients in the range of .35 to .80, therefore supporting the overall validity of the scale (Franklin et al., 2001).

The FACES IV has been utilized in studies consisting of a large number of minority participants (Franklin et al., 2001): African American (37.1%), Hispanic (40%). The age of the sample ranged from 11 to 21 years with a mean age of 16.4. Internal consistency reliability (Chronbach's alpha) was .92 in the current study. This assessment measure has also been utilized with college students (Tiesel & Olson, 1997) however, the sample was comprised of both college students and non-college students. Given that there are no published studies to date that have used this assessment measure with the



target population for this study, utilizing this assessment measure with college students from a predominately urban university will contribute to the literature. This information will also provide information about norms in terms of utilizing this assessment measure with this population.

### **Career Decisions**

Negative career thinking was the dependent variable in this study and was measured using the *Career Thoughts Inventory* (CTI; Sampson et al., 1996a). The CTI total score was utilized in this study as the criterion variable. The CTI is a self-report inventory designed to measure negative career thoughts. The CTI Total (48 items) is a global measure of negative career thoughts. The CTI is based on Cognitive Information Processing theory (CIP) (Peterson et al., 1991; Peterson et al., 1996; Reardon et al., 2000), which predicts that reducing negative career thinking aids clients in effectively processing information needed for exploration, problem solving, and decision-making. The CTI is written at a sixth grade reading level and can be completed in 7 to 15 minutes (Sampson et al., 1996b).

The CTI measures negative thoughts that impede or impact career decision-making using a 4-point-Likert scale (0) *Strongly Disagree*, (1) *Disagree*, (2) *Agree*, and (3) *Strongly Agree*. The CTI consists of 48 items that yield a total score and consists of three subscales. These three subscales are combined to yield a total score. These three scales are utilized to tell what is being measured and to help to determine the extent to which students have difficulty making independent career decisions (Sampson et al., 1996b).

The *CTI-Decision-making Confusion Subscale* (DMC, 14 items) reflects “the inability to initiate or sustain decision-making as a result of disabling emotions and /or a lack of understanding of the decision-making itself” (Sampson et al., 1996b). An example item from this scale is: “Choosing an occupation is so complicated, I just can’t get started.”

The *CTI-Commitment Anxiety Subscale* (CA, 10 items) measures the inability make a commitment to a specific career choice while experiencing generalized anxiety about the outcome of the decision-making process with indecision being perpetuated by anxiety (Sampson et al., 1996b). An example item from this scale is: “If I change my field of study or occupation, I will feel like a failure.” The *CTI-External Conflict scale* (EC, 5 items) measures the inability to balance the importance of one’s own self-perceptions with the importance of input from significant others, resulting in a reluctance to assume responsibility for decision-making. An example item from this scale is “I’m always getting mixed messages about my career choice from important people in my life” (Sampson et al., 1996). This scale reflects factors in one’s environment that impact decision-making.

The CTI Total Score (48 items) is the sum of all 48 items and can range from 0 to 144 (Sampson et al., 1996b). Higher scores indicate negative career thinking. The raw scores for each of the subscales can be converted in to *T*-scores and percentile ranks.

The CTI was standardized on a national sample consisting of over 1,500 adults, college students and high school students; adults ( $N = 571$ ), college students ( $N = 595$ ) and eleventh and twelfth grade high school students ( $N = 396$ ), and combined data on adult and college students ( $N = 376$ ) (Sampson et al., 1999). Internal consistency (alpha

coefficients) for the CTI Total score ranged from .97 to .93. Alpha coefficients for the three construct scales ranged from .94 to .74. Sampson et al. (1999) reported that test-retest reliability was measured in college and high school students across four weeks and ranged from .74 to .82. The internal consistency reliability (Cronbach's alpha) was .97 in the current study.

## **Chapter 4**

### **Results**

This exploratory study investigated the relationships among first-generation status, family dynamics and negative career thoughts. Specifically, this study examined the degree to which first-generation status and family cohesion accounted for variance in the negative career thoughts for a sample of undergraduate students. This chapter describes and summarizes the preliminary and statistical analyses used to evaluate the research questions and hypotheses established in the previous chapters, followed by the results of these analyses.

#### **Preliminary Statistical Analysis**

In order to address the research questions proposed in this study, hierarchical multiple regression was utilized. SPSS software version 19 was used to perform a linear regression and to analyze data collected in this study. After descriptive statistics were reviewed, preliminary analyses were conducted in order to examine the data for accuracy in data entry, missing values, appropriate ranges and frequencies, and normality of distributions. Tests for outliers, skewness and kurtosis of the data were conducted to examine the possibility any potential problems within the data set.

The variance inflation factors (VIF's) were 1.000 and 2.716, which are less than ten, which as Stevens (2002) suggests, indicates that there were no problems with multicollinearity. Visual review of the scatter plots indicated no curvilinearity in the data. No pattern suggested a violation of the assumption of homoscedasticity.

Review of the normal P-plot of regression standard residuals and histograms indicated that the data was normally distributed. Results of the preliminary statistical analyses indicated that the assumptions of independence, normality, and homoscedasticity were met.

Skewness and kurtosis were examined for the measures of negative career thoughts (.950, -.016) and family cohesion (.093, -1.433) respectively. These levels fall between -1.0 and +1.0 which meets the criteria for a normal distribution. Examination of the possibility of outliers of influential data points indicated that there were no subjects who individually influenced the regression results. Therefore, analyses for this study were run on the entire sample, which included a total of 105 participants.

### **Statistical Analysis**

The variable “first-generation status” was operationalized utilizing demographic information provided by the participants. First-generation status was assigned based on both parent’s highest level of education. In the current study, those students who reported their parent’s highest level of education as “some high school” or “completed high school” were considered first-generation college students. Those students who reported their parent’s (both parents) highest level of education as “some college,” “completed college” or “advanced degree” were considered non first-generation college students. When entering the data into the regression analysis, non-first-generation college students was coded as “0” and first-generation college students were coded as “1.” The sample included 63 (60.0%) non first-generation college students and 42 (40.0%) first-generation college students. Table 1 presents information regarding both parents’ highest level of education.

Table 1

*Parent's Highest Level of Education*

Variable	Some High School	Completed High School	Some College	Completed College	Advanced Degree	Missing
Mother's Education	17 (16.2%)	36 (34.3%)	30 (28.6%)	15 (14.3%)	6 (5.7%)	1(1.0%)
Father's Education	30 (28.6%)	34 (32.3%)	24 (22.9%)	10 (9.5%)	6 (5.7%)	1(1.0%)

Total  $N = 104$  for mother's education and 104 for father's education. One response was omitted from each group. First-generation status was defined by both parent's highest level of education.

Table 2

*Summary of Intercorrelations, Means and Standard Deviations for Negative Career Thoughts (CTI) First Generation Status (FGCS) and Cohesion (FACES)*

*N = 105*

Measure	1	2	3
1. CTI	1	.775**	.692**
2. FGCS	.775**	1	.795**
3. FACES	.692**	.795**	1
<i>M</i>	24.20	.40	51.36
<i>SD</i>	24.645	.492	21.91

*Note.* \*\* $p < .01$ . \* $p < .05$ . Correlation is significant at the .01 level. (Higher scores on the CTI indicate greater negative career thoughts).

Table 2 presents the intercorrelations, means, and standard deviations for the variables used in the regression analysis. An alpha level of  $\alpha = .05$  was used to assess statistical significance for all analysis in this study. To explore the influence of first-generation status and family functioning (levels of cohesion) on negative career thoughts for a sample of undergraduate college students, the predictor variables were entered into the regression model in two steps. In the first step, first-generation status was entered on the first step to examine how much variance it accounted for in negative career thoughts. In the second step, family functioning variables were entered into the regression to examine the change in the variance in negative career thoughts that could be accounted for by family cohesion.

First-generation status accounted for 60% (.597) of the variance in negative career thoughts for undergraduate students in this sample (Adjusted  $R^2 = .597$ ,  $F(1, 103) = 154.751$ ,  $p < 0.05$ ). These results supported hypothesis one. First-generation college students reported more negative career thoughts as indicated by higher scores on the Career Thoughts Inventory (CTI). The mean score for first-generation college students was ( $M = 47.48$ ). The mean CTI score for non first-generation college students was ( $M = 8.68$ ).

After accounting for variance related to first-generation status, an additional 1.6% of variance in negative career thoughts was accounted for by family cohesion ( $R^2$  change = .016;  $F$  change = 4.186,  $df = 1, 102$ ;  $p < .05$ ). The results supported hypothesis two as this relationship, although much smaller, had a negative relationship with negative career thoughts decreasing as the balanced cohesion scores increased. Results of the hierarchical regression analysis are presented in Table 3.

Results of the regression analysis support the hypothesis that first-generation status and family cohesion both have a significant relationship with the negative career thoughts of participants in this sample. As hypothesized, first-generation status was strongly related to negative career thoughts. Further, as hypothesized, there was a negative relationship between family cohesion and negative career thoughts. Negative career thoughts decreased (as evidenced by lower CTI scores) as family cohesion levels (FACES-IV scores) increased for first-generation college students in this sample.



Table 3

*Hierarchical Regression Analysis showing amount of Unique Variance in Dysfunction Career Thoughts Accounted for by First-generation Status and Cohesion*

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		<i>R</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>F</i>	<i>P</i>	<i>B</i>	$\beta$
Step 1:	First-Generation Status	.77	.60	.60	154.71	.000	8.68	.77
Step 2:	First-Generation Status	.78	.61	.01	81.86	.043	30.56	.61
	Cohesion						2.3	.20

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*Note.* Cohesion is measured by the FACES IV.

## **Chapter 5**

### **Discussion**

The current study was designed to examine the impact of being the first in one's family to attend college on how one approaches career decision-making. In this study, first-generation status was found to be strongly related to negative career thoughts, with family cohesion also having a smaller but significant relationship. Prior research studies have yet to explore first-generation status, family dynamics, and how these factors affect negative career thoughts. This was the primary aim of the current study. A summary of this study's findings, a discussion of the results, limitations, and implications for research and practice will be presented in this chapter.

#### **Research Question 1**

The hypothesis that first-generation status would account for significant variance in negative career thoughts was fully supported in the current study. Results of the regression analysis indicated that first-generation status, specifically being a first-generation college student, accounted for 60% (.597) of variance related to negative career thoughts. These results show that first-generation college students in this sample reported significantly more negative career thoughts as evidenced by higher scores on the Career Thoughts Inventory than non first-generation college students. CTI total scores for first-generation college students in this sample ranged from 0-87 with a mean of 47.48. Sampson et al. (1996b) notes that these scores fall within the fiftieth percentile and should be specifically addressed given that scores in this range indicate that there could be barriers that may seriously hinder career problem solving and decision-making. Conversely, scores for non-first-generation college students in this sample ranged from 0-

47 with a mean score of 8.68. Such scores represent a minimal amount of negative thinking impeding career problem solving (Sampson et al., 1996b). In sum, mean CTI scores for first-generation college students were at least five times greater than mean scores for non-first-generation college students in this sample. This indicates that those students whose parents did not attend college experienced far greater negative career thoughts than those whose parents did.

Students of parents who did not attend college cannot benefit from the first-hand experience of college educated parents and encounter more difficulty understanding the skills, attitudes, and abilities necessary to successfully navigate college (Acker-Ball, 2007) and have parents who have had less integration into the professional work force (Doggan, 2001). These students also report being overwhelmed by the vast options of majors and career paths in college (Gibbons, 2004) and come from families that often lack information to help the student make optimal career decisions (e.g., Dennis et al., 2005). Given these factors, the findings in this study that students in this sample whose parents had prior experience with college reported more negative or obstructive career thoughts than those whose parents attended college is not surprising.

Findings in this study contradict findings from one of the few studies that explored relationships between first-generation status and career thoughts. Hartley (2009) found that first-generation college students and non first-generation college students did not differ on career indecision and negative career thoughts. Hartley notes that the findings that first-generation and non first-generation college students did not differ on the assessed career constructs may be explained by the sample in her study, given that all of the students were enrolled in a career development course. Hartley

acknowledges that because these participants were enrolled in a career development course and primarily comprised of seniors (53.1%), this group may have been more homogeneous on constructs of career development than college students in the general population. In the current study, the only criteria for participation was being an undergraduate college student at the university and being at least 18 years of age, which led to greater diversity in terms of the overall sample.

### **Research Question 2**

In addition, results of the regression analysis also supported the hypothesis that in the current study, first-generation college students from highly cohesive families would report more negative career thoughts as evidenced by higher scores on the Career Thoughts Inventory, which measures negative career thoughts. After accounting for variance related to first-generation status, significant additional variance (1.6%) was accounted for by family cohesion. Additionally, the hypothesis that this relationship would be negative with negative career thoughts decreasing as cohesion scores increased was supported. These results note a significant correlation between negative career thoughts and family dynamics. While results of this study show that family cohesion levels do make an impact, overall, the greatest impact on negative career thoughts for students in the sample was largely attributed to first-generation status.

### **Limitations**

Although the current research will contribute to the existing body of research on first-generation status, family dynamics and negative and obstructive career thoughts; the following limitations should be noted. One of the limitations of this study is the reliance on self-report given that all of the data was collected using self-report instruments. This

is considered a limitation because students reported their own perceptions of their families when answering questions about cohesion, which was not confirmed by other members of the family.

Another notable limitation is that the researcher in this study assigned individuals to first-generation and non-first-generation groups. These groups were not self-defined by the participants in this study. The main reason participants were assigned to groups by the researcher is because of the lack of uniformity in defining a first-generation college student. Given the variation in how a first-generation college student is defined, it is believed that this may have impacted which group participants assigned themselves to. The “traditional definition” (parents never attended college), was utilized to define first-generation college students in this study. Parents who have attended college, whether they completed one or two classes or several years but did not attain their degree, still have personal experiences and first-hand knowledge about college, majors, and career options that can be passed on to their student. It is expected that any first-hand experience with college can provide greater insight than no experience with college. For that reason, the distinction was made between students who reported “high school” as their parent’s highest level of education, and those who reported that their parents attended college, regardless of their length of attendance.

### **Implications for Counseling Psychology**

As previously noted, students whose parents has no first-hand experience with college may experience greater difficulty in adjusting to college, may have lower educational aspirations for college, greater financial concerns and less external support (e.g., York-Anderson & Bowman, 1991). Additionally, although these students may

experience greater adjustment issues when starting college, have increased anxiety about their ability to succeed in college and feel additional family pressure to be ‘the one to make it.’ These students, particularly minorities, are often less likely to seek counseling services (Owens, Lacey, Rawls, & Holbert-Quince, 2010). Students often see counseling as a place to address issues of mental illness, not issues related to their academic concerns, issues related to adjustment or career concerns. Given the number of concerns students who are the first in their families to attend college face, it is important that university counselors and individuals in higher education are proactive about connecting these students with resources, many of which students do not know exist. Perhaps more importantly, it is important that universities reach out to the parents, perhaps during new student orientation or on their website educating parents about the resources and services available to their student, especially career counseling.

Counseling psychologists may find that outreach programs are especially important in reaching this population. Career counseling can be beneficial in helping these students to identify career options and opportunities. Psychologists may also be helpful in assisting first-generation college students to address issues of anxiety and doubt in individual therapy. The Career Thoughts Inventory Workbook utilizes many cognitive behavioral concepts to help individuals to identify, challenge and alter negative career thoughts and then follow-up with a plan of action (Sampson et al., 1996b). These approaches can be useful in identifying the negative cognitions that can impeding career decision making. Challenging these career thoughts can be helpful in assisting these students in eliminating some of the barriers caused by negative career thoughts, which are

often further impacted by family dynamics and the families own negative thoughts about careers.

### **Implications for Future Research**

As previously stated, there is great variation in the definition of a first-generation college student. Some only consider those whose parents have no education beyond high school to be first-generation college students (Billson & Terry, 1982; Hartley, 2009; Lofhink & Paulsen, 2005; Pascarella et al., 2003). Others consider those who will be the first to achieve a degree to be first-generation college students (Auclair et al., 2008; Dennis et al., 2005). One aspect that has yet to be explored in the literature is how the definition of a first-generation college student affects a student's utilization of services in terms of programs designed for first-generation college students. Simply stated, if a student is aware that their parent attended college and their parent provides feedback from the framework of having gone to college but had limited exposure (e.g., two or three courses), the student may not feel they can utilize services for first-generation college students because their parent "went to college." Given this, the student may not feel that such programs or services apply to him or her. This is another reason a more uniform definition of a first-generation college student is necessary.

Further research is needed to further explore the current study's findings. Qualitative research may provide insight on the specific negative and obstructive career thoughts that are most prevalent for first-generation college students, help to identify sources of these negative cognitions and help to identify specific challenges these students face in career decision-making. Additionally, given the number of African American participants in respect to other racial and ethnic groups in this study, it would

be beneficial to replicate this study comparing the influence of race and ethnicity in a larger sample looking specifically at differences across ethnic groups.

### **Conclusion and Summary**

The current research was conducted for several reasons. One of the primary reasons was to determine how first-generation status impacts the career thoughts of college students. Another reason was to explore how family dynamics such as levels of cohesion impact also impact the career thoughts of these students. This research also adds to the existing body of research that has investigated career decision-making among first-generation college students in comparison to non first-generation college students.

In summary, previous research has explored differences between first-generation and non first-generation college students. These studies have provided pertinent information about some of the unique characteristics and concerns of first-generation college students such as academic difficulties, increased length of completion, greater risk of attrition and lower retention rates. Research has noted that difficulty in making career decision has often lead to premature drop out, increased academic difficulty and greater problems in career decision-making.

In the current study, it was found that first-generation status and levels of family cohesion both were related to greater negative and obstructive career thoughts, which would likely lead to increased difficulty in career decision-making. Many college students attend college to receive the foundation, educational background, and training necessary to enter into a career, however, many encounter problems deciding what that career will be. As the current study suggests, first-generation college students from highly cohesive families exhibit greater dysfunctional career thoughts that may lead to



increased difficulty in career decision-making. This information will hopefully help university personnel, career and college counselors to see the importance of considering the impact of family on the decisions of these students. The findings in the current study will hopefully provide a clearer understanding of how the relationship between parent's experience with college and levels of family cohesion impact career thoughts and the career decision-making process. Finally, the hope in completing this study is that acquiring such an understanding will help colleges, universities and counselors to consider these factors and select the most effective interventions possible to help first-generation college students to have an opportunity to be the first in their families to earn a degree and possibly be the one to forge new career possibilities for future generations.

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## Appendix A

### Informed Consent

Principal Investigators:

Roneferiti Fowler, M.S.  
Douglas Strohmer, Ph.D

Dear Research Participant:

You are invited to participate in an on-line survey aiding research exploring first generation status, family dynamics, and the career-decision making of college students. To qualify for the study you must be at least 18 years of age and able to complete an on-line survey. The entirety of your participation in the study consists of filling out one multi-sectional survey that should take approximately 20 minutes.

The procedures in this study have no foreseeable associated risks. Participants may benefit from the satisfaction of knowing they are contributing to research aimed at A) gaining knowledge about career thoughts, family connections and first-generation status and B) gaining increased awareness/ knowledge about their career thoughts. All information provided by the participant will be handled in a confidential manner to the extent permitted by law. Although the anonymity of the participant is assured, all data may be reported in journals or other professional, scientific communications.

As compensation for this study, each participant has the opportunity to receive an electronic Amazon.com gift-card for a free music download by providing an e-mail address. This information will only be used to deliver this electronic gift card and will not be connected to your survey responses. Participants will not be contacted by the researcher after completion of the survey unless the participant requests additional information about the study. The University of Memphis does not have any funds budgeted for compensation for injury, damages or other expenses. These policies are not meant to restrict whatsoever rights to which you are legally entitled.

If you have any questions or concerns at any point in this study, whether they are about the study or your rights as a research participant, please feel free to direct your questions and comments to the principal investigator, Roneferiti Fowler at [rmfowler@memphis.edu](mailto:rmfowler@memphis.edu) or Dr. Douglas Strohmer at [dstrohmr@memphis.edu](mailto:dstrohmr@memphis.edu). Questions about your rights as a research participant may also be directed to the Chair of the Committee for the Protection of Human Research Participants of the University of Memphis at (901) 678-2533.

Participation in this study is voluntary. You may refuse to participate or withdraw from this study at any time.



By clicking "I agree to participate" below, I signify that I understand this informed consent and am willing to participate in the survey. I also signify that I am at least 18 years of age. If you do not agree to participate or are not at least 18 years of age, please discontinue the survey by closing the page.

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## Appendix B

### Demographics Questionnaire

What year were you born? \_\_\_\_ (years old)

What is your current age? \_\_\_\_

What is your gender?

male

female

**Ethnic Background: (check all that apply)**

African American/Black     Native American     \*Multiracial  
 Asian American     Caucasian/White     Other (\*specify)  
 Latino/Hispanic     \*Biracial

Current Classification:

Freshman

Sophomore

Junior

Senior

Fifth Year Senior

How many years have you attended college?

First Year

Second Year

Third Year

Fourth Year

Fifth Year

Sixth Year or More

Are you a first time college student?

Yes

No

Have you taken any breaks throughout your educational career?

Yes

No

If so, how long?

1 semester

2 semesters

More than one year (Please Indicate) \_\_\_\_\_

Are you a returning college student (Did you pursue a career or other commitment such as child rearing or elder care and decide to go back to school?)

Yes

No

If you go to someone OTHER THAN your mother, father, or guardian for questions or help with college, please indicate their relationship to you (Ex: sibling, aunt, uncle)

\_\_\_\_\_

Please indicate this person's highest level of education:

Some High School       Completed High School       Advanced Degree

Some college       Completed College (Received a Bachelor's Degree)

Highest Level of Education Completed by your Mother

Some High School       Completed High School       Advanced Degree

Some college       Completed College (Received a Bachelor's Degree)

Highest Level of Education Complete by Father

Some High School       Completed High School       Advanced Degree

Some college       Completed College (Received a Bachelor's Degree)

If your primary care giver was someone other than your mother or father, please indicate their relationship to you:

---

Please indicate their highest level of education:

- Some High School       Completed High School       Advanced Degree  
 Some college       Completed College (Received a Bachelor's Degree)

What is your current relationship status?

- In a relationship  
 Living with partner  
 Married  
 Divorced  
 Remarried  
 Widowed

What is your current employment status?

- Unemployed  
 Employed full-time  
 Employed part-time  
 Retired  
 Full time student only  
 Full time student & employed full time  
 Par- time student only  
 Part-time student & full time employment  
 Part-time student & part time employment

Current living arrangement:

Alone

With Others

With Parents

With Children

With Partner

With Partner and Children

Annual Income (If you are a dependent student, please mark your parent's approximate income) Please use the scale provided:

Less than \$10,000

\$10,000-19,999

\$20,000-\$29,999

\$30,000-\$39,999

\$40,000-\$49,999

\$50,000-\$99,999

\$100,000 or more

## Appendix C

### Family Adaptability and Cohesion Evaluation Scale (FACES IV)

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Please respond using the scale provided:

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

1. Family members are involved in each other's lives.
2. Our family tries new ways of dealing with problems.
3. We get along better with people outside our family than inside.
4. We spend too much time together.
5. There are strict consequences for breaking the rules in our family.
6. We never seem to get organized in our family.
7. Family members feel very close to each other.
8. Parents equally share leadership in our family.
9. Family members seem to avoid contact with each other when at home.
10. Family members feel pressured to spend most free time together.
11. There are clear consequences when a family member does something wrong.
12. It is hard to know who the leader is in our family.
13. Family members are supportive of each other during difficult times.
14. Discipline is fair in our family.
15. Family members know very little about the friends of other family members.
16. Family members are too dependent on each other.
17. Our family has a rule for almost every possible situation.

18. Things do not get done in our family.
19. Family members consult other family members on important decisions.
20. My family is able to adjust to change when necessary.
21. Family members are on their own when there is a problem to be solved.
22. Family members have little need for friends outside the family.
23. Our family is highly organized.
24. It is unclear who is responsible for things (chores, activities) in our family.
25. Family members like to spend some of their free time with each other.
26. We shift household responsibilities from person to person.
27. Our family seldom does things together.
28. We feel too connected to each other.
29. Our family becomes frustrated when there is a change in our plans or routines.
30. There is no leadership in our family.
31. Although family members have individual interests, they still participate in family activities.
32. We have clear rules and roles in our family.
33. Family members seldom depend on each other.
34. We resent family members doing things outside the family.
35. It is important to follow the rules in our family.
36. Our family has a hard time keeping track of who does various household tasks.
37. Our family has a good balance of separateness and closeness.
38. When problems arise, we compromise.
39. Family members mainly operate independently.
40. Family members feel guilty if they want to spend time away from the family.
41. Once a decision is made, it is very difficult to modify that decision.
42. Our family feels hectic and disorganized.
43. Family members are satisfied with how they communicate with each other.

- 44. Family members are very good listeners.
- 45. Family members express affection to each other.
- 46. Family members are able to ask each other for what they want.
- 47. Family members can calmly discuss problems with each other.
- 48. Family members discuss their ideas and beliefs with each other.
- 49. When family members ask questions of each other, they get honest answers.
- 50. Family members try to understand each other's feelings
- 51. When angry, family members seldom say negative things about each other.
- 52. Family members express their true feelings to each other.

Please respond using the scale provided:

1	2	3	4	5
Very Dissatisfied	Somewhat Dissatisfied	Generally Satisfied	Very Satisfied	Extremely Satisfied

**How satisfied are you with:**

- 53. The degree of closeness between family members.
- 54. Your family's ability to cope with stress.
- 55. Your family's ability to be flexible.
- 56. Your family's ability to share positive experiences.
- 57. The quality of communication between family members.
- 58. Your family's ability to resolve conflicts.
- 59. The amount of time you spend together as a family.
- 60. The way problems are discussed.
- 61. The fairness of criticism in your family.
- 62. Family members concern for each other.



## Appendix D

### Career Thoughts Inventory (CTI)

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(Three Sample Items)

Directions: Read each statement carefully and indicate the degree to which you agree or disagree with each item by indicating the answer that best describes you. Do not omit any items.

SD=Strongly Disagree      D=Disagree      A=Agree      SA=Strongly Agree

Mark SD if you strongly disagree with the statement

Mark D if you disagree with the statement

Mark A if you agree with the statement

Mark SA if you Strongly Agree with the statement.

“Choosing an occupation is so complicated, I just can’t get started.”

“If I change my field of study or occupation, I will feel like a failure.”

“I’m always getting mixed messages about my career choice from important people in my life.”