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Prospective First-Generation College Racial Minority Students: Mediating Factors that Facilitate Positive Educational Characteristics for College Admission

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ABSTRACT

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First-generation college (FGC) students represent a small portion of the population of students on college campuses across the nation. Racial minority students are also highly underrepresented at four-year institutions. When one combines FGC students who are also racial minorities, they comprise an even smaller subgroup of students attending four-year college campuses. Research conducted to evaluate how FGC students perform their first year in college is prevalent. Additionally, research has been completed on factors that help predict a high school student's admission into and performance in college. However, very little research exists about factors identified in high school that may help strengthen a prospective FGC, racial minority, and high school student's admission into college. This study will utilize the RELATE questionnaire to evaluate individual characteristics or circumstances identified in prospective first-generation college racial minority students that may be potentially mediated for by high school counselors or college administrators to help strengthen college or university admission. Counselors or advisors could have an impact on improving the likelihood of college or university admission for this population by facilitating the process of coming to terms with family stressors and/or strengthening their flexibility or adaptability to new or different environments, learning, and people. Since the RELATE database does not include direct data regarding college admission, positive student educational characteristics such as sociability, calmness, organization, maturity, and happiness will be utilized to represent potential stronger preparation for admission into college. RELATE is a questionnaire designed for individuals in a committed relationship and provides important information regarding the individual, the partner, and the relationship. Research with the RELATE questionnaire data is generally utilized in family and social science domains. This study is unique since it accesses the individual instead of couple data for positive educational characteristics and research. This comparative study between prospective first-generation college White students and prospective first-generation college racial minority students is designed to assist educators in secondary and higher educational levels to better prepare prospective FGC students, particularly prospective FGC racial minority students, for college admission. Also, this study will distinguish between various characteristics that may assist college recruiters identify prospective FGC students who may be a strong fit for their institutions.

Keywords: first-generation college students, minority students, predictors for college admission, RELATE questionnaire, sociability, calmness, organization, maturity, happiness

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My journey throughout my doctoral studies was filled with many emotions and life-changing events. I have always enjoyed learning and improving myself for the service of others. Many individuals know exactly what positions they wish to hold and seek degrees to help them obtain them. I never aspired for particular positions, rather I have always wanted to be qualified to do the work and provide the service where needed and when required. I hope to be able to use my talents, knowledge, and skills to better the lives of others.

While I was finishing my coursework, I met my best friend and now dear husband, M. Todd Parkinson. We were married in March of 2008 and I completed my doctoral coursework that year. Less than a year later, I was diagnosed with stage IV cancer and given a bleak outlook. My doctoral studies were no longer a priority as my health took all of our time and efforts. It was during that time when I realized what my main priorities are in this life and what I hope to take into the next life.

That clarity of mind is what continues to drive me today. I believe in a Heavenly Father who loves us and knows each of us individually. I believe we will take all of the knowledge we gain in this life into the next life. I believe the relationships we form while on this earth can continue after this life and merit work, time, and attention. This degree in education helped strengthen my relationship with God. All of the challenges I encountered served to refine and polish me and understand better to whom I owe all things. My parents, Nobuo and Chihoko Muranaka, instilled in me the love of learning from a young age and always encouraged me to do my best. They provided me with a safe and solid foundation and guided me with kindness and love. My husband, Todd, gently urged me forward when it was difficult or seemed impossible. He took care of our regular responsibilities so I could spend extra time on my studies and

research. He knew I wanted to finish what I had started, and despite ongoing health challenges, he encouraged me to move forward. He knows the desires of my heart and did not want me to be disappointed or leave anything behind that would cause later regret. Todd heartens and inspires me to be my best at all times and provides me all of the love I need which further enables me to love others.

Professors went above and beyond any job description or professional requirement. Several times during my studies, Dr. Sterling Hilton reached out to me with genuine concern and care. His time and attention, superb mentoring and teaching, personal dedication, and expectations of excellence helped me beyond anything I thought was originally possible. Dr. Jonathan Sandberg saw an educational need that I had and without any hesitation offered to fill it. He has inspired me to be a better professional, educator, student, and person by the life he leads and the time he makes for individuals who cross his path. He possesses the talent of making each person he meets feel valued, important, and capable of making significant contributions in the world. Dr. LeGrand (Buddy) Richards was the first professor who kindly encouraged me to truly think and to search for solutions to problems. He lit a fire within me to consider the plight of those who are less fortunate and demonstrated with his own life how to make the world a better place through using his time and talents to bless the lives of others. Dr. Clifford Mayes encouraged me to see the world through different perspectives by incorporating a holistic approach to teaching and learning. Dr. Scott Ferrin served as my committee chair and encouraged me to finish. I truly thank all of the professors aforementioned and others who touched my life in unimaginable ways for the better. I have no doubt in my mind that specific people were placed and continue to be placed in my life to help me learn and grow and to become the best version of myself. I am grateful for each of their contributions in my life.

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DESCRIPTION OF STRUCTURE AND CONTENT

This dissertation, *Prospective First-Generation College Racial Minority Students: Mediating Factors that Facilitate Positive Educational Characteristics for College Admission,* is presented in the format of the hybrid dissertation. The hybrid format focuses on producing a journal-ready manuscript, which is considered by the dissertation committee to be ready for submission. Therefore, this dissertation has fewer chapters than the traditional format, and the manuscript focuses on the presentation of the scholarly article. This hybrid dissertation includes appended materials such as an extended review of literature and a methods section with elaborated detail on the research approach used in this dissertation project.

Background

Research indicates that as we are able to improve individual access and success in higher education, we expand the opportunities for individuals to improve their circumstances in life, particularly the prospect for lifelong employment and higher earning power (Saenz, Hurtado, Barrera, Wolf, & Yeung, 2007). Yet challenges persist for smaller subgroups or populations, like first-generation college (FGC) students, to be able to access or gain entrance into colleges and universities. One challenge is that the educational attainment level of the parents of FGC students is a strong influencing factor in their decision to attend an institution upon graduation from high school (Choy, 2001; Nunez, Cuccaro-Alamin, & Carroll, 1998; Tawney, 2009). Parents who have attended some college or graduated from college are more likely to encourage their children to attend college after high school. FGC students do not always receive the same parental encouragement to consider post-secondary educational opportunities and some are even discouraged from considering or attending college.

Secondary education and college counselors can fulfill a role that a parent may be unable to in the life of a FGC student. Educators can look for potential within a student and provide the encouragement necessary to explore additional options and educational paths. Some students do not appear to be ideal or strong future college prospects on paper. Educators may be specially positioned to see beyond what is demonstrated on paper or perceived as negative student behaviors. Once the potential is identified within a student, what can educators and counselors then do to mitigate some of the difficulties a FGC student may face at their institutions? If a student demonstrates family of origin stressors (i.e., mental, emotional, and physical illness, financial strains, and employment challenges), what can educators do to assuage or alleviate their stressors with advisement or guidance? There are three outcomes identified in this study that are

characteristic traits or emotional states that influence the academic performance of students: sociability, anxiety, and depression. Educational counselors often focus on helping FGC students with perceived academic gaps with additional educational resources. However, this study indicates that counselors may also want to address these characteristic traits or emotional states in order to assist FGC students with their education.

There is a great deal of literature that evaluates FGC students and compares them to their non-FGC peers in terms of academic performance during their college years. However, there is little research regarding FGC students while they are attending secondary school and what can be done during earlier years to help them develop positive characteristic traits or manage family challenges in order to be stronger candidates for future college admission. It is crucial for educators to closely scrutinize the FGC student population because many of them have certain stressors they cannot choose or ignore. Often, the stressors due to their family of origin dissuade educators from investing in such students because they do not seem like ideal academic candidates for future educational opportunities. This study suggests how educators can help students increase their chances of academic success and emotional well-being.

First-generation college students are typically defined in the literature as those whose parents have not had any formal education beyond high school (Gibbons, 2005). The U.S. Department of Education defines a first-generation college student as a student who comes from a family where neither parent has earned a four-year college or university baccalaureate degree (St. Clair-Christman, 2011; Warburton, Bugarin, & Nunez, 2001). For the purposes of this study, a first-generation college student is one who comes from a family where their parents have not attended any college; their highest level of educational attainment or attendance is no more than a high school diploma or equivalent.

Students' aspirations to continue their education past the secondary high school level are strongly shaped by factors that are both personal and environmental including family and community expectations. Goals to attend college are influenced by parental education attainment levels, encouragement from family and friends, socioeconomic status, and access to resources (Aud et al., 2012; Hossler, Schmit, & Vesper, 1999; McDonough, 1997). FGC student groups traditionally contain more racial minorities, are more likely to come from lower-income families, have fewer physical, fiscal, informational, and social resources, less parental integration in the professional and educational workforce, and less familiarity with university processes. They also tend to have somewhat lower academic achievement when compared to their peers who have parents with college degrees and experience (Gibbons, 2005; Saenz et al., 2007; St. Clair-Christman, 2011). They are also more likely to attend high schools with lower college-going rates in the United States and to have peers who are not considered college-bound (Tierney, 2013).

Since FGC students and their parents seldom have the same access to the resources and information necessary for college preparation and admission as students with parents who attended or graduated from college, there may be emotional challenges when thinking about their futures. The disparity of access to educational resources between FGC students and their non-FGC peers can result in higher levels of stress, anxiety, depression, and isolation for FGC students while preparing for college and attending college (Saenz et al., 2007; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; Warburton et al., 2001).

Family of origin stressors effect various elements that influence educational success. The three main areas in this research include sociability, anxiety and depression.

Sociability

One of the areas a student with family of origin stressors may battle with is sociability. Developmental damage due to family stressors may impede an individual with the courage to learn (Mayes, 2007) and his level of sociability. The concept of sociability encompasses the social skills required to be successful in academic settings. It includes the interpersonal qualities and acceptable learned behaviors that can improve the social interactions necessary between academic peers and with professors, staff, and administration. When educational problems exist, educators should explore factors that interfere with learning as well as those that improve or enhance learning (Mayes, 2007). Sociability can improve the learning process by enhancing the various social interactions that are essential to learning (Farrington et al., 2012). Some of the ways sociability can promote learning include the ability to form study groups, share notes and experiences, and give and take advice about classes and classroom strategies. Sociability allows a student to create a social support that may be able to provide a crucial safety net when problems arise. It allows for a safe place to explore and experiment in the educational world (Dennis, Phinney, & Chuateco, 2005).

Teachers also tend to value and reward students with higher sociability. Classroom grading practices show that educators often include student behavior as part of their evaluation process. Students who demonstrate better social skills or sociability tend to receive the benefit of higher grades while those who are more disruptive or have lower sociability are penalized (Austin & McCann, 1992; Cross & Frary, 1999).

Therefore if a student who has family stressors at home is displaying effects of those stressors in school, educational counselors can be cognizant of these challenges and look for

ways to assist these students in order to lessen the effects of their family stressors on their sociability.

Anxiety

FGC students who enter into college are academic pioneers. The novelty of the situation for the individual and the entire family can create ambiguity. The student and family may feel uncertain and anxious about the academic, social, and personal experiences associated with entering college. One of the functions of thought is to enable individuals to predict future events and to be able to develop ways to help control those events that affect their lives. This is a cognitive processing skill to be able to manage some of the ambiguities or uncertainties in life. Students must be able to draw upon their past knowledge in order to cognitively construct possible outcomes. FGC students generally do not possess enough knowledge to recognize all of their prospective options. Since their families have not had the college experience, it is difficult for families to help their student think of all the potential choices. This may cause a level of anxiety for students, particularly if they perceive their peers have more opportunities available to them.

The ability to self-manage anxiety, worry, and nervousness or in other words, the ability to remain calm when faced with academic novelties or challenges is a skill that can influence the academic performance of a student. It can also be viewed as emotional stability, which may be manifested in students' responding well to deadlines, stress, and adaptability to new situations, people, or things (Trapmann, Hell, Hirn, & Schüler, 2007).

Students who suffer from more anxiety or worry are more likely to experience a fear of failure and pursue avoidance-performance goals (Komarraju, Karau, & Schmeck, 2009).

Avoidance motivation can be debilitating with anxiety and students may have the desire or tendency to withdraw from or dislike school or academic endeavors.

Educational counselors who know that a FGC student has family of origin stressors and witnesses that student demonstrating avoidance of performance goals or fear of failure can make additional attempts to connect with him. There can be purposeful contact to soften any anxiety or hesitancies to explore or try new academic platforms that a FGC parent may not be able to assist with from personal experience.

Depression

The way people perceive their capabilities affects how much stress and depression they experience during challenging times. It may also affect their level of motivation to work through difficult circumstances and their commitment to follow through with educational or academic goals. Students who feel they can control the stressors faced in their lives will be better able to navigate their levels of depression. When students feel the stressors faced are beyond their control and the stressors become threatening to them, it may impact their thought patterns and alter their behavior in negative ways. It can be a cause for high levels of depression and instead of focusing on ways to solve their problems or address their challenges, they begin to focus on their coping deficiencies. Suddenly, an environment can feel or be perceived as dangerous or unmanageable. This type of impaired thinking can debilitate a student's ability to function and cause depression. Instead of a student confronting his challenges, he may engage in avoidance behavior. However, if a student is able to cope with his depression, he may have more confidence in his ability to face challenges and engage in taxing activities or experiences (Bandura, 1993).

According to Bandura (1993), individuals may struggle with depression in three different ways, all of which are detrimental to the educational process. The first way in which depression may hinder an individual is through unfulfilled aspirations. Many FGC students may have educational aspirations and goals. Often, these goals and their ability to attain certain goals are associated with their sense of self-worth. Therefore, if a goal or aspiration is not attained or not attainable, it may drive an individual to bouts of depression. The second way an individual may struggle with depression is through a low sense of social efficacy. FGC students may not know how to effectively seek out and cultivate the necessary social relationships to be academically successful. They may find it difficult to develop relationships that can provide mentoring or models on how to manage demanding situations or to help soften the adverse effects of family of origin stressors. The third way an individual may struggle with depression is with the inability to deflect negative thinking. Therefore, by the choices students make on whether to engage in an activity or situation within their coping ability or to avoid the activities or situations, they are cultivating different competencies, social relationships, and life interests that lead to different life courses. Individuals may even consider or choose a different career depending on their levels of depression. The more students can manage their levels of depression, the more career options they may consider possible due to more optimistic thinking. The more interest they show in the various career possibilities, the better they can prepare themselves for the prospective occupations. This increased preparation will increase the potential to be successful in difficult or prestigious academic or occupational pursuits and educational counselors can assist with this type of preparation.

Theoretical Framework

There are certain potential stressors that students cannot choose; they are born into them or with them. A student comes with their particular stressors due to their family of origin that include family members experiencing mental or emotional problems, financial strains, physical illnesses or injury, or addictions to alcohol or drugs. However, there are things students or others can do to help mitigate the students' family circumstances or challenges. Educators can assist students to come to terms with their family of origin stressors and may enable them to address characteristic traits or emotional states that influence academic success, such as sociability, anxiety, and depression.

The primary hypotheses of this study are:

1. Family of origin stressors decrease sociability and increase anxiety and depression for first-generation college students.

2. Coming to terms with family of origin stressors can mediate and moderate the potentially negative relationships in the model.

Predictor Variable: Family of Origin Stressors

The literature suggests that FGC students struggle to prepare for college admission and continue to have difficulty within college when compared to non-first-generation college peers. Some of these challenges are a direct result of their family of origin stressors or adversities. Family of origin stressors was evaluated as an independent variable. Individuals were asked to describe the frequency of the various stressors in their immediate family while they grew up. These stressors included family members who experienced emotional problems such as severe depression, anxiety attacks, eating disorders, or other mental or emotional problems. Financial strains included items such as loss of jobs, bankruptcy, large debts, or going on welfare. Physical

strains included members of the family being physically handicapped, hospitalized for serious physical illness or injury, or becoming premaritally pregnant. And the last category of stressors included family members who had struggled with addictions to alcohol or other drugs.

It is hypothesized that family of origin stressors will have a negative relationship with sociability and a positive relationship with anxiety and depression. These characteristic traits and emotional states influence the potential educational success for FGC students. Although family of origin stressors are unchangeable, it is possible to change the meanings or interpretations that students ascribe to them. This concept is discussed as "coming to terms."

Moderating Variable: Coming to Terms

Many first-generation college students come from impoverished backgrounds or challenging circumstances. It is important for them to be able to come to terms with their backgrounds, circumstances, and family of origin stressors in order to be successful in educational settings as well as in life. Coming to terms is a healing process where individuals work through difficult past experiences with the hope to feel at peace with whatever challenges are faced. According to the research, people who exert efforts to interpret, understand, re-story, find meaning in, reframe, come to a resolution, and to be at peace with difficult past experiences, are better able to be happy despite family challenges or backgrounds (Dagley, 2012; Mayes, 2007).

In one of the earlier studies on first-generation college students, London (1989) conducted research where he interviewed lower-income, first-generation college students to learn more about their educational experiences. He was particularly interested in how family dynamics affected a high school student's transition from high school to college. He wanted to explore if it was any different for the first person in the family to pursue a higher education than for those

that followed and if it changed or affected the student's role within the family unit. London found through his research that separation was one of the central themes in these students' family issues. The students reported feeling guilt about attending college because not only did they leave the family unit, they were purposefully choosing to follow a different path from their parents. These results still held true even when the students chose to attend college locally and live in their parents' home. Students ended up dealing with conflicts within themselves and within their families. The conflict between the two perceived worlds of family and college has consistently been cited as a strong contributor to attrition for first-generation college students (Gibbons, 2005).

Individuals who perceive they have people who are supportive of their efforts or goals or encourage them to try new things can often come to terms with their family of origin stressors and be more successful in their academic efforts (Dennis et al., 2005). Fuertes and Sedlacek (1994) found that the availability of supportive systems or individuals and positive self-concept were predictive of college academic success for those who are first to attend college in their family. And sometimes these factors were even more important than some of the traditional measurements for college academic success or measures of cognitive skills like the Scholastic Aptitude Test (Dennis et al., 2005; Fuertes & Sedlacek, 1994; Gibbons, 2005).

Participants in this research study were asked about their family based on their years growing up. The need for a process of coming to terms was identified by evaluating if the participants had matters from their family experience that they still were having trouble dealing with, matters from their family experience that negatively affected their ability to form close relationships, and if they felt at peace about anything negative that happened to them in the family in which they grew up.

Outcome Variables: Characteristic Traits or Emotional States that Influence Educational Success

  Sociability. The concept of sociability in this research was assessed by participants self-identifying how much a word described their level of socialness or interaction skills. These words included talkative, quiet, shy, and outgoing.

  Anxiety. Participants rated their own experience with descriptors related to anxiety. They identified how much particular words described them including fearful, tense, nervous, and worrier.

  Depression. The concept of depression was evaluated by assessing the level of depressive symptoms a person experienced. The participants were asked how much some words or phrases described them including sad and blue, feeling hopeless, and depressed.

Data Set

  The RELATE Institute utilizes a comprehensive, research-based questionnaire to gather information about tens of thousands of participants. RELATE was developed by the Marriage Study Consortium at Brigham Young University in 1979 and is a non-profit organization with the specific task of developing research and outreach tools that can be used directly with the public. The consortium consists of a group of scholars, researchers, family life educators, and counselors from varied religious and educational backgrounds (Relate Institute, 2013). The current version of the questionnaire that was utilized for this research was released in the fall of 1997.

  The researcher examined the demographic information provided by the questionnaire and some of the specific questions to explore characteristics that could impact educational success. The data was previously collected and provided voluntarily by those who took the RELATE

questionnaire (Holman, Busby, Doxey, Klein, & Loyer-Carlson, 1997). RELATE is a questionnaire designed for individuals in a committed relationship and provides important information regarding the individual, the partner, and the relationship. Some of the data collected is focused on the individual context like gender and age and other demographic information. Even though couples usually complete the questionnaire, not all of the data is specifically paired by relationships. Specific self-reported personality traits, beliefs, and attitudes of individuals are also included.

RELATE was developed by following the standards of educational and psychological testing (American Psychological Association, 1985) and the principles of construct hierarchy for multidimensional scaling. This process was complicated and extensive, requiring several pilot studies, preliminary factor analyses, test-retest and internal consistency analyses, content validity analyses, and the rewriting of many items. Reliability coefficients for most of the measures scored between 0.70 and 0.90 for internal consistency and two test-retest samples, including a test-retest of a Hispanic version (Dagley, 2012). The final form of RELATE was created by statistically and qualitatively analyzing over 450 items. The analyses aided the researchers in reducing the final instrument to the 271 items that were eventually published and distributed (Busby, Holman, & Taniguchi, 2001).

Research with the RELATE questionnaire data is generally utilized in family and social science domains. This study is unique since it accesses the individual instead of couple data for characteristic traits and emotional states that may impact educational outcomes. Some limitations will exist for educational generalizability because it is a questionnaire that is normally taken by self-selection or by those who are referred to take it by ecclesiastical leaders, counselors,

therapists, and others in social science professions. It is not widely offered in educational systems as a regular standardized test or one for specific educational purposes.

Sampling Procedure

The entire RELATE database from 1997 through 2013 was utilized and the sample was narrowed by gathering data from FGC students with ages between 17 - 30 years. This age range was selected because these are the ages of individuals who are most likely to enroll in college.

In order to ascertain whether or not an individual was a first-generation college student, the individual was asked how much education his mother and father had completed. The responses used for this sample include, "less than high school," "high school equivalency (GED)," and "high school diploma." This allowed the evaluation of all FGC students whose parents did not have education levels greater than a high school diploma. The total sample size after narrowing the database by the selected criteria was 5,153 participants. Table 1 includes the descriptive statistics for the sample in the research model.

Table 1

Descriptive Statistics for Research Model Sample

Characteristic	Sample Size (*n* = 5,153)		

Age	Range	Mean	Standard Deviation
	17 - 30	24.03	3.450

Gender	Gender	Frequency	Percent
	Female	3,185	61.8
	Male	1,954	37.9
	Not Identified	4	0.1

Racial minority	Race	Frequency	Percent
	African or Black	249	4.8
	Asian	262	5.1
	Caucasian	3,245	63.0
	Latino	410	8.0
	Mixed or Biracial	113	2.2
	Native American	43	0.8
	Other	804	15.6

First-generation college student	Highest Earned Education Level	Mother Frequency	Father Frequency
	Less than high school	1,013	1,185
	High school equivalency (GED)	695	611
	High school diploma	3,445	3,357

Measures

All of the variables in the model had possible scores ranging from 1 - 5. The concept of

family of origin stressors assessed if individuals had family members with emotional or mental

problems, financial strains, physical strains, or family members with addictions. Participants who

responded with the number one represented the lowest end of the scale, meaning that in their immediate family while they grew up they "never" had family of origin stressors. The number five represented the highest end of the scale meaning they "very often" had family of origin stressors present while they grew up. The Cronbach's alpha is a measure of internal consistency to indicate how closely related a set of items or questions are as a group. It is a measure of scale reliability and the Cronbach's alpha for this variable is good (0.713).

Coming to terms assessed how much an individual agreed with statements about their family based on their years growing up. The questions asked if there were matters from their family they were still having trouble dealing with now, if there were matters from their family experience that negatively affects their ability to form close relationships, and if they felt at peace with anything negative that happened to them in the family in which they grew up. The first two questions were reversed scored to reflect when participants responded with the number one, it represented the lowest end of the scale. A one meant they had not come to terms or found resolution with past family matters. The number five represented the highest end of the scale meaning the individuals had come to terms or found resolution with their past family matters. The Cronbach's alpha for the variable is good (0.779).

Participants responded for sociability by indicating how much a word described them including talkative, quiet, shy, and outgoing. Two of the questions were reverse coded (quiet and shy) with the number one representing the lowest end of the scale, meaning the word "never" described them or that the individuals never perceived themselves as social. The number five represented the highest end of the scale meaning the word described the individuals "very often" or that they perceived themselves as very often social. The Cronbach's alpha for the variable is strong (0.801).

Participants responded for anxiety by identifying how much particular words described them including fearful, tense, nervous, and worrier. Number one represented the lowest end of the scale, meaning the word "never" described them or the individuals never perceived themselves as anxious. The number five represented the highest end of the scale meaning the word "very often" described the individuals or that they perceived themselves very often as anxious. The Cronbach's alpha for this variable is good (0.754).

Participants responded for depression identifying how much the words or phrases described them including sad and blue, feeling hopeless, and depressed. The number one represented the lowest end of the scale, meaning the word or phrases "never" described them at all or the individuals perceived they were never depressed. The number five represented the highest end of the scale meaning the word or phrases "very often" described the individuals or that they perceived they very often felt depressed. The Cronbach's alpha for this variable is very strong (0.843).

The score range, means, and standard deviations for each of the research variables are reported in Table 2.

Table 2

Range, Mean, and Standard Deviation of Observed Variables

Variable	Score Range	Mean	Standard Deviation
Family of Origin Stressors	1 – 5	2.20	0.975
Coming to Terms	1 – 5	3.46	1.039
Sociability	1 – 5	3.14	0.554
Anxiety	1 – 5	3.09	0.686
Depression	1 – 5	3.61	0.746

Method

Primary Analyses

Structural Equation Modeling (SEM) was used to analyze the data utilizing the statistical software package AMOS 7.0 (Arbuckle, 2006). Overall chi-square statistics and direct and indirect relationships were tested among the different variables that may be correlated (see Figure 1). All of the estimates for the relationships in the research model and their associated *p*-values are listed in Table 3.

The Root-Mean-Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Tucker Lewis Index (TLI) were examined to evaluate the fit of the measurement and structural models. Researchers have suggested that RMSEA ≤ 0.06, CFI ≥ 0.95, and TLI ≥ 0.95 values represent very strong model-to-data fit (Kline, 2010). This research model value for RMSEA is 0.048, CFI is 0.963, and TLI is 0.954, all demonstrating very strong fit statistics.
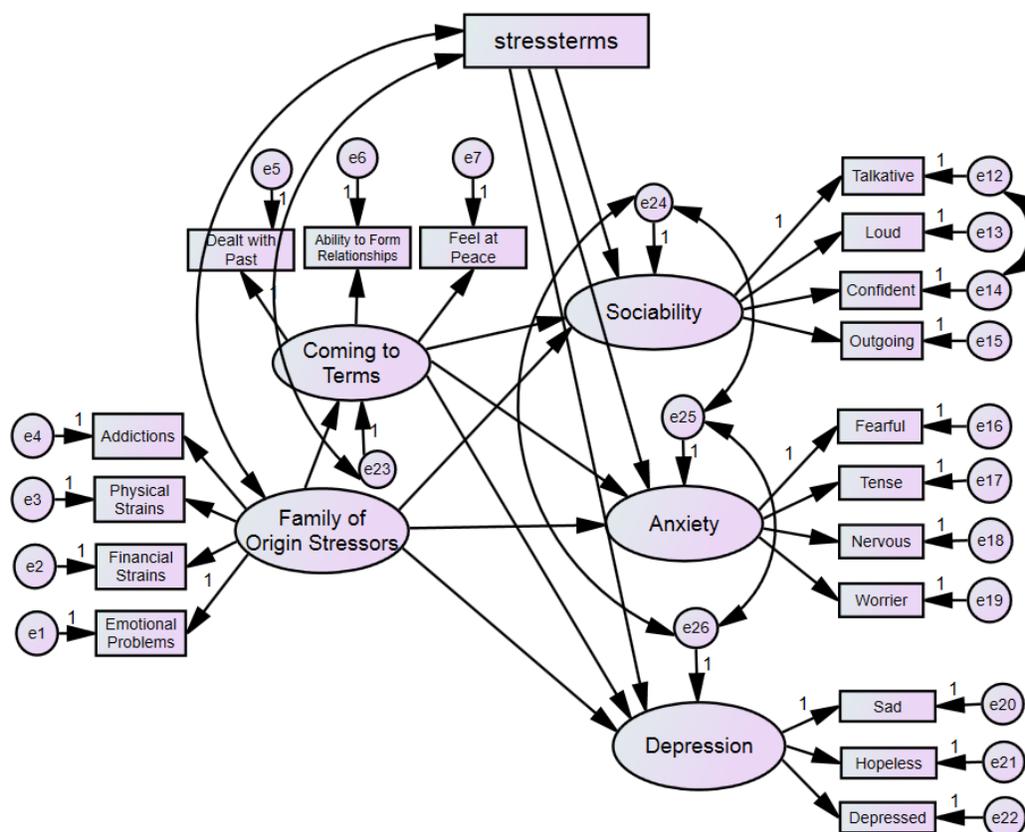
Figure 1. Final structural model including only significant paths (*p* < 0.05), required correlation paths, mediating and moderating paths, and error terms.

Table 3
Estimated Effects and p-Values for Relationships within the Research Model

Outcome	Relationship with Outcome	Estimate	*p*-Value
Sociability	Family of Origin Stressors	-0.036	< 0.001
	Coming to Terms	0.033	0.001
	Stress*Terms	0.021	< 0.001
Anxiety	Family of Origin Stressors	0.074	< 0.001
	Coming to Terms	-0.170	< 0.001
	Stress*Terms	-0.010	0.004
Depression	Family of Origin Stressors	0.115	< 0.001
	Coming to Terms	-0.206	< 0.001
	Stress*Terms	-0.018	< 0.001

Secondary Analyses

The mediating relationships were analyzed to evaluate what the effect of coming to terms with an individual's family of origin stressors had on sociability, anxiety, and depression. The three relationships were found to be partially mediating, meaning that coming to terms only partially explained how family of origin stressors related to sociability, anxiety, and depression. Third, the moderating relationship of coming to terms with family of origin stressors was analyzed to evaluate the effect on sociability, anxiety, and depression. The three moderating relationships demonstrate that coming to terms with family of origin stressors actually changes the effect of the family of origin stressors on all three outcomes. Once it was determined that coming to terms changed the relationship between family of origin stressors and sociability, anxiety, and depression, the moderating relationship became the most accurate way to address the two hypotheses. The estimated effects in Table 3 indicate that the moderating effect of coming to terms with family of origin stressors have a positive relationship with sociability and a negative relationship with both anxiety and depression. It is important to note that the moderating effect is weighty and of more interest in this model and that all of these effects differ in magnitude.

The relationship between family of origin stressors and sociability differs depending on the degree to which an individual has come to terms with his family of origin stressors. For example, this relationship as measured by the slope of the regression line is essentially non-existent for individuals who have not come to terms with their family of origin stressors (terms = 1 or terms = 2). However, for those who have partially or fully come to terms with their family of origin stressors, this relationship is positive. Starting with those who have initiated the process of coming to terms with their family stressors (terms = 3), the change in sociability for those

with no reported family stressors and those with a high frequency of family stressors is 0.027. A person who has fully come to terms with his family of origin stressors (terms = 5), the change in sociability is even greater with an estimated slope of 0.069. The moderating impact of coming to terms with family of origin stressors on sociability can most effectively be seen by evaluating the estimated slope difference between all of the levels of coming to terms as the family of origin stressors increase (see Figure 2).

Influence of Coming to Terms with Family of Origin Stressors on Sociability

Estimated Slope

Terms 1	-0.015
Terms 2	0.006
Terms 3	0.027
Terms 4	0.048
Terms 5	0.069

Influence of Coming to Terms with Family of Origin Stressors on Anxiety

Estimated Slope

Terms 1	0.065
Terms 2	0.054
Terms 3	0.044
Terms 4	0.034
Terms 5	0.024

Influence of Coming to Terms with Family of Origin Stressors on Depression

Estimated Slope

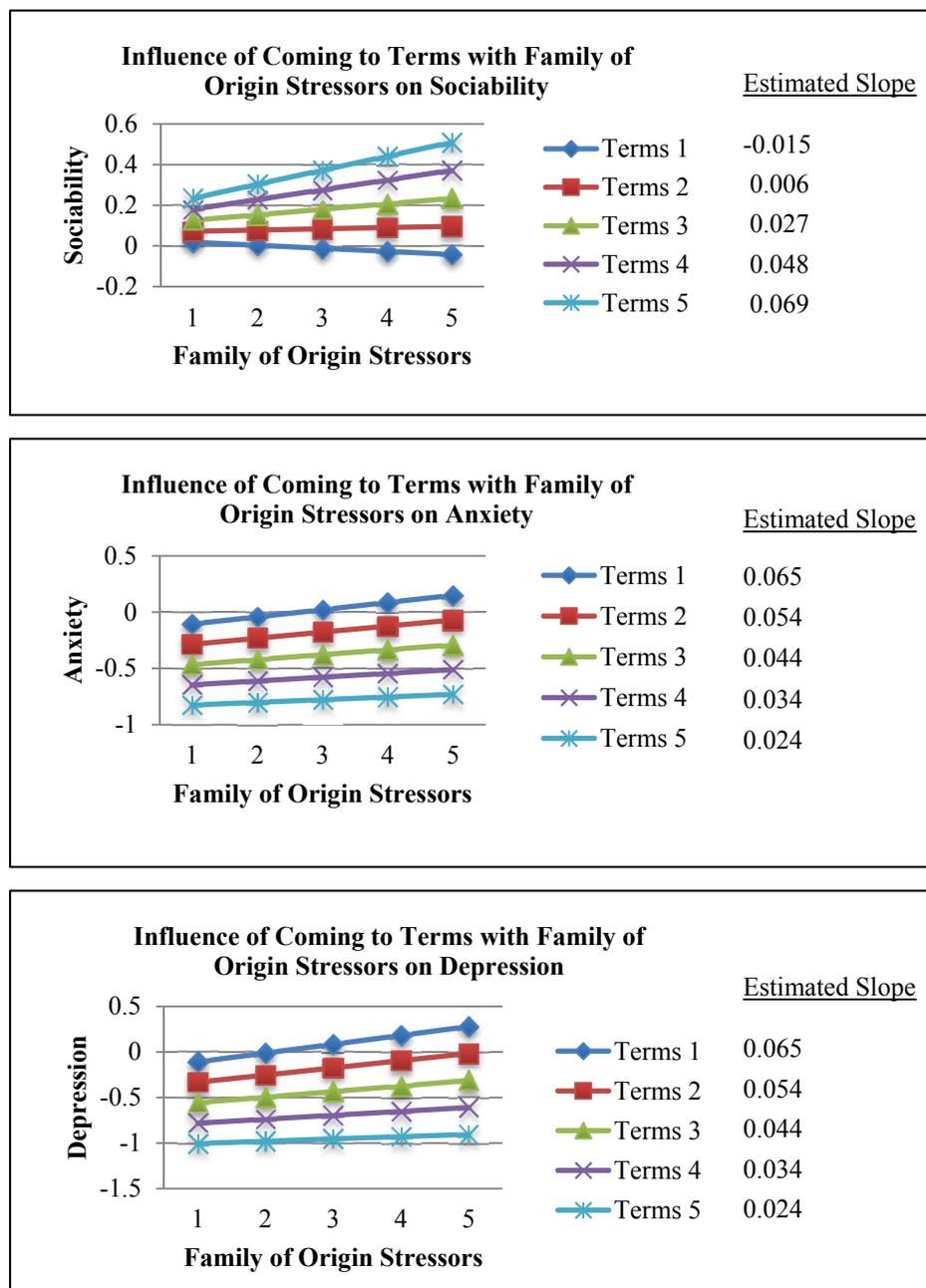|	
Terms 1	0.065
Terms 2	0.054
Terms 3	0.044
Terms 4	0.034
Terms 5	0.024

Figure 2. The moderating effects of coming to terms with family of origin stressors on sociability, anxiety, and depression with the estimated slope for each level of coming to terms with family of origin stressors.

Coming to terms moderates the relationship between family of origin stressors and anxiety. The relationship differs depending on the degree to which an individual has come to terms with his family of origin stressors. The relationship as measured by the slope of the regression line is positive across all levels of coming to terms. But it increasingly diminishes as individuals come to terms with their family of origin stressors, meaning the relationship between family stressors and anxiety decreases as individuals come to terms with their stressors. For those who have not come to terms at all (terms = 1) with their family or origin stressors, the slope is the highest at 0.064. On the other end of the spectrum, individuals who report they have fully come to terms (terms = 5) with their family of origin stressors, the estimated slope is 0.024 (see Figure 2).

The relationship between coming to terms with family of origin stressors and depression is similar to the relationship with anxiety. The relationship as measured by the slope of the regression line is positive across all levels of coming to terms, with the relationship between family stressors and depression decreasing as individuals come to terms with family or origin stressors. Therefore, individuals who have not come to terms at all (terms = 1) with their family stressors, the estimated slope is calculated at the highest level of 0.097. In contrast, individuals who report they have fully come to terms with their family stressors (terms = 5), the slope is 0.025.

Discussion

The relationships between family of origin stressors and sociability, anxiety, and depression have direct and partially mediating relationships. However, due to the moderating relationship of coming to terms with family of origin stressors, it is best to discuss the two hypotheses together. It is the moderating relationships that add new information to the current

literature base with the relationship between family of origin stressors and sociability (p-value < 0.001), family of origin stressors and anxiety (p-value = 0.004), and family of origin stressors and depression (p-value < 0.001). The discussion regarding the moderating effect of coming to terms with family stressors on sociability, anxiety, and depression will fully address both hypotheses.

Findings regarding the impact of family of origin stressors on sociability extend the literature. Most FGC students fail socially before they fail academically. Regarding FGC students, it has been said that providing access without any support is not opportunity (Engstrom & Tinto, 2008). They are generally less involved on campus, have less student acquaintances, less interaction with professors and staff, and less social coping skills that can enhance their learning (Mehta, Newbold, & O'Rourke, 2011). Lower amounts or the lack of social capital is often a challenge for FGC students because they tend to lack the social connections and networks that provide access to opportunities, the negotiation or transmission of privileged information, and other resources. Since social capital produces a cumulative effect, the more social capital an individual possesses, the easier it is to expand and acquire even more economic, cultural, and social capital (Lin, 2011), which further widens the gap between FGC students and their non-FGC peers. Also, FGC students are less likely to disclose stressful situations to others, which can limit the benefits from any social support they may have in their lives (Jenkins, Belanger, Connally, Boals, & Duron, 2013). This research indicates that as FGC students struggle with family of origin stressors, they are less likely to be social or make the connections necessary to develop the networks or relationships required to support their academic success and learning.

The literature also indicates that a student's social capital plays an important role in determining one's academic aspirations, persistence, and degree attainment (Lin, 2011). Studies

have shown that social capital is significantly positively related to college choice and student persistence in college (Wells, 2008). Essentially, students with college-educated parents tend to have greater social, economic, and cultural capital and therefore greater access to such resources through their basic family relationships and social networks (McDonough, Korn, & Yamasaki, 1997; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Saenz et al., 2007). Therefore, this research suggests that FGC students with decreased sociability may not have as high of academic aspirations, persistence, or degree attainment when compared to their non-FGC peers.

The data demonstrates the most significant moderating change of the effect of coming to terms with family of origin stressors on sociability is when the level of family of origin stressors is at its highest reported level as seen in Figure 2 (family of origin stressors = 5) and coming to terms is at the highest reported level (coming to terms = 5). Therefore in regards to sociability, the individuals who benefit the most from coming to terms with family of origin stressors are those who indicate the highest frequency of family challenges while growing up and who also report experiencing the most resolution with their family circumstances (an estimated slope of 0.069 as seen in Figure 2). The relationship between family stressors and sociability is 4.6 times greater for individuals who have come to terms with their family of origin stressors when compared to those who have not come to terms.

This research also suggests that FGC students with high levels of family stressors have higher levels of anxiety associated with their stressors. Students who suffer from anxiety problems tend so suffer a greater risk of failing academically which can quickly compound their anxiety (Fernandez-Castillo & Gutierrez-Rojas, 2009). Anxiety interferes with an individual's working memory and cognitive functioning, which can drain resources and lead to significant decreases in academic performance. This effect will be even greater as the difficulty of the

cognitive tasks increase. Anxiety related deficits on tasks are often manifested in terms of the time taken to complete a task (Owens, Stevenson, Hadwin, & Norgate, 2012). There is evidence linking high levels of anxiety with decreased performance of any task since attention, concentration, and effort are not fully functioning (Fernandez-Castillo & Gutierrez-Rojas, 2009).

Individuals who struggle with family of origin stressors and anxiety are more likely to describe themselves as not ready to participate in learning (Mann, Kristjansson, Sigfusdottir, & Smith, 2014). It can also lead to unrealistic or unattainable academic aspirations which often leads to more anxiety and feelings of loneliness for FGC students which compromises their academic success when compared to their non-FGC peers (Stebleton & Soria, 2012).

Anxiety can also have a negative impact on social life and the development of social skills necessary for academic success. Students suffering from anxiety may avoid classroom activities or even refuse to attend school. Poor school attendance combined with anxious behavior when attending school may lead to decreased academic performance.

The most significant moderating change of the effect of coming to terms with family of origin stressors on anxiety is when the level of family of origin stressors is at its highest reported level (family of origin stressors = 5) and coming to terms is at the lowest reported level (coming to terms = 1). Therefore in regards to anxiety, the individuals who benefit the most from coming to terms with family of origin stressors are those who indicate the highest frequency of family challenges while growing up who have not come to terms at all with their family of origin. The estimated slope for that group is 0.064 (see Figure 2).

Barriers that stem from family of origin stressors or from being the first in a family to attend college can lead to a feeling of a lack of belonging or isolation and depression. FGC students generally have lower self-images of and less confidence in their academic ability

(Stebleton & Soria, 2012). Students who report more family of origin stressors may also exhibit a trauma-related-avoidance pattern that becomes a general coping strategy for academic stress as well. FGC students perceive more stress which relates to more disengagement coping and less positive thinking when compared to students with more educated parents (Jenkins et al., 2013). Students who are depressed have a more pessimistic view of themselves and are more threatened by difficult academic tasks. They may view themselves in self-defeating ways and interpret their academic experiences in negative ways. This can lead to a doubtful view of their scholastic future and further impair aspects of information processing, task completion, motivation to learn, and expectations for academic success (DeRoma, Leach, & Leverette, 2009).

Depression is associated with difficulties concentrating, social withdrawal, and challenges being self-reliant with school performance. It may impair cognitive functioning if an individual has ruminative thoughts and depressive interpretations instead of focusing on actual tasks. Depression may also directly block cognitive resources, which would have a significant negative impact on school performance (Frojd et al., 2008).

The most significant moderating change of the effect of coming to terms with family of origin stressors on depression, and in the entire model, is when the level of family of origin stressors is at its highest reported level (family of origin stressors = 5) and the lowest level of coming to terms (terms = 1). Therefore in regards to depression, the individuals who could potentially benefit the most from coming to terms with family of origin stressors are those who indicate the highest frequency of family challenges while growing up who have not come to terms at all with their family of origin stressors. They demonstrate the largest increased change in depression across all levels of family of origin stressors with an estimated slope of 0.097.

Therefore, if a FGC student has experienced a high frequency of family of origin stressors, they are the individuals who can be most positively impacted by the influence of an educator. Educational counselors who can assist their students to come to terms with their family of origin stressors can have a significant influence in the areas of sociability, anxiety, and depression. It is clear all three of these outcomes influence academic performance and success and can be improved by individuals coming to terms with family stressors. FGC students with high levels of family of origin stressors may appear to be the least likely to progress forward in their academic careers, particularly due to high levels of family of origin stressors. However, if educational counselors assist these FGC students with the process of coming to terms with their family stressors they could potentially demonstrate the most change in the relationship between family of origin stressors and sociability, anxiety, and depression.

The literature suggests that an increased level of sociability would facilitate the establishment of crucial social networks to improve learning and academic performance as well as enhance academic aspirations, persistence, and degree attainment. A decreased level of anxiety can increase task and academic performance, concentration, effort, and the development of social skills. And finally, decreased levels of depression could improve levels of interest and initiative, ability to allocate attention resources to cognitive tasks, engagement levels, and optimism about future academic aspirations.

All of the data in this research indicate the moderating process of coming to terms with the stressors due to family of origin actually changes the direction and strength of the relationship between family stressors and sociability, anxiety, and depression. Educational counselors can play a key role in the lives of FGC students if they can assist them with coming to terms with their family stressors. This research suggests that facilitating the process of coming to

terms is a powerful course of action that educational counselors can engage in with their FGC students to possibly improve the relationship between family of origin stressors and their sociability. Coming to terms can also change the relationship between family of origin stressors and anxiety and depression by decreasing their levels, all which can directly influence the academic potential and success of FGC students.

Implications

The higher the levels of family of origin stressors a FGC student reports, the potentially more negative the impact is on the outcomes considered as characteristic traits or states that influence educational success. FGC students are a critical population to assist because the current research and data indicates that relative to their peers, FGC students have weaker academic preparation, different motivations or reasons for enrolling in college, varying levels of parental support and involvement, different ideas, perceptions, or expectations of what the college experience will be, and some significant obstacles in their path of college retention and academic success (Saenz et al., 2007). Some of these significant obstacles were factors included in the family of origin stressors in this model. FGC students with family obstacles or stressors need key educational associations in their lives, in addition to their family, to help them advance their academic aspirations and level of resources. Educational counselors can be those key academic associations who become "academic family" and prove to be a powerful influence in the lives of FGC students.

Previous studies have outlined that FGC students may need additional academic support and guidance. However, to address these challenges, educators have traditionally researched, explored, and implemented educational programs for FGC students in an attempt to close any academic gaps in comparison to their non-FGC peers. FGC students may need more assistance

with a reduction of distress due to family of origin stressors than help with specific academic behaviors. According to this study, FGC students who come to terms with their negative family experiences change the effect of the family stressors on sociability by increasing it up to 4.60 times higher than those who do not find any resolution of family stressors. In another positive way, FGC students who come to terms with their family of origin stressors can change the effects of their family stressors on anxiety by down to 2.67 times lower, and levels of depression by down to 3.88 times lower in comparison to those who do not find resolutions for family challenges. Therefore, the more an educator or counselor can assist an individual to come to terms with family stressors, the stronger the prospective positive changes in FGC students levels of sociability, anxiety, and depression.

Educators who are truly responsive to the development of their students must understand all of the factors related to the success and failures of their students. The initial evidence in this study indicates that given the positive outcomes of coming to terms with family of origin stressors, it is beneficial for educators to consider ways they can help students come to terms with their family stressors in addition to the traditional academic support in order to improve the potential academic and life opportunities for FGC students. This more holistic approach to developing students has the potential to further promote and increase academic success and emotional well-being.

It is crucial for educational counselors, advisors, and other administrators to consider the access that FGC students have to mentors and supportive friends, particularly if there is an absence of familial support. FGC students may need additional support to come to terms with their family of origin stressors in order to decrease their levels of anxiety and depression, particularly if their anxiety and depression is due to their family challenges. Although some

students may need professional psychological services in order to fully come to terms with their family of origin stressors, educational counselors can begin the process of providing the help these students may need. Educators can proactively seek out FGC students and be prepared to intervene on their behalf by gaining their trust and earning their confidence so they can facilitate the process of coming to terms with family of origin stressors or refer them to a professional therapist who can help them find resolution.

FGC students with high levels of family of origin stressors may be even more responsive to educational role models like counselors. The interpersonal interactions can help them build perspective and learn effective coping skills, develop social capital by providing crucial institutional support, facilitate academic acculturation, and potentially improve life circumstances. The results of this study is consistent with literary findings stating that the inclusion of at least one educator in the social network of a student from a disadvantaged background carries far more transformative power than such an inclusion in the network of a student with parents who have their own resources (Kim & Schneider, 2005).

In terms of future research, this study suggests a potential to evaluate the relationships between prospective first-generation college students and those who are first-generation college students who have earned degrees at various levels. It may be helpful to research if any differences exist between those who have successfully completed a degree and those who have not completed a degree with the same reported level of family of origin stressors during their childhood. This future study may be particularly interesting since the number of Asians who were FGC students in the sample when only prospective FGC students were considered, increased from 116 to 262 when the sample included FGC students who had earned a degree post-high school. It also may be interesting to further break down the FGC student parental

educational attainment levels to ascertain if differences exist between levels. Particularly since there were 1,013 mothers (20% of the sample) and 1,185 fathers (23% of the sample) who had less than a high school equivalency. A lower parental educational attainment level could potentially exacerbate the challenges faced by FGC students. Additional future research could include a longitudinal study of anxiety to evaluate what happens with levels of anxiety over time. The process of coming to terms could potentially be different for those who exhibit anxiety as a personality trait versus as a result of other family of origin stressors. Future studies could also be conducted to evaluate if mean scores of anxiety or depression vary across the different racial background groups.

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APPENDIX A: REVIEW OF LITERATURE

First-Generation College Students: An Overview

First-generation college students are typically defined in the literature as those whose parents have not had any formal education beyond high school (Gibbons, 2005). The U.S. Department of Education defines a first-generation college student as a student who comes from a family where neither parent has earned a four-year college or university baccalaureate degree (St. Clair-Christman, 2011; Warburton, Bugarin, & Nunez, 2001). For the purposes of this study, a first-generation college student is one who comes from a family where their parents have not attended any college; their highest level of educational attainment or attendance is a high school diploma or equivalent. This group traditionally contains more racial minorities, is more likely to come from lower-income families, and have somewhat lower academic achievement when compared to their peers who have parents with college degrees and experience (Gibbons, 2005; Saenz et al., 2007; St. Clair-Christman, 2011). They are also more likely to attend high schools with lower college-going rates in the United States and to have peers who are not considered college-bound (Tierney, 2013). It is important to remember however, that students who come from what has traditionally been called disadvantaged backgrounds, are not coming from something bad or worse than others. They are just coming from families or backgrounds that are different than those who have had more academic experiences.

First-generation college (FGC) students are underrepresented in four-year colleges and universities in the United States. National data indicates that the proportion of FGC students has steadily declined over time. In 1971, FGC students made up 38.5% of all first-time, full-time college new freshmen (Saenz et al., 2007). This percentage dropped more than 50% in 2005, with FGC students comprising only 15.9% of freshmen at four-year institutions (Coy-Ogan,

2009). However, the number is growing and is significantly higher if we evaluate the total number of FGC students attending some type of postsecondary institution, including specific trade schools or non-accredited institutions. Although the proportion of FGC students attending college has decreased over time, the proportion of racial minority FGC students has remained high. The National Center for Education Statistics in September 2010 reported that among the students who enrolled in some type of post-secondary education or higher education in the United States in 2007-2008, only 28.2% of students who are White are FGC students. However, 48.5% of Hispanics, 45.0% of Blacks, 35.6% of American Indians, 32.2% of Asians, and 31.3% of Pacific Islanders had parents who had a high school diploma or less (Staklis, 2010).

Students' aspirations to continue their education past the secondary high school level are strongly shaped by factors that are both personal and environmental including family and community expectations. Goals to attend college are influenced by parental education attainment levels, encouragement from family and friends, socioeconomic status, and access to resources (Aud et al., 2012; Hossler et al., 1999; McDonough, 1997).

College students who have parents with university or college experience theoretically have access to resources that FGC students may not. According to most researchers, parents with college degrees are able to provide advice to and guidance for their own children that can assist them before, through the transition to, and during college. They are generally familiar with the requirements needed and/or preferences for university acceptance and can instruct and lead their children during the various phases of college preparation. For example, parents with college degrees typically understand the importance of enrolling in certain courses during junior high and high school that will prepare their children for college. They also are likely to have an understanding that these same courses may better prepare their children for the standardized

college entrance examinations like the American College Test (ACT) or the Scholastic Aptitude Test (SAT). Parents with college degrees also tend to understand the importance of developing well-rounded students who participate in various extracurricular activities that include service and leadership opportunities.

Literature indicates that parents without college experience may be less familiar with the college or university admission processes. This means at times they may not understand the importance of course selection, extracurricular activity involvement, or test-taking at crucial points during their children's educational experiences. They are often reliant upon school counselors or others to assist their children through the secondary and higher educational systems. Parents of FGC students or the FGC students at times attempt to navigate the secondary education and higher education system on their own hoping that their good faith efforts will be sufficient. This often exacerbates the stress upon prospective FGC students and their families as they break away from their family norms which creates an automatic transition for themselves and their families (St. Clair-Christman, 2011).

Often prospective FGC students do not possess the necessary knowledge to successfully transition from high school to postsecondary institutions. This lack of knowledge may contribute to the lower postsecondary enrollment rates (Ross et al., 2012). FGC students are more likely to enroll in two-year institutions rather than four-year (St. Clair-Christman, 2011). However, for FGC students who are admitted into a four-year postsecondary institution, finding a way to become acculturated into and navigating the various aspects of university life is crucial. Acculturation is frequently a given for those who have parents with baccalaureate degrees (Terenzini et al., 1994) and the transition from high school to college is more seamless than their first-generation peers. Prospective FGC students and their parents seldom have the same access

to the resources and information necessary for college preparation and admission as students with parents who attended or graduated from college. Challenges identified in the literature indicate that many prospective FGC and FGC students and their parents are lower socioeconomic status (SES), have fewer physical, fiscal, informational, and social resources, less parental integration in the professional and educational workforce, and less familiarity with university processes. This can result in higher levels of stress, anxiety, depression, and isolation for prospective FGC students (Saenz et al., 2007; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; Warburton et al., 2001). Literature demonstrates that the inclusion of at least one educator in the social network of a student from a disadvantaged background carries far more transformative power than such an inclusion in the network of a student with parents who have their own resources (Kim & Schneider, 2005).

Bourdieu's theory of social reproduction discusses three types of capital: economic, cultural, and social (Bourdieu, 1986). This theory demonstrates how various forms of capital apply to the stratification in education by reproducing and perpetuating existing societal structures. Bourdieu (1986) defines economic capital as material wealth. It can refer to money, property or other assets, and other material objects. Cultural capital is more complicated to describe and includes sets of internalized attitudes, knowledge, behaviors, and practices acquired by the socialization process. Cultural capital often results in the preservation of social standing or further advancement and can be inherited from one's family. Social capital is abstracted by relationships. These social connections or networks provide access to opportunities, the negotiation or transmission of privileged information, and other resources. Social capital produces a cumulative effect. The more social capital an individual possesses, the easier it is to expand and acquire even more economic, cultural, and social capital (Lin, 2011). One of the

positive educational characteristics the researcher will evaluate in this study is the concept of sociability. A lack of sociability or social capital can seem overwhelming or difficult when entering a culturally rich environment, like a research university or a four-year college. A student in such a situation may experience more anxiety or depression (Tierney, 2013), which is related to two more of the positive educational characteristics the researcher will explore; calmness and happiness. Terrion (2006) discussed Family Stress Theory and the American Academy of Pediatrics Task Force on the Family. The task force concluded that stress from negative factors such as financial or health problems, employment difficulties, or lack of supportive networks, lead to emotional distress. Vulnerable families under stress can avoid family crises if they feel they have adequate social support networks that provide them a sense of hope that they do not have to manage their stresses alone (Terrion, 2006). Various levels of sociability can help ameliorate family stressors.

The literature indicates that a student's economic, cultural, and social capital plays an important role in determining one's academic aspirations, persistence, and degree attainment (Lin, 2011). Studies have shown both cultural and social capital to be significantly positively related to college choice and student persistence in college (Wells, 2008). Essentially, students with college-educated parents tend to have greater social, economic, and cultural capital and therefore greater access to resources through their basic family relationships and social networks (McDonough, Korn, & Yamasaki, 1997; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Saenz et al., 2007). Unfortunately, the lack of access to resources or social, cultural, and economic capital or the lack of sociability for a FGC student can result in lower preparation for or likelihood of college admission. But if a student is able to increase his social capital by accessing school administrators, these institutional agents can help provide a stronger network that may

compensate for lower levels of family networks when students' parents have limited emotional and social resources (Kim & Schneider, 2005). This higher level of sociability through educators may make a difference in a student's academic aspirations, persistence, and degree attainment. Research shows if students can be admitted and enroll into selective four-year colleges and universities that it automatically increases their social capital. They are more likely to have opportunities to socialize with other individuals who are predicted to complete their university degrees and to move onto academic and professional positions of high status. This type of sociability will not only accrue greater returns on their own personal education, but it will also increase their personal social capital gained while enrolled in post-secondary education (Kim & Schneider, 2005).

FGC students frequently take longer to enroll in four-year colleges and universities when compared to their non-FGC peers. This additional time may be attributed to a lack of access to or knowledge about available resources and the need to work for their own financial support. Lack of access to knowledge about available resources and finances is unfortunately not just a challenge in college; it can also be problematic in high school during the preparatory stages for college. These limited resources may be, but are not limited to, parental financial support and single parent homes. Family stressors and the lack of resources often directly damage a prospective FGC student's level of competitiveness for admission into universities and colleges, especially if the student needs to work during high school. Students from families with less economic capital or net worth are often in a less-privileged position than peers with families with access to more resources. They are often less able to purchase academic inputs of higher quality such as good schooling, private tutoring, and extracurricular training (Engberg & Allen, 2010). Many FGC students are required to work in order to support their educational endeavors and in

some situations to support the basic needs of their family members at home. First-generation college students report the need to work 20 or more hours per week during their last year of high school in addition to working 20-40 hours a week during college (Saenz et al., 2007). Understandably, for every hour a high school student works, it is one less hour he has to develop academic measures such as high school grade point average (GPA) or preparation for college entrance examinations. It is also less time he can participate in extracurricular activities that are generally viewed as favorable on college admission applications.

When parents and family without college degrees are the primary support of students in college, the lack of experience surrounding and supporting the student may lead to inadequate levels of emotional and academic support. Many FGC students and their families lack the understanding of the required commitment for a student to be admitted into and be successful in college (Sparkman, Maulding, & Roberts, 2012). Because many parents of FGC students lack first-hand knowledge of how to navigate the college experience, they have the inability to directly help their students with college tasks (Dennis, Phinney, & Chuateco, 2005) or their children perceive they have less family support in regards to college (Gibbons, 2005). Students who are the first in their family to attend college may not have parents who understand the time pressures required to be a competitive applicant for college admission, which may result in unrealistic expectations in regards to family responsibilities or family obligations. Family expectations of their prospective college students at times interferes with their student's educational responsibilities and distracts from or adds to their academic pressures (Phinney & Haas, 2003). This may lead to student anxiety, depression, or isolation from others when they feel like they do not have the support that they need (Terrion, 2006).

Racial Minority Students: An Overview

Race, culture, and ethnicity are complex in nature and often used interchangeably in literature although they should be distinguished separately. Race has been used as a classification system to delineate between populations or groups by various categories including anatomy, culture, ethnicity, genetics, geography, linguistics, and historical affiliations. It has also been considered as only an inherited biological factor, but social conceptions of race have varied over time by defining types of individuals based on perceived or expected traits. Markus (2008) discusses race as an implication of power that indexes the history or the continual imposition of one racial group over another. Racial designations may indicate that one group is identifying another group as different and usually inferior (Markus, 2008). Since the concept of race is complex in nature, it often is difficult to measure. Historically, it has been used to distinguish those who have suffered academic or financial disadvantages in society. The government has used and continues to use racial information to identify those who may need additional assistance or programs to supplement the educational resources for those from racial minority groups. Reactions to the civil rights movement in the 1960s and 1970s resulted in up to half of the moderately and highly selective institutions reporting they practiced affirmative action (Grodsky & Kalogrides, 2008; Posselt, Jaquette, Bielby, & Bastedo, 2012). Whether we evaluate the past or look at current practices, the United States is highly stratified by race. Although many Americans would like to argue that race and ethnicity does not matter, life opportunities vary sharply by the racial group to which an individual belongs and stratifies almost every aspect of society. Whether or not people are aware of their race, or use it as a self-definition, race can influence their thoughts, feelings, and actions (Markus, 2008).

The U.S. Office of Management and Budget's (OMB) started requiring federal agencies to use a minimum of five racial/ethnic categories in 1997: White, Black, Hispanic, American Indian, and Asian/Pacific Islander. The respondents who did not identify with any of the previously mentioned five racial categories could indicate "Some Other Race" on the 2000 and 2010 Census questionnaires. The 2010 Census indicates that White is the dominant racial background in the United States with 72.4 percent of the total population self-identifying as such (Hixson, Hepler, & Kim, 2011). Most universities and colleges utilize the same racial and ethnic identifiers as the U.S. Census. Although the enrollment of racial minority students in higher education has increased over the last 30 years, students from different ethnic or racial backgrounds are generally identified as a minority student on the preponderance of college and university campuses (Aud et al., 2012).

Depending on the type of literature or institution, different groups are included in the racial minority population. Generally speaking, the categories considered as underrepresented or minority racial backgrounds on four-year colleges and university campuses are the Black or African American, Native American Indian or Alaskan Indian, Latino or Hispanic, and Polynesian, Hawaiian, or Pacific Islander students. Asian or Asian American students are occasionally included as racial minority students in some of the literature and on some college or university campuses but are often combined or grouped together with the Polynesian or Pacific Islanders. Asians are rarely considered part of the racial minority population at colleges and universities except when a campus further narrows the classification within the Asian category and identifies Southeast Asians such as Cambodians, Vietnamese, and Hmong and Laotian students as highly underrepresented populations. This representation is in comparison to the Japanese, Chinese, and Korean students who on some campuses outnumber the Caucasian

students. There are a group of students who occasionally indicate Asian as their racial

background because the U.S. Census data defines racial background in a different way than they

may identify themselves. This includes students from the Middle East like Iranians, Iraqis,

Indian, Pakistanis, and others. Even though this group of students is usually underrepresented on

college campuses, when they are categorized with other Asian students, they are generally not

considered as one of the racial minority populations on higher education campuses. It is

interesting to note, the U.S. Census defines Lebanese, Arabs, and Moroccans as White,

Pakistanis as Asian, and Iranians, Iraqis, and Indians are not mentioned within any of the

identified ethnic groups (Humes, Jones, & Ramirez, 2011).

The study will utilize and define racial minority with similar categories found within the

U.S. Census, that asks, "Your race or ethnic group is," which includes White, Black or African-

American, American Indian and Alaskan Native, Asian, and Native Hawaiian and Other Pacific

Islander. These are similar to the categories that are represented in the RELATE survey with the

exceptions that the RELATE survey combines American Indian and Alaskan Native into one

grouping, "Native American" and the Native Hawaiian, Other Pacific Islander into one grouping,

"Polynesian," and allows for, "Mixed/Biracial," and "Other."

Perspective is helpful when evaluating racial minorities in colleges and universities. The

most current U.S. Census from 2010 reports the total population of the United States to be

308,745,538. The government has both an origin and a race category that individuals can choose.

It is Hispanic or Latino origin and race and 16.3 percent (50,477,594 people) of the U.S.

population self-identified as Hispanic or Latino. Since people with Hispanic or Latino origins

can be of any race, it is interesting to note that 72.4 percent of the U.S. population also self-

identified as White alone for their race. This means that the U.S. Census excludes Hispanic and

Latino as one of the racial categories and only includes Black or African American (12.6%),

American Indian or Alaska Native (0.9%), Asian (4.8%), Native Hawaiian and Other Pacific

Islander (0.2%) and the choice to list some other race (6.2%) or two or more races (2.9%). But

when Hispanics who describe themselves as White are removed from the calculations, 63.7% of

the U.S. population is White (Humes et al., 2011).

Table 1

United States Population by Race - 2010 Census Briefs

Race	Number of People	Percentage of Total Population
White	223,553,265	72.4
Black or African American	38,929,319	12.6
American Indian and Alaska Native	2,932,248	0.9
Asian	14,674,252	4.8
Native Hawaiian and Other Pacific Islander	540,013	0.2
Some Other Race	19,107,368	6.2
Two or More Races	9,009,073	2.9
Total Population	308,745,538	100.0

Certain racial minority groups from underrepresented cultural backgrounds are smaller in

number in four-year, accredited institutions. According to the National Center for Education

Statistics in December 2013, Table 263 documented the percentage of students pursuing an 4-

year undergraduate degree by racial background during the year 2010 were 66.0% White, 14.5%

Black, 10.6% Hispanic, 6.1% Asian, 0.9% American Indian, 0.3% Pacific Islander, and 1.6%

two or more races (Snyder & Dillow, 2013).

When data trends for first-generation college students are disaggregated by racial

categories, there are compelling differences seen over time. In a report which evaluated the

profiles of first-generation college students at four-year institutions since 1971 (Saenz et al.,

2007), the differences in numbers from 1971 through 2005 were not surprising. There was a

wider gap in educational opportunities between the White and higher-income students in

comparison to low-income and historically underrepresented racial minority students previous to

the 1970s. Since that point in time, many state and federal policies and programs were created to

provide greater financial assistance and access to higher education that changed the proportion of

first-generation college students within the various ethnic and racial groups. In 1971 when the

national average of first-generation college students attending four-year institutions was 38.5

percent among entering new freshmen, the proportion of them was much higher among the racial

minority populations. When evaluating all of the Hispanics attending four-year institutions in

1971, 69.6 percent of them were first-generation college students. Similarly high in proportion of

those attending four-year institutions, 62.9 percent of all the African Americans, 44.8 percent of

all the Native Americans, and 42.5 percent of all the Asian Americans were first-generation

college students. Although the proportion of first-generation students has declined within each of

the racial minority groups over time, the Hispanic population continues to demonstrate the

highest proportion of first-generation college students of any racial minority background with

over one-third of the total Hispanic students registering at four-year institutions as first-

generation college students (38.2 percent). Although in the aggregate, the declining

representation of first-generation college students has aligned with the declining proportion of

the United States population without a college education. However, upon closer scrutiny the rate of decline of first-generation college students within the Hispanic and African American populations is slower than the relative proportion without a college degree. Meaning, it is very probable that Hispanics and African Americans who are first-generation college students are still having a more difficult time gaining access to four-year institutions (Saenz et al., 2007).

When we evaluate prospective FGC racial minority students within the higher education system, the current literature indicates they are disadvantaged in preparation for college and access to resources that eventually leads to early departure from college or disparaging end results in academic performance. The government report, *The Condition of Education 2012*, shows more than a third (34.1 percent) of the 5-17 year olds in the United States are prospective first-generation college students, with 23.14 percent with parents who have earned a high school diploma or equivalent and 10.7 percent with parents who have less than high school completion. When comparing each of the racial backgrounds individually, only 22.8 percent of those who are White are prospective FGC students. However, when evaluating the racial minority groups, 24.0 percent of all Asians, 28.2 percent of all two or more races, 41.0 percent of all Black or African-Americans, 42.3 percent of all American Indians or Alaska Natives, 50.0 percent of all Native Hawaiians or Pacific Islanders, and 60.9 percent of all Hispanics or Latinos are prospective FGC students. The rate is clearly highest among racial minority groups underrepresented in colleges in the United States. When we review the percent of 5-17 year olds in the United States with parents who have less than a high school degree, it compounds the prospective FGC challenges even more. It is reported that within the total U.S. population of the 5-17 year olds, 10.7% of them have parents whose highest level of education is less than a high school graduate. However, the racial minority groups are large portions of that percentage. Those who are less than a high

school graduate and White are 3.4 percent, Black are 10.8 percent, Hispanic are 30.3 percent, Asian are 7.3 percent, Hawaiian and Pacific Islander are 10.8 percent, American Indian or Alaska Native are 10.7 percent, and two or more races are 5.3 percent (Aud et al., 2012).

Depending on the type of institution and where a student is attending college or university, one of the pressures or stressors students face is their racial minority status. Researchers have examined how racial minority students feel on a predominantly White campus versus a campus with higher concentrations of diverse student populations. On predominantly White campuses, racial minority students tend to feel ethnic and cultural stressors such as perceived or actual discrimination. They also perceive cultural differences between their own culture and that of a largely White middle class American university (Phinney & Haas, 2003). Many students from different racial, ethnic, or cultural backgrounds are likely to face challenges when the underlying or dominant social and cultural values and philosophies of a university are different or in direct conflict with their own (Lin, 2011). They can experience feelings of isolation or loneliness as they try to negotiate between their racial, familial, personal, cultural, and social identities and values (Tawney, 2009).

Research in higher education often focuses on academic achievement-based outcomes such as cognitive skills, degree attainment, and attrition. Researchers speak of the achievement gap and show statistics demonstrating how racial minority students are not achieving as much or at the same rate as their White peers. However, it would depict a more accurate picture to have a balanced perspective that includes the social and cultural contexts influencing academic achievement and retention. Some of these non-cognitive factors help us better understand the challenges faced by racial minority students. It is well documented that members of historically underrepresented racial minority groups tend to feel less welcomed or supported by their

majority group peers. This could lead to the perception that a campus climate is unfriendly and a level of discomfort for underrepresented groups. A college campus climate can influence a prospective FGC racial minority student's selection for interest in submitting an admissions application and potentially attending it. Members of historically underrepresented racial groups tend to have lower perceptions of campus climates than their majority group peers. Meaning, for racial minority groups, the campus feels less welcoming or supportive and they are more likely to feel marginalized within the campus community (Ancis, Sedlacek, & Mohr, 2000; Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999; Lin, 2011; Worthington, 2008). This additional pressure or stress may dissuade a student from preparing to attend college and/or applying to particular institutions of higher education. A student's sense of belonging of feeling part of a school or classroom community is crucial for FGC racial minority students. It has significant psychological benefits and can make him more likely to engage in productive academic behaviors (Farrington et al., 2012).

Many racial minority students come from families with immigrant backgrounds and are engrained in cultures where the family is the number one priority. Racial minority students from various cultural backgrounds may have different family expectations and emphases within their family structures. Students who come from cultures where family member interdependence is emphasized may be expected to continue to fulfill family responsibilities or obligations that take precedence over or conflict with college responsibilities (Dennis et al., 2005). Racial and ethnic minority family expectations, responsibilities, and roles can be so deeply rooted that any outside competing force of any type may be viewed as disruptive or damaging to the family unit. Such students, particularly those who may be attending or planning to attend a local college or university and are living at home, may feel obligated to fulfill family roles and expectations and

may need to perform housework and/or childcare at the expense of academic responsibilities. This can create a challenging situation where a racial minority student is drawn towards the family and academic performance at the same time, and yet may not feel able to perform well with both simultaneously. Such family relationships may become a major source of stress, anxiety, depression, and concern when coupled with academic or university pressures (Phinney & Haas, 2003).

Cultural or ethnic values can deeply influence a student's motivation to attend college (Phinney & Haas, 2003). Markus and Kitayama (1991) suggest that individuals with collectivistic orientations are motivated to achieve or meet the perceived demands and expectations of others, particularly family members. Those personalities that display more individualistic orientations exhibit behaviors and actions that seem to be based more on personal reasons and motivations. Frequently with racial minority or multicultural students, we see that their motivation to attend a college or university is related to both individual and collective reasons. This blend may include personal motivations that are founded upon individual interest, academic or intellectual curiosity, and a personal desire for a career of the student's choice. Although some racial minority students may feel pressure to sacrifice academic pursuits to fulfill family responsibilities, others may experience the extreme opposite. Individuals with a collectivist motivational blend may enroll in post-secondary education because of a perceived family expectation to attend college. This often stems from the desire to do something that could potentially benefit the entire family (Markus & Kitayama, 1991). Studies on the development of students in college by Cote and Levine (1997) determined that students who displayed motivations that were personal in nature instead of collectivist performed at higher academic

levels in college than those with other types of motivation (Cote & Levine, 1997; Dennis et al., 2005).

Traditional Admission Criteria for Colleges and Universities

There are some common identified objective criteria measured in secondary schools that are utilized to determine college admission decisions in meritocratic ways. Cumulative grade point averages (GPA) from 9th through 12th grades, class rankings, and standardized tests such as the American College Test (ACT) and Scholastic Aptitude Test (SAT) are the most commonly measured predictors for college success. Sawyer (2013) found correlational evidence that suggested in general that a student's high school GPA was a stronger predictor of first-year college GPA than standardized test scores when academic success was defined as a first-year college GPA of a 2.00 to a 3.00 on a 4.00 scale. However, test scores demonstrated incremental predictive validity for schools with high selectivity in admissions and high academic performance levels where academic success was defined as first-year college GPA of 3.00 and higher. Analyses suggested high school GPA was more useful to predict future college success in low selective admission schools and standardized test scores more useful for highly selective admission schools (Sawyer, 2013).

The ACT and SAT and high school cumulative GPA "have been shown to account for only a modest amount of variance (25%) of a student's academic performance in college as reflected by their [college] GPA" (Sparkman et al., 2012, p.642). This is where additional subjective or qualitative factors may be utilized in admission processes to assist university administrators determine whether or not a student is sufficiently prepared to begin his higher educational experience. High school cumulative GPAs may measure students' content knowledge and academic skills, but high school grades also reflect a degree to which students

have demonstrated a range of important academic strategies, attitudes, academic behaviors, and other skills that are crucial for academic and life success. These additional skills may not be traditionally measured in admission such as help-seeking behaviors, time management, work skills, social problem-solving skills, and study skills that may allow students to manage new environments and academic and social demands well (Farrington et al., 2012).

Researchers Kobrin and Patterson (2011) found that contextual factors are associated with the legitimacy of SAT scores and high school GPA correlating with the first year GPA of college students. They found that SAT scores and high school GPA had stronger predictive powers of first year college GPA in liberal art colleges rather than universities. The correlations were also stronger for institutions in rural versus metropolitan areas. Institutions with large academic offerings and academically selective criteria result in weaker correlations between the high school GPA and SAT scores and the first year college GPA. The more diverse the curricula in the college institution, the less predictive the high school GPA is for first year college GPA (Kobrin & Patterson, 2011).

Racial and ethnic background also influences the correlation of SAT scores and high school GPA and a student's first year college GPA. Culpepper and Davenport (2009) examined the extent to which race and ethnicity changed the predictive power and found that on average, high school GPA was more predictive for the success of African American college students and the SAT scores were more predictive for Asian American college success in comparison to White college peers (Culpepper & Davenport, 2009). Stronger high School GPA is more associated with long-term effort, maturity, and organization. While the ACT or SAT are more indicative of a student's access to resources and the socioeconomic status of their family. Sternberg (2004) discusses how standardized tests such as the ACT and SAT are used frequently

for making high-stakes decisions about educational opportunities. However, those with lower socioeconomic standing have fewer opportunities that may also be compounded by politics associated with race. He argues that these tests cannot be adequately construct-validated, therefore we must question if they reach the ideals we are setting for them (Sternberg, 2004).

Course selection is also scrutinized in the admission process as another objective factor, although the level of objectivity is under question in some of the literature. Courses in high school should be designed to improve a student's skill and knowledge base. This improvement should translate into a higher level of preparation for postsecondary opportunities. The current admission models function under the assumptions that advanced courses are taught by the most effective teachers in the school and that high school educators only allow the highest ability students to enroll in the advanced courses (Long, Conger, & Iatarola, 2012). One of the challenges faced by FGC racial minority studies is they often are not aware of which courses are needed to be competitive for college admission. Junior high and high school counselors place students on various academic tracks early in the system that makes it almost impossible to enroll in the traditional college preparatory courses deemed crucial by many colleges (Farrington et al., 2012). Students may not be aware that college counseling services exist, and often FGC and racial minority students are less likely to seek out the guidance of school counselors. Unfortunately, some school counselors may not view FGC or racial minority students as college material and may not provide the necessary guidance to maximize their opportunities to pursue post-secondary academic options (Broussard, 2009). Also, some of the schools with a higher density of lower socio-economic status students do not even offer strong college preparatory courses to help their students prepare for university admission or standardized college admission tests.

Even though the type of courses taken while in high school is one of the factors many colleges and universities utilize for admission purposes and to predict college success, current literature offers limited information. Students, parents, high schools, and colleges and universities assume that Advanced Placement (AP) classes and honors courses help students prepare for college and are good indicators for college admission. There are also traditional college preparatory course categories that the majority of colleges and universities require or recommend students take in order to be more competitive admission applicants such as mathematics, English, laboratory sciences, history or government, and foreign languages. However, there could be variations in course-taking effects across different subgroups of students in the nation and across high schools with different characteristics. As a result, we do not have concrete data about which courses in the high school curriculum result in stronger admission preparation, whether all subgroups of students benefit equally from the same coursework, and whether or not the characteristics of the specific schools where the courses are offered determine the actual rigor of the courses (Long et al., 2012).

A current trend is participation in concurrent enrollment classes where high school students take college level courses at their high school or the local college campus to earn college credit before they are admitted into college. However, a national standard to regulate whether or not the high school concurrent enrollment classes are truly equivalent to college courses offered on college campuses is practically nonexistent. There are not any national standardized evaluations to determine if the rigor of the courses validates the awarding of college credit before a student is deemed prepared to enter into college on an actual college campus post high school graduation.

One of the challenges with the current literature is that FGC and racial minority students are less likely to enroll in college preparatory coursework including Advanced Placement, International Baccalaureate, and concurrent enrollment courses when compared to their peers. They also have higher attrition rates once they begin attending colleges and universities (Gibbons, 2005). Therefore, if universities and colleges are relying upon student course load to indicate the academic preparedness of a FGC racial minority student, the results may be an indication of academic ability and readiness for college, but it may also be indicative of access to resources and the level of education provided in their community. Therefore, if it is determined that the challenge is not academic capability rather impoverished access to resources, perhaps there are mediating factors that educators can explore to facilitate greater academic performance despite challenges.

Many admission criteria also include subjective information in addition to the objective. Common subjective information gathered is comprised of personal interviews, written essays, letters of recommendation, portfolios, demonstrated leadership and service, and other extracurricular activities a student has participated in over the years. Also, some colleges and universities will also try to ascertain how much interest a student demonstrates in their particular institution or specific programs or majors.

Traditional consideration variables for admission, both objective and subjective, may not necessarily identify potential college success when considering student admission and academic performance for specific subgroups and various types and sizes of institutions. One example of the traditional consideration criteria is the breadth and depth of extracurricular activities. A student with lower financial resources may not be able to afford to participate in activities due to fees or work requirements in order to support himself or his family. A working student may not

have the time to participate in extracurricular activities, even if finances are not an issue. Another example is the traditional types of service and leadership that are considered in admissions. First-generation college and racial minority students may exhibit a great deal of leadership or service within their family or their community in a way that is not commonly recognized within different sociocultural contexts. Yet, the lack of knowledge of how to articulate it on an admissions application may make it appear as if there was little or no service or leadership. There could be additional consideration for positive characteristic traits that could lead to academic success at the university level. Also, it could help to have more recruiters and educational support systems available to help them recognize their various strengths and articulate them instead of focusing on their deficiencies.

Conley (2008) believes there are four key facets to determine a student's readiness for college. The first facet is fundamental and the other three facets build upon each other and or transcend the previous facets. Foundationally, students need to have the first facet or key cognitive strategies in order to be ready for college. These key cognitive strategies will enable students to progress to the second facet of being able to learn key content from a variety of disciplines, not just their academic area of interest. The key cognitive strategies include skills such as formulating and solving routine and non-routine problems, engaging in active inquiry and dialogue about subject matters and research questions, analyzing competing or conflicting information and synthesizing their own interpretation and the identification of what type of precision or accuracy is appropriate for specific tasks or assignments. This requires a level of sociability and organization as key strategies for individuals. The third facet addresses key academic behaviors like self-awareness, self-monitoring, and self-control. This type of maturity and calmness allows a student to evaluate and think about how he processes things and learns.

This ability is crucial for students to be able to be flexible and to adjust by reflecting on what worked well and what might need improvement. Another skill is to be aware of one's current level of mastery and understanding or misunderstandings of a subject. Finally, the fourth facet of a prospective college-ready student is contextual skills and awareness. This includes the privileged information necessary to successfully apply to college, for financial aid, and then subsequently how to navigate a college system or culture (Conley, 2008).

Although there is a great deal of research on the performance of FGC and racial minority students in their first year in college as well as university success predictors, there is very little research about college success predictors gathered for this population before they enter college. The majority of the research in these areas focuses on the results after their first year in college. The researcher would like to focus on mitigating processes or traits that educators have the potential to facilitate in students by exploring positive educational characteristics identified while students are in high school that might predict successful outcomes for admission into colleges and universities. Even though retention and graduation issues are also important, the scope is too large for this research study. The focus will be on admission into college for prospective FGC racial minority students. The researcher would like to explore various positive educational characteristics that may lead toward better preparation for college admission and academic success at the university level.

The Research Questions

There are certain characteristic traits that students cannot choose; they are born into them or with them. A student arrives on campus with their particular family of origin and family stressors including but not exclusive to their family's ethnic or racial background, parental level of education, socioeconomic status, or other family adversities that are pre-determined for them.

However, there are things students or others can do to help mediate the students' family circumstances or challenges. Educators can assist students with the mediation process that may enable them to develop stronger character traits that could render them more successful or competitive for college admission.

Therefore, the primary research questions of this study are:

1. Do family of origin stressors negatively influence positive educational characteristics for first-generation college students?

2. Does this relationship vary across the different racial groups?

3. Are there processes or traits, such as coming to terms with family of origin stressors and flexibility, which can mediate the potentially negative relationships?

The selected positive educational characteristics include sociability, calmness, organized, maturity, and happiness. The researcher believes these traits, if acquired earlier in the secondary school experience, will be beneficial for academic success post-high school and may serve as strong indicators for future college admission.

College recruiters and admissions officers will be very interested in the researcher's findings if she can identify any high school student characteristics traits that could be strengthened by school administrators which may potentially indicate better success in college admission for FGC racial minority students. Secondary school counselors, college support staff and advisors for first year college students will also have a vested interest in the researcher's findings if there is documented evidence of mitigating factors they could potentially influence to better assist FGC racial minority students persist towards high school graduation and college admission. This research could potentially aid college administrators in creating support programs or stronger recruitment and advisement models with this new knowledge.

Some terms and concepts need to be explained in better detail or defined in order to understand how all of the variables may be connected in the theoretical framework. Please refer to Figure 1 for a visual of the basic theoretical framework.
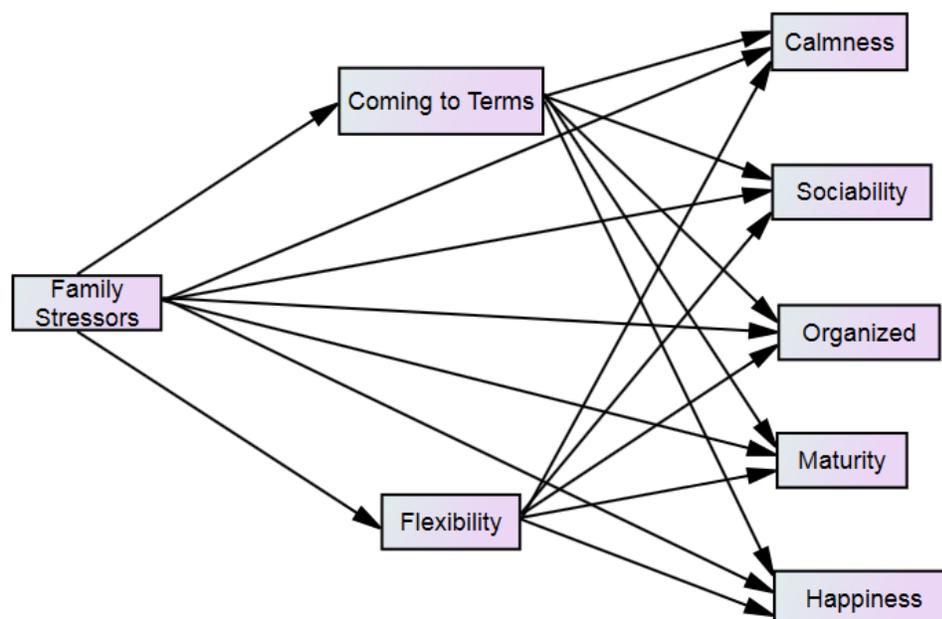

Figure 1. Basic theoretical framework for the research model including predictor, moderating, and outcome variables.

Theoretical Framework

The next few pages contain terms, definitions of the terms, and brief literature references in order to better understand what they are and how they will be utilized in this research. The terms are also concepts and the following information is designed to assist the readers establish a stronger foundation for the researcher's theoretical framework.

Predictor variable: Family of origin stressors. The literature suggests that prospective FGC racial minority students struggle to prepare for college admission and continue to have difficulty within college when compared to non-first-generation college or White peers. Some of

these challenges are a direct result of their family of origin or particular family adversities. This may seem like an unfair challenge for prospective FGC racial minority students since they do not select their family of origin and generally do not choose the particular adversities they face. There are some inherent characteristic traits they possess such as their racial background. And other characteristic traits are due to parent choices or circumstances like cultural background and being a prospective first-generation college student. Statistical information such as low socioeconomic status and single parent home individuals and the terms, "Family of Origin," "Adversity," and "Family Stressors" will be used as an independent variable.

While negative family of origin issues, adverse experiences, or family stressors such as FGC student status or an individual's race are unchangeable, it is possible to change the meanings or interpretations that people ascribe to them. This concept will be discussed further under a category and term called, "coming to terms."

Moderating variables. A moderating factor or variable is one that influences or moderates the relation between two other variables. Thus, the net effect is one that produces an interaction. There are two moderating variables that will be explored during the research: coming to terms and flexibility. The two different terms and concepts are further described below.

Coming to Terms. Many first-generation college and racial minority students come from impoverished backgrounds or challenging circumstances. It is important for them to be able to come to terms with their backgrounds, circumstances, and family of origin stressors in order to be successful in educational settings as well as in life. Coming to terms is a healing process where individuals work through difficult past experiences with the hope to feel at peace with whatever challenges are faced. According to the research, people who exert efforts to interpret, understand, re-story, find meaning in, reframe, come to a resolution, and to be at peace with

difficult past experiences are better able to be happy despite family challenges or backgrounds (Dagley, 2012).

In one of the earlier studies on first-generation students, London (1989) conducted research where he interviewed lower-income, first-generation college students to learn more about their educational experiences. He was particularly interested in how family dynamics affected a high school student's transition to college. He wanted to explore if it was any different for the first person in the family to pursue a higher education than for those that followed and if it changed or affected the student's role within the family unit. London found through his research that role assignment and separation were central themes in these students' family issues. The students reported feeling guilt about attending college because not only did they leave the family unit, they were purposefully choosing to follow a different path from their parents. These results still held true even when the students chose to attend college locally and live in their parents' home. Students ended up dealing with conflicts within themselves and within their families. The conflict between the two perceived worlds of family and college has consistently been cited as a strong contributor to attrition for first-generation college students (Gibbons, 2005).

Individuals who feel like their families are supportive of their efforts or goals or encourage them to try new things can often come to terms with their family of origin stressors. Fuertes and Sedlacek (1994) found that non-cognitive variables like the availability of supportive systems or individuals and positive self-concept were predictive of college academic success for racial minority students. And sometimes these factors were even more important than some of the traditional measurements for college academic success or measures of cognitive skills like the SAT (Dennis et al., 2005; Fuertes & Sedlacek, 1994; Gibbons, 2005).

Flexibility. It is important for individuals to be able to adjust to new or different people and situations or environments to be more successful in educational settings and in life. Sternberg (2004) discusses intelligence and how traditional intelligence has emphasized the importance of adapting to the environment. But he argues that intelligence not only includes being flexible or adaptable to an environment, but also being able to modify the environment to suit oneself (shaping), and sometimes finding an environment that is a better match for an individual's skills, talents, values, and desires (selection). Individuals once they have selected a particular environment must then be able to demonstrate this type of intelligence or flexibility, not only with their environment but also with those around them, in order to be successful (Sternberg, 2004). Being able to learn in an academic setting really requires flexibility with the environment and socio-cultural processes in order to be successful. If a student has a fixed mindset and is not flexible, it may constrain a student from expending effort to adapt to a new academic environment. The higher educational demands required to enter college may be difficult without flexibility because students may not believe that their efforts will be enough to overcome any perceived limits of their academic ability (Farrington et al., 2012).

Outcome variables. There are five main outcome variables that will be explored in regards to positive educational characteristics.

Sociability. There are numerous words in the literature associated with the term, sociability. Research includes related items such as social and emotional learning, competence, social skills, emotional intelligence, conflict-resolution, coping, and stress reduction. The concept of sociability encompasses the social skills required to be successful in academic settings. It is the interpersonal qualities such as self-control, self-awareness, cooperation, relationships skills, responsibility, assertion, and empathy. Social skills or sociability are

acceptable learned behaviors that can improve social interactions that are required between academic peers or other students and with professors, staff, and administration. Sociability therefore, can improve learning by enhancing or improving the various social interactions that give rise to learning (Farrington et al., 2012).

Standardized achievement test scores were evaluated in a longitudinal study that followed students through first grade, third grade, sixth grade, and again at age 16. The researchers found that socio-emotional adjustment in school, or sociability, was predictive of achievement test scores at each of the measurement periods of time (Farrington et al., 2012; Teo, Carlson, Mathieu, Egeland, & Sroufe, 1996). So although it is often classified as a noncognitive factor, it is directly related to academic performance and success.

Teachers or educators may also value and reward students with higher sociability. Classroom grading practices show that educators often include student behavior as part of their evaluation process. Those who demonstrate better social skills or sociability tend to receive the benefit of higher grades while those who are more disruptive or have lower sociability are penalized (Austin & McCann, 1992; Cross & Frary, 1999).

Calmness. Calmness is one of the psychosocial measures that are usually identified in literature in higher education as a non-cognitive factor. Some people may consider non-cognitive factors as less important or less valuable because academic success and performance are traditionally measured in cognitive ways. Even though calmness is considered a non-cognitive factor, psychologists typically view this subtype as cognitive (Allen, Robbins, & Sawyer, 2010).

FGC racial minority students who enter into college are academic pioneers. The novelty of the situation for the individual and the entire family can feel ambiguous in nature. The student and family may feel uncertain and anxious about the academic, social, and personal experiences

associated with entering college. One of the functions of thought is to enable individuals to predict future events and to be able to develop ways to help control those events that affect their lives. This is a cognitive processing skill to be able to manage any ambiguities or uncertainties in life. Students must be able to draw upon their past knowledge in order to cognitively construct possible outcomes. FGC racial minority students generally do not possess enough knowledge to cognitively recognize all of their prospective options. Since their families have not had the college experience, it is difficult for families to help their student think of all the potential end-results. This may cause a level of anxiety or the student to not be calm.

Psychology literature regarding the Big Five personality factors is abundant. This framework of personality traits has emerged as a robust model for understanding the relationship between various academic behaviors and personality (Poropat, 2009). Draper and Holman (2005) discuss how all of the Big Five personality factors or measures (extraversion or surgency, agreeableness, conscientiousness, neuroticism, and openness) can be assessed as part of the RELATE questionnaire (Draper & Holman, 2005) which the researcher is utilizing for this study. Additional studies have shown how the Big Five are associated with education, learning styles, and academic performance. Trapman, Hell, Hirn, and Schuler (2007) conducted a meta-analysis of how the Big Five personality factors relate to college success. They found that neuroticism, a measure of a student's level of anxiety or worry, predicted worse satisfaction in students of their college experience, which negatively influenced their academic performance as measured by college grades. The ability to self-manage anxiety, worry, or nervousness or in other words, the ability to remain calm when faced with academic novelties or challenges is a skill that can influence the academic performance of a student. It can also be viewed as emotional stability,

which may be manifested in students' responding well to deadlines, stress, and adaptability to new situations, people, or things (Trapmann, Hell, Hirn, & Schüler, 2007).

Students who suffer from more anxiety or worry are more likely to experience a fear of failure and pursue avoidance-performance goals (Komarraju, Karau, & Schmeck, 2009). Avoidance motivation can be debilitating with anxiety, or the lack of calmness, and students may have the desire or tendency to withdraw from or dislike school or academic endeavors.

Organized. The ability to be organized seems to be a trait that would be clearly connected with academic performance and success. There are various ways to define and measure particular concepts of organization. The Big Five psychosocial trait that is connected with the concept of organization is conscientiousness. This includes traits such as degrees of dependability, organization, persistence, and achievement orientation. The meta-analysis conducted by Trapmann et al. (2007) reported that conscientiousness or organization is associated with academic achievement when measured by college grades. It is seen as a crucial trait for academic success because it has explicit behavioral meaning. There are many facets of organization that possess high face validity for college success including the drive to accomplish or finish something and being efficient, systematic, orderly, and consistently steady (Trapmann et al., 2007). Individuals high in their level of conscientiousness or organization also tend to show a strong learning goal orientation. Komarraju et al. (2009) suggest that conscientiousness has a positive association with college GPA beyond that which is explained by standardized admission tests and high school GPA (Komarraju et al., 2009).

Conscientiousness or organization influences academic achievement. It has been shown to predict higher course performance (Komarraju, Karau, Schmeck, & Avdic, 2011; Paunonen & Ashton, 2001) and to predict GPA when students apply previously acquired knowledge to real

life settings (Komarraju et al., 2011). Students who are organized are also more likely to be thoughtful and careful in the way they perform their daily responsibilities and tasks including the way they study and prepare for classes (Bauer & Liang, 2003).

Maturity. The concept of maturity can encompass many qualities or traits. Discussions in literature regarding "educational maturity" that would be important for students to possess would include various levels of self-regulation and autonomy. These two characteristic traits will be classified as maturity and the current educational research shows that they enable individuals to perform at higher academic levels (O'Donnell, Chang, & Miller, 2013; Turner, Chandler, & Heffer, 2009; Winch, 2002).

Literature in the educational field uses the term self-efficacy to describe a level of maturity necessary for students to be successful. Bandura (1993) reviews how perceived self-efficacy contributes to cognitive development and functioning. He states that a student's belief in their efficacy to regulate his own learning and to master academic work determines his aspirations, level of motivation, and academic accomplishments. If the student possesses a strong sense of self-efficacy, he will be more mature as he tests and revises his judgments based on the results of his actions and be able to remember which factors he tested and how well they worked. These types of situational demands require a strong sense of efficacy or maturity to be able to face the inevitable failures that have social repercussions (Bandura, 1993).

The perception an individual possesses about ability impacts the way he learns and strengthens or weakens his own self-efficacy and academic maturity. Bandura (1993) believes:

Some children regard ability as an acquirable skill that can be increased by gaining knowledge and competencies. Such children adopt a functional-learning goal. They seek challenges that provide opportunities to expand their knowledge

and competencies. They regard errors as a natural part of an acquisition process. One learns from mistakes. Therefore, they are not easily rattled by difficulties. They judge their capabilities more in terms of personal improvement than by comparison against the achievement of others. (Bandura, 1993, p. 120)

Other children view ability as a capacity that is inherent where performance indicates their intellectual capacities. Therefore, perceptions of deficient performances result in threatening feelings that they lack basic intelligence and may result in an immature processing of information. A strong preference is given to tasks that minimize errors so their proficiency levels will not be revealed. They would rather give up expanding their knowledge or competencies than risk demonstrating a potential deficiency. Exerting high effort is also threatening because it presumably reveals one is not smart. Instead of being able to celebrate the successes of others, it is discouraging because it belittles their own perceived ability. The inherent capacity view fosters a self-diagnostic focus that is designed to protect a positive evaluation of one's competence although it may demonstrate a lower level of academic maturity. The acquirable skill view fosters a task-diagnostic focus designed to expand one's competence and the mastering challenges (Bandura, 1993) which is more educationally mature.

During adolescence, goals are generally related to academic and career paths. The self-efficacy beliefs of adolescents are learned through modeling the behavior of the people in their lives. They identify with teachers, parents, and peers and use their personal interpretation of what they believe the influential people in their lives are doing to be more mature and successful. Their academic maturity may develop over time, but initially it is based on mimicking and mirroring behavior. They adopt their beliefs and actions and begin to incorporate them into their own lives as if they were their own. They select which beliefs and actions to emulate based on

whether or not their behaviors are reinforced or rewarded by society. This in turns affects their academic and career paths and this particular cycle becomes the guiding force for the early plans of adolescents (Gibbons, 2005).

Each individual possesses personal agency and can choose his own behavior. Self-regulation within motivational, social, and affective aspects and the contributions they make to cognitive functionality is best evaluated within the conceptual framework of the exercise of human agency (Bandura, 1993). Individuals choose the selection and construction of their environments. Therefore, the impact of the majority of environmental influences on individual motivation and behavior is largely determined by how the individual processes them. People assign meaning and validity to external events that continue to shape their experiences. Bandura (1993) expressed that what people believe about their capabilities to exercise control over the events that affect their lives influences how they think, behave, feel, and motivate themselves.

Bandura (1993) continued to state:

Most courses of action are initially shaped in thought. People's beliefs in their efficacy influence the types of anticipatory scenarios they construct and rehearse. Those who have a high sense of efficacy visualize success scenarios that provide positive guides and supports of performance. Those who doubt their efficacy visualize failure scenarios and dwell on the many things that can go wrong. It is difficult to achieve much while fighting self-doubt. (p. 118)

Individuals striving to enter into college generally set academic goals in order to reach their destination. The type of goals a person sets may be determined by his self-appraisal of his capabilities. An individual who possesses a strong level of perceived self-efficacy will naturally possess more academic maturity and set higher academic goals for

himself. If he feels capable of achieving his goals, he will have a stronger level of

commitment to do the work required to meet them. Bandura (1993) believes that ability is

not a fixed attribute. Instead it is a capability in which an individual improves based on

the organization of his motivational, social, behavioral, and cognitive skills to effectively

serve a number of purposes. And part of that organization process includes the skill of

managing aversive emotional reactions when challenges arise. It requires the process of

thinking and acting with quality maturity without emotionally damaging impairments or

debilitating responses hindering the process of increasing capabilities. There is a

difference between individuals who possess knowledge and skills and those who are able

to use them well under physically, cognitively, and emotionally challenging situations.

Personal student accomplishments require both skill and a belief that he possesses the

self-efficacy to use his skills well. A person with the same knowledge and skills may

perform phenomenally, adequately, or poorly contingent upon how the individual views

his self-efficacy and level of academic maturity.

Theoretically speaking, students who can learn to identify what they want to accomplish

and can initiate the behaviors or actions to help them accomplish it will have better educational

outcomes. Self-regulatory skills and maturity require that students be able to consistently utilize

and apply them when they face challenges or different stressors as well as when there are other

attractions competing for their attention. Students with a strong sense of their own self-regulatory

skills and maturity will exhibit more confidence to stay committed to their goals. This is

confirmed in a study completed by Zimmerman, Bandura, and Martinez-Pons (1992). They

tested high school students who were mainly minority students. The students were tested for

their perceived self-efficacy and their ability to place themselves in environments that were

conducive to learning, to efficiently plan and organize their own academic activities, to enhance their understanding by using cognitive strategies, and to gather information. In addition, the students were tested to see if they would seek out and receive help from peers and teachers when necessary, motivate themselves to complete their homework and other academic activities, meet the required deadlines for academic assignments, and stick to academic activities when there were more enticing or entertaining options to participate in instead. The researchers found that the higher the students' self-regulatory efficacy, the more confident they were in their ability to master academic subjects. Their perceived efficacy of being able to regulate themselves directly improved their academic achievements as well as helped the students to raise their own personal goals (Zimmerman, Bandura, & Martinez-Pons, 1992).

Part of the challenge that prospective FGC and FGC racial minority students face is that most academic activities do not provide objective standards to self-assess their ability other than grades. Therefore, one of the ways they assess their ability or their capability is by comparing themselves to others. They view the attainment levels of those around them or those that they associate with and make deterministic evaluations of their own attainment or ability. These types of social comparative standards can be damaging to their self-esteem. It can also take away from their own sense of accomplishment when they perceive that they did not accomplish as much as another person. It can lead to a decrease of satisfaction of their own increased ability based on comparison of end results of their social counterparts, even if their peers began at a different starting point. These feelings of inadequacy can then be exacerbated by normal academic practices in higher education. Students receive individual feedback from professor evaluations of their academic work, grading practices, and group discussions (Marshall & Weinstein, 1984; Rosenholtz & Simpson, 1984). Individuals who perceive that others are surpassing them may

feel as if their personal self-efficacy is being undermined. This may in turn increase immature or erratic analytical thinking and progressively impair their performance. Whereas those who feel they are consistently improving and gain more self-efficacy may think more efficiently and actually enhance their academic performance (Bandura, 1993).

  Happiness (Depression). One of the positive educational characteristic traits in the theoretical framework is happiness or levels of depression. Literature often discusses happiness or depression in terms of emotional intelligence, which is a learned ability to understand, use, and express emotions in healthy and productive ways (Goleman, 1995). Osterholt and Barratt (2010) report that as more research is conducted on emotional intelligence, the important message is that it is the key factor in achievement, college success, personal health, career performance, and leadership (Osterholt & Barratt, 2010). The way people perceive their capabilities affects how much stress and depression they experience during challenging times. It may also affect their level of motivation to work through the difficult circumstances and their commitment to follow through with their educational or academic goals. According to the theoretical framework, it is anticipated that students who feel they can control the stressors faced in their lives will be better able to navigate their levels of anxiety. When students feel the stressors faced are beyond their control and the stressors become threatening to them, it may impact their thought patterns and alter their behavior in negative ways. It can be a cause for high levels of anxiety and instead of focusing on ways to solve their problems or address their challenges; they begin to focus on their coping deficiencies. Suddenly, their environment feels dangerous and unmanageable. This type of impaired thinking can debilitate a student's ability to function and cause depression or anxiety. Instead of a student confronting his challenges, he may engage in avoidance behavior. However, if a student has a strong sense of self-efficacy and

happiness, he may have more confidence in his ability to face challenges and engage in taxing activities or experiences (Bandura, 1993). Therefore, by the choices students make on whether to engage in an activity or situation within their coping ability or to avoid the activities or situations, they are cultivating different competencies, social relationships, and life interests that lead to different life courses. A student may even consider or choose a different career depending on his levels of happiness. The stronger the sense of happiness and self-efficacy, the more career options individuals may consider possible. The more interest they show in the various career possibilities, the better they can prepare themselves for the prospective occupations. This increased preparation will increase the potential to be successful in difficult or prestigious academic or occupational pursuits.

Theoretically, a low sense of self-efficacy can lead a student to feel anxious or depressed. This can be manifested in a few different ways. Students who experience unfulfilled aspirations may feel a lack of self-worth because they were not able to reach their own standards they expected of themselves. This inability to meet their own expectations can lead them to bouts of depression. Another way a low sense of self-efficacy can impair the confidence of a student is by withdrawing himself from social relationships or potential providers of support and encouragement. Students who possess a high sense of self-efficacy naturally seek out and cultivate relationships with others around them. This allows for the opportunity for students to meet others who become mentors or models on how to navigate challenging circumstances and how to learn to work through stress and anxiety. Kavanaugh and Wilson (1989) state that, "Much human depression is cognitively generated by dejecting ruminative thought. A low sense of efficacy to exercise control over ruminative thought also contributes to the occurrence, duration, and recurrence of depressive episodes" (p. 134).

Conceptual Model

The researcher will investigate if family of origin stressors or adversities have a negative effect on positive educational characteristics important for college admission. Then she will evaluate if secondary or university educators can utilize two specific mediating factors (coming to terms and flexibility) to assist prospective FGC students with positive educational characteristics and better preparation for admission into colleges and universities. The researcher will also evaluate whether or not an individual's racial background influences the relationship between family of origin stressors and the positive educational characteristics. Counselors or advisors with awareness of the mediating factors (coming to terms and flexibility) can potentially influence this population of students and their quality of educational opportunities. Since the data does not include direct information regarding college or university admission, the researcher will utilize traits, which are confirmed in the literature to be positive educational characteristics, as indicators for potentially stronger college admission possibilities. The researcher will compare factors such as "Coming to Terms" and "Flexibility" for prospective FGC students and prospective non-FGC racial minority students and what the effects are on specific desired positive educational characteristics with and without the mediating variables (see Figure 1).

Family science research shows that individuals who are able to come to terms with their own family of origin or with the adversities they face, generally have stronger relationships or more positive outcomes in their relationships (Fackrell, Poulsen, Busby, & Dollahite, 2011; Martinson, 2005). The researcher will investigate if there is a similar educational phenomenon when students are able to come to terms with their own family of origin or with the adversities they face. It will be determined if individuals will demonstrate more positive educational characteristics if they are able to come to terms with their own family of origin. Responses from

the questionnaire will be utilized as latent variables to indicate if a student is coming to terms. These responses include information regarding their perceived family quality and family influence.

For the purposes of this study, family quality information will be gathered from the RELATE questionnaire with the following questions:

108. From what I experienced in my family, I think family relationships are safe, secure, rewarding, worth being in, and a source of comfort.

113. From what I experienced in my family, I think family relationships are confusing, unfair, anxiety provoking, inconsistent, and unpredictable.

118. We had a loving atmosphere in our family.

122. All things considered, my childhood years were happy.

Family influence information will be gathered from the RELATE questionnaire with the following questions:

111. There are matters from my family experience that I'm still having trouble dealing with or coming to terms with.

116. There are matters from my family experience that negatively affect my ability to form close relationships.

125. I feel at peace about anything negative that happened to me in the family in which I grew up.

The other mediating factor is flexibility. The more prospective FGC racial minority students demonstrate the ability to be flexible, the more the researcher anticipates they will have positive educational characteristics. It is anticipated that the gathered research would indicate the more flexibility the individual demonstrates, the stronger the positive educational characteristics.

Flexibility information will be gathered from the RELATE questionnaire with the following questions:

"How much do these words or phrases describe you?"

4. Open minded

11. Flexible

18. Easy going

23. Adaptable

The RELATE questionnaire identifies specific traits the researcher believes could lead towards positive educational characteristics; traits of individuals which could predict better admission into colleges and universities. These traits include sociability, calmness, organize (or organized), flexibility, maturity, and happiness. The researcher will evaluate the aforementioned latent variables representing positive educational characteristics to see what the relationships are between the independent and dependent variables with and without the moderating variables, coming to terms and flexibility (Refer to Figure 1).

APPENDIX B: METHODS

The RELATE Institute utilizes a comprehensive, research-based questionnaire to gather information about tens of thousands of participants. RELATE was developed by the Marriage Study Consortium at Brigham Young University in 1979 and is a non-profit organization with the specific task of developing research and outreach tools that can be used directly with the public. The consortium consists of a group of scholars, researchers, family life educators, and counselors from varied religious and educational backgrounds (Relate Institute, 2013). The current version of the questionnaire that will be utilized for this research was released in the fall of 1997.

The researcher will examine the demographic information provided by the questionnaire and some of the specific questions to explore positive educational characteristics. Some of the data collected is focused on the individual context, like gender and age, which includes a combination of information. Not all of the data is specifically paired by relationships. Specific self-reported personality traits are also included like kindness, sociability, volatility, calmness, organization, and flexibility. The data also includes beliefs and attitudes of individuals like autonomy, self-regulation, and spirituality. Busby, Holman, and Taniguchi (2001) described the creation of RELATE well.

RELATE was developed by following the standards of educational and psychological testing (American Psychological Association, 1985) and the principles of construct hierarchy for multidimensional scaling. This process was complicated and extensive, requiring several pilot studies, preliminary factor analyses, test-retest and internal consistency analyses, content validity analyses, and the rewriting of many items. Reliability coefficients for most of the measures scored between 0.70 and 0.90 for

internal consistency and two test-retest samples, including a test-retest of a Hispanic version (Dagley, 2012). The final form of RELATE was created by statistically and qualitatively analyzing over 450 items. The analyses aided the researchers in reducing the final instrument to the 271 items that were eventually published and distributed. (Busby et al., 2001)

Data for this sample was collected using the RELATE questionnaire (Holman, Busby, Doxey, Klein, & Loyer-Carlson, 1997) from 1997 to 2013. It is necessary to utilize such a large time span in order to collect enough information about racial multicultural individuals. The database has an overrepresentation of individuals from the western United States and therefore contains high numbers of Caucasians.

It appears that this research will be one of the first times a direct connection with the educational field has been extrapolated from the RELATE questionnaire results. This research effort is a true attempt to bridge experience from the social sciences and the educational field in order to better assist individuals with specific educational needs.

The researcher will only utilize and analyze specific items of the RELATE instrument in order to examine the relationships outlined in the theoretical framework. Even though there are more than 300 questions or items within the RELATE instrument, the researcher will isolate the variables utilizing the demographic information associated with this study and the items identified as mediating variables and educational outcomes. The demographic information that will be utilized is listed below under the section entitled, "Variables."

Data Set

The data is already collected and provided voluntarily by those who take the RELATE questionnaire. Some limitations will exist for educational generalizability because it is a questionnaire that is normally taken by self-selection or by those who are referred to take it by ecclesiastical leaders, counselors, therapists, and others in social science professions. It is not widely offered in educational systems as a regular standardized test or one for specific educational purposes.

Sampling

The entire RELATE database from 1997 through 2013 is available for the researcher to draw upon and will be utilized in order to get the multicultural representation necessary as noted in the methodology section above. Data will be drawn from the entire time frame to maximize the number of participants who identified themselves as racial minorities. In order to increase the power of the analysis, no minority participants were excluded.

The demographic information gathered in RELATE comprises the initial defined sample narrowed by only gathering data from prospective first-generation college and ages from 17 - 30 years. This age range was selected because these are the ages of individuals who are most likely to enroll in college. The researcher will select all of the members of the underrepresented or racial minority groups. The racial minority information is from question 72 – your race or ethnic group. The responses include African (Black), Asian, Caucasian (White), American Indian, Latino (Mexican American, Puerto Rican, Cuban, etc.), and mixed/biracial or other (please specify).

In order to determine whether or not an individual is a prospective first-generation college student, three questions were utilized. The first was question 70 – "How much education

have you completed?" This allows the researcher to evaluate prospective college students who have not completed a bachelor's degree yet. The responses include, "Less than high school," "High school equivalency (GED)," "High school diploma," "Some college not currently enrolled," "Some college currently enrolled," "Associate's degree," "Bachelor's degree," "Graduate or professional degree not completed," and "Graduate or professional degree completed." The researcher chose all of the individuals who indicated the first six categories to indicate a prospective first-generation college student. The second and third questions utilized to narrow the sample group were questions 102 and 103, "How much education has your father completed?" and "How much education has your mother completed?" respectively. The responses used for this sample include, "Less than high school," "High school equivalency (GED)," and "High school diploma." This allows the researcher to evaluate only the prospective college students who have not completed a bachelor's degree and whose parents do not have any college experience.

The initial sample within the defined age range (17 - 30) who indicated he/she is a prospective first-generation college student was predominantly Caucasian or White with 2,555 individuals (64.0%), 171 African or Black (4.3%), 116 Asians (2.9%), 43 Native American (1.1%), 331 Latino (8.3%), 86 Mixed/Biracial (2.2%), and 678 Other (17.0%). The majority of the respondents were 21 years old with 67.6% of all of the individuals between the ages of 17 and 24.

Descriptive Statistics

Initially the researcher will perform basic descriptive statistics for all eight variables in her model. She will gather the means, standard deviations, and ranges for all of the variables and put them together in a table for easier review. Then the researcher will create correlation tables

for all of the variables to identify potential multicollinearity problems. She will create a correlations table for easier review as well.

Proposed Model

Even though there are latent variables in the model, utilizing the mean score for the items representing one of the latent variables allows the researcher to consider the latent variables as observable. Each of the outcome variables (sociability, calmness, organization, maturity, and happiness) is related theoretically and in the literature to a greater likelihood for academic success. The outcome and moderator variables (coming to terms and flexibility) are related theoretically and in the literature as potential factors influencing academic success or failure. Again, the purpose of this study is threefold:

1. Identify if family of origin stressors negatively influence potential for academic readiness for prospective first-generation college students.

2. Ascertain if specific factors can mediate that relationship.

3. Assess whether these relationships differ among various racial groups.

Below is a description of the variables with the question numbers representing the item location in the RELATE survey. Also, there are descriptions of variable selection and utilization.

Predictor variable: Family stressors. First, the researcher created a "family stressors" variable. This variable is assessed in the RELATE database by four questions (104 through 107). These items ask the participants to describe the frequency of the various stressors in their immediate family (never, rarely, sometimes, often, and very often), which is proxy for the amount of stress in an individual experienced in his childhood. This variable is computed by utilizing the mean scores of items 104 through 107.

104. There were family members who experienced emotional problems such as: severe depression, anxiety attacks, eating disorders, or other mental/emotional problems.

105. There were financial strains such as loss of jobs, bankruptcy, large debts, or going on welfare.

106. There were physical strains such as a member(s) being physically handicapped, hospitalized for a serious physical illness or injury, or becoming premaritally pregnant.

107. There were one or more family members who struggled with addictions to alcohol or other drugs.

Utilizing the mean score for the four items created the predictor variable. The higher the score on the family stressor variable indicates the more family stress an individual experienced as a child. The Cronbach's alpha for this variable is good (0.713).

Moderating variables. There are two main moderating variables utilized in this research including coming to terms and flexibility.

Coming to Terms. The researcher created a "family influence" scale, which is proxy for how much resolution, or coming to terms happens when family stressors occur. This is assessed in the RELATE database by three items 111, 116, and 125. The participants are asked how much they agree with the item statements about their family based on their years growing up. They are able to answer using a numerical scale that indicates "strongly disagree, disagree, it depends, agree, and strongly agree."

111. There are matters from my family experience that I'm still having trouble dealing with or coming to terms with.

116. There are matters from my family experience that negatively affect my ability to form close relationships.

125. I feel at peace about anything negative that happened to me in the family in which I grew up.

Utilizing the mean score of the three items created the variable. Items 111 and 116 were reversed scored to indicate that a higher score means more individual resolution of previous family stressors. The Cronbach's alpha for the variable is good (0.779).

Flexibility. The concept of flexibility, which is a proxy for an individual's ability to adapt to new or different situations, people, or environments, is assessed in the RELATE database by four questions (4, 11, 18, and 23). The items asked the RELATE participants to explain how well these particular words or phrases described them with numerical values that represented, "never, rarely, sometimes, often, and very often." Utilizing the mean score of the four items created the variable.

4. Open minded

11. Flexible

18. Easy going

23. Adaptable

The higher the score, the more flexible an individual is regarding new or different situations, people, or environments. The Cronbach's alpha for this variable is also strong (0.729).

Outcome variables. Five main outcome variables were considered in the model as considerations that can influence educational outcomes.

Sociability. The concept of sociability, which is a proxy for extroversion, the ability to interact well with others, or social skills and abilities, is assessed in the RELATE database by four questions (2, 8, 15, and 21). The items ask participants how much the word or phrases describe their level of socialness or interaction skills in responses associated with numbers such

as, "never, rarely, sometimes, often, and very often." Utilizing the mean score of the four items created the variable. A higher the score indicates a higher level of sociability.

2. Talkative

8. Quiet

15. Shy

21. Outgoing

Items 8 and 15 were reverse coded and the Cronbach's alpha for the variable is also strong (0.801).

Calmness. The concept of calmness, which is a proxy for anxiety, is assessed in the RELATE database by four questions (9, 16, 22, and 24). The items ask participants to rate their own experience of descriptors related to anxiety, such as, "How much do these words describe you?" Summing the four items created the variable. The responses were associated with a numerical value, which represented, "never, rarely, sometimes, often, and very often."

9. Fearful

16. Tense

22. Nervous

24. Worrier

Each item was reverse scored so that higher scores represent more calmness or less anxiety. The Cronbach's Alpha or reliability for this variable is good (0.754).

Organized. The concept of organized is direct and not designed to be a proxy for a similar concept. It is assessed in the RELATE database by two questions (6 and 13). The items ask the participants to describe how much these words describe them. The responses are

associated with a numerical value, which represents, "never, rarely, sometimes, often, and very often." Utilizing the mean score of the two items created the variable.

6. Organized

13. Messy

The RELATE database scoring indicates that a higher score represents an individual who is more organized. The researcher reverse coded question 13 and the Cronbach's Alpha or reliability is good (0.747) for this variable.

Maturity. The concept of maturity is also direct and not designed to be a proxy for a similar characteristic trait. It is assessed in the RELATE database by three items (5, 12, and 19). The items ask participants how much do these words or phrases describe them. The responses are numerical representing, "never, rarely, sometimes, often, and very often." The mean score of the three items creates the variable.

5. Fight with others / Lose temper

12. Act immature

19. Easily irritated or mad

A higher score indicates an individual who is more mature. All of the questions were reverse coded by the researcher and the Cronbach's Alpha or reliability is 0.589 for this variable, which is only somewhat strong. However, because this concept is theoretically important as a positive educational characteristic for academic success, it is relevant for this study.

Happiness. The concept of happiness is also direct and not designed to be a proxy for a similar concept. However, in the RELATE database, it is assessed by evaluating the level of depressive symptoms a person experiences by three questions (3, 10, and 17). The items ask the participants how much do these words or phrases describe them. The responses are numerical

representing, "never, rarely, sometimes, often, and very often." The mean score of the three

items creates the variable.

3. Sad and blue

10. Feel hopeless

17. Depressed

A higher score indicate an individual who is happier. The researcher reverse coded all of

the questions and the Cronbach's Alpha is good for this variable (0.843).

Creating the Model

After the variables were created in SPSS, the model was created in the AMOS statistical

package (refer to Figure 1). Missing variables will be replaced according to standard mean

replacement procedures where less than 5% of the data is missing. The data will then be divided

into four main categories by racial group: Black, Asian, Latino, and Caucasian. The model will

be run four separate times, one for each group.

Data Analysis

Basic statistical methods will be utilized to provide mean and standard deviation scores

on all of the identified key variables. Bivariate correlation tables will then be utilized to evaluate

how the variables are associated between the key variables. Finally, the researcher will utilize

Structural Equation Modeling (SEM) to analyze the data utilizing the statistical software package

AMOS 7.0 (Arbuckle, 2006). Structural Equation Modeling (SEM) is a multivariate correlational

procedure designed to compare overall chi-square statistics and test both direct and indirect

relationships among the different variables that may be correlated. One of the advantages of

utilizing this approach is the ability to identify latent variables and calculate the relatively

unbiased estimates of their effects in the model. The two main goals with SEM are to understand

the patterns of correlations among a set of variables and to explain as much of the variance as possible with the researcher's specified model. The researcher has identified specific mediating variables to evaluate the direct and indirect relationships that may exist between the defined test populations and the variables for positive educational characteristics.

Some of the terminology used in SEM, like "model fit" or "goodness of fit," will describe the relationship between the model and the data. Model fit describes how accurately the relationships in the model represent the relationships that exist within the data. There are various measures of fit or fit indices including the chi-square statistic for general fit, the Comparative Fit Index (CFI) for incremental fit, and the Root Mean Square Error of Approximation (RMSEA). A CFI value can range from zero to one and values above 0.95 are considered to be a good fit (Byrne, 2001). A RMSEA value below 0.05 also indicates a good fit (Arbuckle, 2006).

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