Analysis of the Risk and Protective Factors Among Low-Income, First-Generation College Students

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ANALYSIS OF THE RISK AND PROTECTIVE FACTORS AMONG LOW-INCOME, FIRST-GENERATION COLLEGE STUDENTS

A Thesis

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Master of Social Work in

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ABSTRACT

One population of particular concern for college-employed social workers is the low-income, first-generation (LIFG) student population. As the national pressure to increase retention in college has intensified, many students are graduating from universities across the country and starting professional careers. In the college population, some students may be classified as either low-income, first-generation, or both. The two classifications combined define a vulnerable population within colleges and universities – those students who are both low-income and first-generation students. The need to examine LIFG college students’ experiences after admittance, particularly in relation to degree attainment, can help social workers determine what programs are effectively helping this population and what needs have yet to be met for this population. Resiliency theory may be especially useful in understanding LIFG college students’ experiences. This study will also examine LIFG students’ mental health needs. By assessing LIFG students’ mental health, this study will build upon what is already known about the mental health problems among college students, as well as build upon existing resilience research.

Risk and protective factors were evaluated between academic and nonacademic variables including: factors related to matriculation and characteristics of the current college experience. Mental health needs were also assessed using the MHI-38 (Veit & Ware, 1983). Results showed LIFG students had high parental press, high valuation of college, high academic integration, and high social integration. LIFG students in the sample also showed low psychological distress, with inversely high psychological well-being and high overall mental health scores. These results have implications for future research, policy, practice, and social work education.
CHAPTER 1: INTRODUCTION

Social work’s core values are social justice, competence, dignity and worth, integrity, importance of human relationships, and service (NASW, 2013). Therefore, social workers employed within higher education are obligated to uphold the profession’s core values, just as those in other settings are as well. This means that college-employed social work practitioners must be especially attuned to the complex, multifaceted needs of marginalized and vulnerable student populations in college settings. One population of particular concern for college-employed social workers is the low-income, first-generation (LIFG) student population.

LIFG College Students

As the national pressure to increase retention has intensified, many students are graduating from universities across the country and starting professional careers. In the college population, some students may be classified as either low-income, first-generation, or both. To clarify, low-income students are defined as having household incomes less than $25,000 a year (Engle & Tinto, 2007). First-generation status is defined as having neither parent ever earn a bachelor’s degree from a four-year university but does include parental education of “some college, postsecondary certificates, or associates degrees” (Lee & Muraskin, 2004, p. 8). Forty-two percent of the first-generation student population is also considered low-income (Engle & Tinto, 2007). The two classifications combined define a vulnerable population within colleges and universities – those students who are both low-income and first-generation students. LIFG students comprise 24 percent of the total US college population, representing a 60 percent increase since 1970 (Mortensen, 2007; U.S. Department of Education, 2012). This population has specific needs, and they experience substantial disparities in postsecondary education when compared with their peers.
As this population increased over the last 35 years, the gap in degree attainment between LIFG students and their peers has almost doubled. LIFG students are six times less likely to earn a four-year degree than their higher-income peers (Mortenson, 2007). This gap in degree attainment is based on many factors affecting LIFG students. Disparities are evident for this population in relation to their academic preparation, family income, parental level of education, educational expectations, parental involvement, remedial coursetaking, and postsecondary academic performance (Chen, 2005; Choy, 2001; Engle & Tinto, 2007; Thayer, 2000). These disparities influence their persistence in accessing college and their completion of a postsecondary education (Chen, 2005).

In the United States in 2010, the average income for salary workers ages 25 to 34 was approximately $25,000 for high school graduates versus $40,000 for those with a bachelor’s degree (National Center for Education Statistics [NCES], 2013). These data testify to the importance of a college degree in that higher education may level the income disparity between LIFG students and their respective peers. Aside from earning a degree, college enrollment also promotes exposure to different cultures and interpersonal growth for students as they transition into young adulthood (Grayson & Meilman, 2006). The disparity in degree attainment for LIFG students compared to their peers poses an interest for social workers because receiving a college education has various benefits, such as improving family income levels and promoting educational growth for vulnerable populations. LIFG students who attained a bachelor’s degree earned similar employment and salaries as their higher income, non-first generation peers (Nunez & Carroll, 1998).

Social workers employed in college settings address social justice issues by advocating for the needs of LIFG students entering college at economic or educational disadvantages.
Knowledgeable practice that employs cultural competence helps to support students’ needs in terms of utilizing resources for their retention at four-year universities (Engle & Tinto, 2007). Social workers’ existing engagement on university campuses presents an opportunity to provide quality and effective services to LIFG students that may address the educational gaps between these students and their peers. The need to examine LIFG college students’ experiences after admittance, particularly in relation to retention and degree attainment, can help social workers determine what programs are effectively helping this population and what needs have yet to be met for this population. Resiliency theory may be especially useful in understanding LIFG college students’ experiences.

**Resiliency Theory**

In the early 1970s, researchers began to realize the need for evaluation of human development and the study of how individuals were able to progress despite risky life circumstances and adversity (Masten, 2011). The focus of this research grew to encompass the study of resilience. Resilience is defined as the possession of strengths and benefits (i.e., protective factors) that help individuals overcome adversity (Zolkoski & Bullock, 2012). The study of resilience began with Manfred Bleuler’s research on the life of a 14 year-old female who raised her four young siblings and cared for their alcoholic father. Bleuler found that the woman’s risks were overcome by traits of strength and courage as she grew up to later marry and have two children of her own (Bleuler, 1984). In 1976, Lois Murphy continued the study of resilience when he observed coping patterns of infants living in pressure-filled environments (Zolkoski & Bullock, 2012). The ability for infants to flourish, despite their risk factors proved to further initiate the need for research on the concept of resilience.
Several early researchers in this area examined stress among people with schizophrenia, marital conflict impacting children, and emotional support among family members (Zolkoski & Bullock, 2012). Collectively, these studies supported the notion that individuals may overcome their stressors as a result of their strengths, rather than their deficits or risks. The ability for individuals to have positive outcomes, despite their exposure to major threats seen in their development, proposed an explanatory model to successful functioning and coping. The major models of resiliency research have since impacted interventions to encourage healthy adjustment and coping for individuals (Zolkoski & Bullock, 2012). For instance, life skills training programs in schools focus on enhancing social resources by identifying strengths, building skills for stress management, and helping students develop supportive social networks (Zolkoski & Bullock, 2012). This intervention draws on resiliency theory by focusing on developing resources and skills needed to overcome adverse situations.

Resiliency theory examines the harmful risks of negative developmental factors and seeks to uncover the processes that promote protective factors. Risks to an individual’s development may result in problem behaviors, mental distress, and poor health outcomes (Luthar, Sawyer, & Brown, 2006). Protective factors may buffer or ameliorate risks as they indicate the possession of the skills or resources needed to help a person cope with a challenging circumstance. Moreover, risk and protective factors are interrelated, acting as either strengths or limitations to coping and adversity. For example, factors can be both personal risks and protective factors in attributes such as intelligence, temperament, coping skills, efficacy, self-esteem, and emotional resiliency. Family, support networks, class, gender, race, and resources are also factors that influence an individual. The interplay of these factors impact life events when stressors occur and result in positive or negative adaptations (Corwin, 2002). The ability to
cope and grow can allow for successful outcomes even after individuals experience developmental challenges. The analysis of positive protective factors and negative risk factors can influence change strategies and inform intervention design.

This study builds upon resiliency theory to develop an initial understanding of the risk and protective factors for LIFG students. Risk and protective factors and resiliency theory can inform our understanding of LIFG college students by comparing this population to the overall general student population in terms of factors experienced both prior to college and while enrolled in college. Socioeconomic status, parental engagement, and academic preparation are areas in which LIFG students may differ from their higher income and non first-generation peers (Engle & Tinto, 2007). Engle and Tinto (2007) also identified seven “big” risks for LIFG students after numerous studies, which were found to directly influence the retention of LIFG students. As a result of these disparities, LIFG students are at an academic and cultural predisposition to drop out or transfer from a four-year university (Thayer, 2000). They are viewed as high-risk and seen to have less protective factors when entering college (Engle & Tinto, 2007). While previous research highlighted the disparities and risk factors seen in LIFG students, little is known about what protective factors maintain and promote their retention in higher education across cohorts. The use of a risk and protective factor framework, along with resiliency theory, may help illuminate the retention and success of LIFG college students.

Mental health problems are common developmental risks for the college population that should also be considered when studying LIFG students (Grayson & Meilman, 2006). Many students have mental health needs that accompany a number of other stressors that students typically experience while in college (e.g., unrealistic expectations, academic concerns, financial issues; McGrath, 2005). These needs are most evident in the recent increase in demand for
mental health services on college campuses (Watkins, Hunt, & Eisenberg, 2012). Early research indicated that LIFG students’ preexisting mental health needs often went unreported or undiagnosed because low-income families were less likely to seek mental health services (Grayson & Meilman, 2006). Additionally, mental health problems are even more concerning for the LIFG student population as college stressors exacerbate mental health problems, and thus lead to higher rates of dropout and course repetition (Gary, 2005).

This study will also examine LIFG students’ mental health needs. By assessing LIFG students’ mental health, this study will build upon what is already known about the mental health problems among college students, as well as build upon existing resilience research. The application of resiliency theory to understand the disparities that are evident for the LIFG student population will contribute to determining the ways in which individuals cope with barriers and overcome their risks to retention and degree attainment. No studies have examined LIFG students with a resiliency framework or emphasized what risk and protective factors can be appropriated to successfully engage LIFG students in the various benefits of a postsecondary education. There is a gap in the literature on the mental health needs as well as risk and protective factors among first-generation and low-income college students.

**Purpose of the Study**

The purpose of this study was to examine LIFG students’ adjustment to college by exploring risk and protective factors, as well as their mental health needs. In addition, it examined how the identified “big” risk factors related to mental health, academic/social integration, and academic performance. An understanding of these factors provides insight into the process of degree attainment and persistence of LIFG college students.
CHAPTER 2: REVIEW OF THE LITERATURE

In 2011, half of all school children in the United States were from low-income families and were eligible for free or reduced-price lunch from their schools, a proxy indicator of family poverty status (U.S. Department of Agriculture, 2012). These children represent the nation’s future college population derived from low-income families. The growing number of low-income students has drawn attention to the need to focus on various aspects of retention in college for this population, as LIFG students are known to be six times less likely to graduate as a result of their economic and educational predispositions (Mortenson, 2007). This disparity causes LIFG students to have higher rates of dropout and thus perpetuates a cycle of poverty and low educational attainment. Specifically, these students face disadvantages prior to enrollment in higher education and need additional assistance once enrolled in comparison to their peers (Thayer, 2000).

Despite these poor retention rates, a number of LIFG students succeed and graduate from college on time as well (Engle & Tinto, 2007). While they may face a number of risk factors, including mental health needs, they may also possess protective factors that promote their retention in higher education. An analysis of risk and protective factors, as well as the mental health needs, of LIFG students may aid in understanding the resiliency of this population, defined as their ability to overcome various barriers and graduate from college. Several researchers have begun to examine the experiences of LIFG students, particularly in relation to their nuanced service needs (Choy, 2001; Engle & Tinto, 2007).

Early Research

Existing research primarily utilizes secondary data analytic methods to examine large, national datasets and report on the trends of the LIFG student population in higher education.
Engle and Tinto (2007), Choy (2001), and Chen (2005) are among the major researchers in the field who have used datasets from the U.S. Department of Education’s National Center for Education Statistics (NCES, 2013) to study LIFG students. Descriptions of these major national datasets used by these authors will be described to emphasize the existing research on this population and how it has been obtained.

The Beginning Postsecondary Students Study (BPS) began in 1996 and concluded in 2001 (NCES, 2013). The BPS was a large, national data collection strategy that surveyed first time college students about their undergraduate experiences, persistence in school, transfer rates, and degree completion. Data collection took place from students’ first year in college through their sixth year. Analysis of undergraduate experiences, persistence, transfer rates, and degree completion for LIFG students showed that their chances of earning a degree increased if they enrolled in four-year institutions immediately following high school (Engle & Tinto, 2007) and that LIFG students lacked support, information, and money while enrolled in college (Engle & Tinto, 2007; Choy, 2001).

The Baccalaureate and Beyond Study (B&B) followed students while enrolled in college and after they completed their degrees (1994, 1997, 2003; NCES, 2013). Researchers surveyed students’ educational and employment experiences during college and after graduation using three follow-up surveys. Engle and Tinto (2007), as well as Choy (2001), reported on LIFG students’ postsecondary access, persistence, and attainment using this dataset. Both found risk factors often correlated with students’ background characteristics, as LIFG students had more risks than their higher income, non-first generation peers.

The National Postsecondary Student Aid Study (NPSAS), conducted during the 2003-2004 academic year, examined a nationally representative sample of students in postsecondary
education to assess how students and their families paid for postsecondary education (NCES, 2013). The NPSAS included general demographics, types of aid and amounts received, costs of attending college, combinations of work, study, and borrowing, and enrollment patterns (NCES, 2013). Using this dataset, Engle and Tinto (2007) found that LIFG students were more likely than their peers to be older, female, and racial/ethnic minority students. They also reported that LIFG students were more likely to have a disability, have dependent children, and be financially independent from their parents. Engle & Tinto (2007) also identified potential financial barriers that existed within the LIFG student population, such as taking out proportionately less financial aid than their peers.

Lastly, Chen (2005) used the National Education Longitudinal Study (NELS; NCES, 2013) and the Postsecondary Education Transcript Study (PETS; NCES, 2013) to examine students’ backgrounds, academic preparation and expectations, enrollment behaviors, and postsecondary coursetaking and performance. Chen (2005) reported on numerous risks to LIFG students including delayed enrollment, poor academic preparation, and part-time enrollment. These will be expanded upon further within this chapter. Each of these national datasets built upon one another to gather more information about students in higher education.

Collectively, these authors have used these various national datasets to provide insight into how LIFG students participate in higher education compared to other students. These studies, funded by the NCES, have helped to show that LIFG students with multiple risk factors are less likely to earn a bachelor’s degree (Engle & Tinto, 2007). Although these studies highlight several of the risk and protective factors experienced within the LIFG population, they also reveal the need for more specific research. This is particularly the case for understanding the mental health needs of this population. Likewise, these major studies do not utilize theory
extensively to understand the issues evident for LIFG students. Nevertheless, these studies were critical to developing an initial knowledge base and the findings described herein will guide the development of the proposed study. First, existing research on the nonacademic and academic factors that LIFG students experience prior to matriculation will be described. Then, existing research on the mental health needs will be discussed. Finally, the characteristics of the current college experiences of LIFG students enrolled in college will conclude this review of the literature.

**Factors Related to Matriculation Prior to College**

Matriculation, defined as entering into higher education, has been a powerful factor in bringing about positive outcomes for LIFG students. Gray (2005) stated that receiving a college education has become a prerequisite for entering the middle class of today’s society for students of all backgrounds. LIFG students, however, face risk and protective factors outside of the academic realm that influence their ability to further their education. These factors can be nonacademic and academic.

**Nonacademic factors**

Nonacademic factors related to matriculation have been defined as characteristics from a student’s background that impacted matriculation into higher education (Nyugen, Bibo, & Engle, 2012). Many of these factors are evident while students are still in high school and shape students’ ultimate enrollment and matriculation into postsecondary institutions. Prior research noted the importance of poverty, financial literacy, familial support, environment, and race in LIFG students’ adolescent lives (Bozick, 2007; Nguyen, Bibo, & Engle, 2012; Roderick, Coca, & Nagaoka, 2011). Disadvantages in these areas set LIFG students apart from their peers, posing potential barriers to their enrollment in higher education.
Poverty. Socioeconomic status (SES) is measured by the combination of income, education, and occupation in determining an individual’s ability to access resources (American Psychological Association [APA], 2013). LIFG students are, by definition, low-income and their low SES puts them at an increased risk for low educational attainment, poverty, and poor health (APA, 2013). Being a low-income adolescent is directly related to lower educational attainment levels as these students are typically enrolled in schools that are high-poverty and poor performing (APA, 2013). More specifically, poorly performing high schools impact the LIFG student population because these students receive the least support, assistance, and information related to college (Gray, 2005). These schools exist in communities that are under-resourced and have high dropout rates, thus maintaining low SES in the community (APA, 2013).

Engle and Tinto (2007) found that LIFG students’ inability to access a rigorous high school curriculum, as a result of attending a low-performing high school, contributed to the educational disparities that they experienced between high school and college. Moreover, Nguyen, Bibo, and Engle (2012) found that LIFG participants attended high schools that had less financial resources, lower expectations, and were often taught less frequently than the high schools their peers attended. These disparities influenced matriculation in college for LIFG students and affected their academic skills as well. Low-performing high schools offered less academic guidance and support for LIFG students and created a high risk for drop out prior to college (Nguyen, Bibo, & Engle, 2012). Universities that did improve their minority graduation rates provided LIFG students with financial resources to combat their known risks during the application process (Nguyen, Bibo, & Engle, 2012). Poverty, therefore, is a risk to matriculation as it creates both academic and environmental barriers for high school students who may want to pursue a degree in higher education to better their educational and occupational positions.
Financial illiteracy. Financial illiteracy, defined as lacking the ability to understand finances and money (Lusardi & Mitchell, 2011), is another barrier to matriculation in post-secondary institutions for LIFG students. LIFG students were less knowledgeable about financial aid and, thus, less likely to apply for aid in comparison to their higher income, non-first generation peers (Engle & Tinto, 2007). Financial literacy, rather than illiteracy, may be a protective factor if students are educated about available aid and know how to obtain it prior to college. Roderick, Coca, and Nagaoka (2011) used the Chicago School Research Senior Exit Surveys and examined indicators of the “college-going climate” (p. 188) associated with LIFG students’ application to, enrollment in, and choice of four-year degree. The surveys measured financial literacy based on the number of completed Free Application for Federal Student Aid (FAFSA) applications accompanied by students’ college applications (Roderick, Coca, & Nagaoka, 2011). Completion of the FAFSA indicated that students had the basis of financial literacy and understood the process of obtaining student aid. These students were then found more likely to apply and enroll at four-year universities. Their study also found that LIFG seniors who did not complete FAFSA applications believed that college was too expensive and that college would impose a financial burden to themselves or to their families (Roderick, Coca, & Nagaoka, 2011).

Other researchers found similar results, noting that obtaining financial aid and understanding the process of aid were significant factors in LIFG students’ postsecondary education decision-making processes (Bozick, 2007; Nunez & Carroll, 1998). If students knew how to fill out a FAFSA and were knowledgeable about Pell grants, they had increased matriculation to college (Bozick, 2007; Nunez & Carroll, 1998). A lack of knowledge about these programs resulted in students not applying for aid, which posed a risk to matriculation.
(Bozick, 2007). Financial literacy, therefore, defined as knowledge and completion of the FASFA, may promote matriculation to college for LIFG students.

**Parental press and valuation of high school.** Lack of family support is a barrier for LIFG students prior to matriculation in postsecondary institutions. Roderick, Coca, and Nagaoka (2011) used survey data from high school seniors’ exit questionnaires and found that 71 percent of students from low-income backgrounds planned to attend a four-year college the following fall; yet, 59 percent applied and only 41 percent enrolled. The most significant factors related to the ultimate enrollment of students were parental press and valuation of high school. Parental press was defined as a student having a parent who supported his or her decision to attend and enroll in college. Valuation of high school was defined as a student who valued his or her education and academic achievement in high school (Roderick, Coca, & Nagaoka, 2011). Researchers found a positive relationship among parental press, valuation of high school, and application/enrollment in a four-year college among LIFG students (Roderick, Coca, & Nagaoka, 2011). As such, parental press and valuation of high school served as protective factors for LIFG youth as they looked toward college enrollment. On the other hand, these factors may pose as barriers to LIFG students in high school if parental press and valuation of high school are low. Analysis of parental press and valuation of high school may prove to be a protective factor for LIFG students already enrolled in college.

**Environment.** Just as parental support is important for a LIFG student, a student’s environment is also important when evaluating barriers to matriculation. The environmental context prior to matriculation for LIFG students may differ significantly in comparison to their peers. The environment of LIFG students has characteristically been found to consist of low-income neighborhoods and to be comprised of families with low social capital (APA, 2013).
Engle & Tinto (2007) found that LIFG students had fewer familial and community resources than their higher income peers. LIFG students also were more likely to live in single parent households, which limited their financial and social support when accessing resources about college (Engle & Tinto, 2007). They were also more likely to live with relatives prior to college, yet little is known about how this might impact matriculation for LIFG students. The existing research, however, is clear that a lack of support and a lack of family resources might be risks to matriculation for LIFG students (Engle & Tinto, 2007).

Nunez and Carroll (1998) also found that LIFG students had greater responsibilities in their homes because their families often had lower levels of financial support. LIFG students were required to work more hours in high school than their higher income peers to help with the family finances (Nunez & Carroll, 1998). In addition, the greater the number of hours spent working in high school for LIFG students correlated with lower levels of academic success. Therefore, the social environment of LIFG students can be a risk to matriculation as they may experience less support and more responsibility for their families. However, if their home environments support students’ high school education and engagement in activities that enhance their knowledge of postsecondary education, then their home environments may promote matriculation to college.

**Race.** Race might also impact matriculation in higher education, as stigmas can exist within college environments about minority LIFG students attending college. Gray (2005) noted, through observation of a public, four-year university with high minority enrollment, that false perceptions of LIFG students existed among faculty and administration at four-year universities. Faculty and administration believed that LIFG students may have emotional, educational, and psychological challenges as a result of their racial backgrounds (Gray, 2005). The researcher also
noted that these stigmas might hinder LIFG students’ consideration of a postsecondary education by degrading their confidence in their ability to succeed in college. Roderick, Coca, and Nagaoka’s (2011) research supported these notions as well. They found that a lack of university support and recruitment for minority students hindered the perception of support in college for LIFG students, especially among African American minority students (Roderick, Coca, & Nagaoka, 2011).

In sum, these factors likely impact LIFG students and their matriculation into higher education. Stigmas about students’ racial backgrounds, unequal methods of recruitment, and a lack of university support must be addressed prior to college to increase enrollment and retention for LIFG students in postsecondary education. In addition to these factors, LIFG students’ mental health needs also may pose a threat to their success in college.

**Academic factors**

Academic factors related to matriculation prior to college have been defined as academic variables needed for enrollment to college that are known to impact a student’s performance in college. Advanced high school mathematics, high school GPA, and college preparatory test scores were among the academic factors that occurred prior to college and were found to affect matriculation (Chen, 2005; Choy, 2001).

**Level of high school mathematics.** The academic characteristics of LIFG students are important to evaluate when understanding their educational risks to retention in high school. Choy (2001) found that the level of a student’s parental education positively correlated with his or her enrollment in advanced math classes in high school. Higher levels of high school mathematics proved to show greater enrollment in four-year institutions. Since LIFG students were found to take less advanced high school mathematics, their enrollment numbers were lower
and showed they enrolled at a rate of 30 percent less than their peers found to have taken higher levels of high school math (Choy, 2001).

Even LIFG students who had the opportunity to take one advanced math course in high school enrolled at a rate of 64 percent compared to 85 percent of their peers who had at least one parent with a bachelor’s degree (Choy, 2001). These data may reflect the confounding factors of the LIFG student population in relation to their low-performing high schools, lack of adequate academic preparation, and lack of parental press for college. The level of high school mathematics for LIFG students poses as a risk to retention as the fewer advanced math courses taken in high school, the less likely students were to enroll in higher education (Choy, 2001). High school math levels act as an interrelated risk along with high school grade point averages (GPA) and college entrance exam scores.

**High school GPA.** Just as the level of mathematics has been evaluated for LIFG students, lower GPAs received in high school display the academic disadvantage of this population prior to college. Chen (2005) found that high school GPAs for LIFG students were lower than those of their peers. Chen (2005) also found that high school grade point averages of LIFG students remained lower throughout the student’s academic performances in college in relation to their peers. Chen further reported that LIFG students averaged a 2.6 GPA in college, compared to a 2.9 achieved by their peers (based on a four-point scale). These data emphasize that the academic preparation LIFG students received in high school later affected their academic grade point averages once enrolled in college. Upon entering college, a student’s academic preparation can be determined as a risk to his or her ability to perform and succeed. The gap in achievement between LIFG students and their peers ultimately influences retention. Low college GPAs for LIFG students decreased the likelihood of the students obtaining a bachelor’s degree,
while low GPAs increased the students’ likelihood of dropout (Chen, 2005). Test scores impact LIFG students similarly.

**Test scores.** LIFG students have been found to score lower on college preparatory exams than their higher income, non-first generation peers (Chen, 2005; Choy, 2001; Engle & Tinto, 2007). Choy (2001) found that only 55 percent of LIFG students took the ACT or SAT, while 74 percent of their peers took these college preparatory exams. Because LIFG students were less likely to take the ACT or SAT, they were also found less likely to enroll in four-year institutions (Choy, 2001). Studies also indicated that if LIFG students did take the ACT or SAT, they were more likely to score in the lowest quartile of the exam (Chen, 2005; Choy, 2001). Additionally, low test scores, similar to low high school GPAs, were positively related to poor performance in college coursework resulting in high rates of drop out (Chen, 2005). This indicates that college preparatory exams are an area of increased risk for LIFG students affecting both enrollment and performance at four-year universities (Chen, 2005). High college preparatory test scores, however, is a protective factor for LIFG students as they positively correlate with academic success in college. The mental health needs of LIFG college students will be explained next.

**Mental Health Needs**

As college students become increasingly diverse, colleges are forced to consider the mental health needs of their students (Choy, 2001). In fact, directors of mental health services on college campuses have reported an increase in severe psychological problems among their overall college clientele (Gallagher, Gill, & Sysko, 2000). Recent national surveys of college mental health service directors indicated that 94 percent of those surveyed reported a higher number of students already taking psychiatric medication, as well as higher rates of hospitalization and student suicides, than seen in previous years (Gallagher, Gill, and Sysko,
Levine and Cureton (1998) surveyed students nationally and found that many entered college more overwhelmed than in previous years and presented higher rates of depression than previous generations. More recent reports from student affairs administrators across the country supported this research noting that they also saw an increase in mental health issues and therefore felt they spend more time dealing with highly distressed students than seen in previous cohorts (Kitzrow, 2003).

Similar mental health needs are evident among LIFG students as well, particularly for those also identifying as members of racial or ethnic minority groups (Patel, Flisher, Hetrick, & McGorry, 2007). The relationship between poverty and stress has been stated as a risk to perpetuating the cycle of poverty. People with low SES often have greater levels of stress due to monetary difficulties, unhealthy or dangerous living situations, and lower educational attainment (APA, 2013). Increased stress frequently prevents a majority of this population from overcoming their barriers. Low-income populations also tend to seek out mental health services less frequently due to both financial strain and mental health stigmas that exist in their communities (Patel et al., 2007). The untreated mental health needs of this population and increased levels of stress can place LIFG students at particularly high risk for mental health problems.

The increase in LIFG students in college, coupled with increasing mental health needs among students, may pose critical implications for students’ academic performance, retention, and overall well-being. An improved understanding of mental health needs will help guide retention efforts in higher education for these students and, potentially, help social workers meet the needs of these students to close the educational gap. In addition, it is also important to develop our understanding of the other barriers LIFG students may face in college.
Risk and Resilience in College

In order to address these disparities, research is needed to determine what promotes the graduation of LIFG students who enroll in higher education. Resilience has become important when evaluating LIFG students as they face many disparities in higher education that can be interpreted as risk or protective factors to retention. Resiliency theory illuminates the ways in which individuals cope with barriers in their life and overcome these risks to success and overall well-being (Zolkoski & Bullock, 2012). Assessment of interrelated risk and protective factors can determine the resiliency of an individual.

The LIFG student population has a number of significant risk factors across a variety of domains that existed in their lives prior to entering college and that exist during their post-secondary education. Likewise, LIFG students may experience a variety of protective factors that buffer these risks. Together, these factors explain how an individual reaches a certain outcome, such as drop out or graduation from college. These factors may be organized into four categories to clarify the ways in which risk and resilience operate for LIFG students while they are enrolled in college: 1) demographic factors; 2) academic characteristics; 3) college experience; and, 4) nonacademic factors (Chen, 2005; Choy, 2001; Engle & Tinto, 2007). Further, assessing (and ultimately addressing) their mental health needs also may help social workers provide necessary support services on college campuses. In turn, an improved understanding of these components may be the key to promoting resilience in this population. The primary categories of risk and protective factors will be described next.

**Demographics**

The demographic characteristics of LIFG students are important to consider when identifying risk and protective factors. The current number of LIFG students in the United States
totals approximately 4.5 million students (The Pell Institute, 2012). Existing studies (Chen, 2005; Engle & Tinto, 2007) found that the majority (approximately 60%) of LIFG students tend to be female, similar to the current demographic ratio of women enrolled in higher education on a national level (56%; U.S. Department of Education, 2012). The female majority of college students, and LIFG female students, may be historically related to the growing number of women entering college in the United States. Chen (2005) found, however, that male LIFG students were more at risk to drop out than their female LIFG peers. LIFG women were found more likely to be retained indicating female gender can be determined as a protective factor in this population.

Similar to the factors that occur prior to matriculation, race/ethnicity is important to consider while students are in college as well. Engle and Tinto (2007) found that 54 percent of LIFG students identified as racial/ethnic minorities, while only 26 percent of their higher income, non-first generation peers identified as racial/ethnic minorities. Therefore, the LIFG student population consisted of a disproportionate amount of minority students than the general student population. Further, students of Hispanic and African American descent are most at risk of school failure within the LIFG population (Chen, 2005). Likewise, 19 percent of LIFG students were non-native English speaking students, compared to only 9 percent of their higher income, non-first generation peers (Engle & Tinto, 2007). Being a non-native English speaker was found to be a risk to degree attainment in higher education for LIFG students (Engle & Tinto, 2007).

Age may be another demographic factor related to the risk and resilience of LIFG students. Engle and Tinto (2007) found that LIFG students were more likely to be an average of two years older than their higher income peers upon enrollment. In addition to gender, race/ethnicity, and age, LIFG students were also more likely to live with relatives off-campus,
receive financial aid, work full-time, and take longer to graduate than their peers (Choy, 2001; Thayer, 2000). All of these characteristics display the known demographics of LIFG students. Their academic and nonacademic characteristics of the current college experience will be described next.

**Characteristics of the Current College Experience**

Similar to risk and protective factors for students that occur prior to matriculation, characteristics of students’ current college experiences should be examined among LIFG students. These include academic and nonacademic characteristics of the students at their current universities.

**Academic characteristics**

Previous studies viewed academic characteristics of the current college experience through coursetaking and performance, as well as enrollment behavior (Engle & Tinto, 2007). These characteristics are important to consider among this population.

**Performance.** In addition to lower GPAs and test scores, LIFG students are more likely to require remedial classes once enrolled in college. According to Chen (2005), over students’ college careers, 55 percent of LIFG students were placed in remedial classes compared to 27 percent of their peers. LIFG students entered college with a higher need for enrollment in remedial coursetaking due to their lack of academic preparation for college, and further struggled in remedial courses delaying their degree attainment (Chen, 2005).

LIFG students also withdrew and repeated courses more frequently than their peers, which delayed the completion of degree credits for LIFG students, harming both their financial resources and individual motivation levels (Chen, 2005; Engle & Tinto, 2007). In short, both remedial and withdrawn coursetaking characteristics might be important risks to retention for
LIFG students, while fewer remedial courses and remaining enrolled in courses might be protective factors.

**Enrollment behavior.** The enrollment behaviors of LIFG students affect their academic performance. Specific enrollment behaviors have been found to increase LIFG students’ likelihood of retention within 4-year universities. Chen (2005) found that when LIFG students began their postsecondary education at 4-year institutions, rather than 2-year institutions, they progressed at higher rates. Chen further found that students were more likely to persist (remain enrolled in college) if they had continuity of enrollment, meaning they never withdrew from the university for any length of time. LIFG students who always maintained their full-time status were approximately 25 percent more likely to persist than LIFG students who enrolled part-time or engaged at any time in part-time coursetaking (Chen, 2005). Discontinuous enrollment and having more than one year between high school graduation and college decreased LIFG students’ persistence in postsecondary education and increased their risk of dropout (Chen, 2005; Engle & Tinto, 2007). Therefore, immediate enrollment after high school, continuous enrollment, and beginning college at a four-year university proved to be protective factors for the retention of LIFG students.

**Nonacademic characteristics**

LIFG students differ from their peers prior to enrollment and while enrolled in relation to their experiences of college life (i.e., their college experience). College experience factors include activities such as mentorship, tutoring, academic advising, academic integration, and social integration. If LIFG students actively participate in these activities, or in activities that build a sense of community within their universities, then they are more likely to be retained (Engle & Tinto, 2007; Tinto, 2003). The following college experience factors are likely
Mentorship. Mentorship has been found to be a protective factor in the lives of youth resulting in positive academic, behavioral, and emotional outcomes. The use of mentors fosters trust, empathy, and mutuality in youth development (Leyton-Armakan et al., 2012). Leyton-Armakan et al. (2012) found, through analysis of a school-based college mentoring program offered to all university students, that traditional college students who participated in the program tended to have higher rates of knowledge on cultural capital and professor expectations than low-income students. Since LIFG students have no family members to model or prepare them for the adjustment process and expectations of college professors, mentorship may be essential for filling these needs that their peers may already possess. Leyton-Armakan et al. (2012) further observed improvements in academic self-worth when low-income students engaged in mentoring programs. In their study, mentorship guided students to achieve a better understanding of the university’s expectations and a point of reference for questions and encouragement during their transition to college. Others found that peer mentoring helped LIFG students gain information about the importance of faculty expectations and the importance of understanding a syllabus. Students also learned about the importance of communication with professors, time management and budgeting, and the use of campus resources (Collier & David,
Gaining knowledge and support from peer mentors proved to be a protective factor in the college experiences of LIFG students.

**Tutoring.** Tutoring may also be a factor related to LIFG students’ resilience. Data from national longitudinal studies found that supplemental instruction, specifically for introductory courses, facilitated positive academic outcomes for LIFG students in college (Engle & Tinto, 2007). In addition, Blankenship (2012) found that risks to retention were increased when LIFG students were unable to gain academic assistance in their introductory courses. Tutoring fosters protective academic factors for LIFG students and it also supports academic integration within the university. Tutoring, therefore, may be a protective factor if utilized by LIFG students in both providing academic support and promoting academic integration.

**Academic advising.** Academic advising also is beneficial for LIFG students as they navigate the academic climate of their universities. Escobedo (2007) conducted a 3-year study with LIFG students in community college and found that positive effects for students were evident when intensive academic advising took place. Intensive academic advising included tracking students’ progress and educating them about available resources along the way. Escobedo further stated that specific types of services aided LIFG student retention, such as those that connected students with university staff members who provided guidance toward coursetaking, communication with their professors, and an orientation to campus. Structured advising appointments helped students to realize personal and academic goals, along with aiding in referrals to tutoring, personal counseling, and other campus resources (Escobedo, 2007). Academic advising for the LIFG student population has positive effects on retention and persistence acting as a protective factor while also supporting academic and social integration at universities.
**Academic integration.** A student’s academic involvement impacts his or her retention in higher education. Tinto (2003) synthesized numerous national studies and found that the more LIFG students were able to engage with faculty and other students, the more likely they were to become valued members of the institution and feel their four-year stay was justified. Therefore, academic integration can be defined as the level of engagement a student has with faculty and other students. The experience of relating to peers and faculty had a stronger effect on students’ persistence if it took place in the first year of enrollment in college (Tinto, 2003). Specifically, involvement in the classroom fostered communities that supported learning, registration in more courses, and “study teams” (Tinto, 2003, p.170). As such, the ability for students to feel support and feel a sense of community within the academic framework of their universities could serve as a protective factor for LIFG students.

**Social integration.** Just as academic integration is important to retention, Tinto (2003) found that social integration plays a crucial role for LIFG students’ experiences while in college. Social integration can be defined as the level of engagement a student has with his or her peers through campus involvement and extracurricular activities. Since many LIFG students attend college part-time or work full-time, they are at increased risk for minimal social involvement in college. Working full-time or attending school part-time harmed students’ abilities to connect with others and gain the same experiences as their peers while enrolled (Tinto, 2003). Many racial and ethnic minority students reported feeling isolated from their peers and campus environment as a result of barriers such as full-time work, living off campus, or attending college part-time (Engle & Tinto, 2007). This is particularly important for LIFG students because they tend to experience less time participating in extracurricular activities than their peers, which had have negative effects on their retention (Tinto, 2003).
Filkins and Doyle (2002) studied the National Survey of Student Engagement (NSSE) to assess cognitive and affective development, as well as peer and student interaction for low-income college students. Their study found that low-income students waited longer than their peers to become involved in social activities on campus. This happened as a result of students prioritizing their academic needs before their social needs. Although this focus on academics may seem practical for the LIFG population, research found that LIFG students had greater benefits from participation in campus activities than their peers (Filkins & Doyle, 2002). Filkins and Doyle (2002) also found positive correlations between peer and student interaction and positive educational practices (e.g., participation in class presentations, discussions with faculty members, and positive cognitive and affective developmental growth). Social integration therefore, may be an important protective factor in relation to retention and persistence in higher education. A lack of social integration could pose as a risk as students do not interact with their peers and hence decrease their academic integration as well.

**Work.** The number of hours spent working when enrolled in college has been found to impact LIFG students. Bozick (2007) used data from the Beginning Postsecondary Student Longitudinal Study and found that LIFG students tended to enroll in higher education while working full-time (20 hours or more) and continue full-time work throughout their college careers. Bozick’s findings indicated that LIFG students who worked full-time were less likely to earn a degree than their peers. In addition, LIFG students who worked also had lower grades and lower academic expectations than their peers who did not work in college (Bozick, 2007). Working-full time may therefore be a risk to the retention of LIFG students acting as an interrelated risk factor affecting academic expectations and achievement.
Research conducted by Engle and Tinto (2007) supported the notion that full-time work correlated with lower academic achievement, and also added that the risk of full-time work positively correlated with part-time enrollment. Part-time enrollment is a known risk to earning a bachelor’s degree within the LIFG population (Engle & Tinto, 2007). Working full-time therefore affected LIFG students’ grades, expectations, and enrollment behavior while in college and may be a risk to the retention of LIFG students; however, if students do not work they may have more time to devote to their schoolwork and time to interact with faculty members and peers; protective factors for this population of students (Bozick, 2007; Engle & Tinto, 2007). Similar to work, housing can impact LIFG students as well.

**Housing.** Living arrangements also may be a strong factor in determining the effects of the transition to college for LIFG students. Bozick (2007) assessed living arrangements for students and found that living at home was a strategy LIFG students used to reduce financial needs. Other students, however, chose to leave home for the first time and live in dorms or residence halls during college. Bozick’s results indicated that living on campus exposed college students to living skills, accountability, and exposure to students of different racial and ethnic backgrounds. Since LIFG students have been found to benefit from social relationships during their first year of enrollment in college, students who lived on campus experienced more frequent contact with faculty members and their peers, and had easier access to campus resources (Bozick, 2007).

LIFG students who lived on campus were less likely to drop out than their LIFG peers who did not live on campus (Bozick, 2007). On-campus housing proved to be a protective factor for LIFG students, while living at home increased the risk of drop out for this population (Bozick, 2007; Engle & Tinto, 2007). Living arrangements, therefore, could be related to social
integration and access to resources when determining student’s risk or protection in relation to retention. Housing could act as an interrelated protective factor to promote the retention of this population of students.

**Financial aid.** LIFG students lack the financial support that their peers receive in higher education as a result of their lower family income levels. It is known that traditional college students from higher income families receive more financial assistance from their parents (Engle & Tinto, 2007). Therefore, low-income students typically engage in different means of funding college than their higher income peers. Many LIFG students use full-time work and living at home to assist in the financial liabilities of college, despite these being interrelated risks to the retention of the population. Bozick (2007) speculated, after reviewing financial aid disparities between LIFG students and their peers, that LIFG students take out less money in loans while in college because they place less value on their education as an investment in their futures. Bozick additionally suggested that the economic obligation to pay back loans after college deterred LIFG students from seeking government-funded financial aid while in school.

Engle and Tinto (2007) reported that if LIFG students did receive aid, then they received just slightly more than their higher income peers despite a much greater need. Students who received aid tended to work less, which may also be a protective factor to students’ retention (Engle & Tinto, 2007). Therefore, not receiving aid can be a risk factor to the LIFG student population’s retention. Moreover, those who did not receive aid were more likely to work-full time and live at home, which may be risks to retention for this population (Engle & Tinto, 2007). Receiving no aid also negatively impacted LIFG students academically as well (Engle & Tinto, 2007). Financial aid is important to evaluate when assessing the risks and protective factors for LIFG students.
**Parental press for college and valuation of college.** Similar to parental press and valuation of high school, parental press and valuation of college are important variables to consider for students in college. Since the adjustment to college is often intimidating for LIFG students, particularly because the students do not have family members to model college-going behavior, questions of how to register for classes, what classes to take, and what is an appropriate course load overwhelm many LIFG students (Blankenship, 2010). Along with decreased exposure to modeling, LIFG students often reported facing discouragement from family members because they were furthering their education and that opportunity did not exist for their parents after high school (Blankenship, 2010). As a result, it can be inferred that LIFG students may lack family support once enrolled in college. Stripplin (1999), however, found that family support proved to be a positive aspect associated in coping with academic and emotional difficulties experienced while in college. Having academic and emotional support, therefore, is a protective factor for LIFG students.

Roderick et al. (2011) reported that parental press and valuation of high school supported the matriculation of LIFG students from high school to college. The same constructs may be important for LIFG students as they are in college. No existing studies, however, examine these variables within the LIFG college population. These constructs should be examined for students enrolled in college to determine family and individual motivation levels for college retention. Influences associated with parental press and valuation of college may support either protective factors LIFG students may possess, or determine risks with ensuing consequences to retention.

**Utilization of campus resources.** Another important factor to consider in relation to LIFG students is their utilization of available campus resources. This is especially relevant as federal policy initiatives recently increased funding for a number of student support programs
targeting this population. For instance, federal TRIO programs such as McNair, Upward Bound, and Student Support Services are all designed for students from disadvantaged backgrounds and assist these students in entering higher education (U.S. Department of Education, 2013). Specifically, Student Support Services aims to monitor student progress by providing tutoring, classroom support, personal counseling, and social activities to retain as many at-risk LIFG students as possible (Lee & Muraskin, 2004). The program’s counseling efforts support knowledge on financial literacy, academic integration, social engagement, and education on the benefits of a four-year degree. These programs have proven effective for improving retention rates for LIFG students (Lee & Muraskin, 2004). Therefore, participation in these federally funded programs are protective for LIFG students as they address and assist with overcoming the known risks of this population.

Other resources, such as mental health counseling, multicultural affairs, career services, financial aid, and the student health center may be beneficial for LIFG students. There is not enough research in the field of retention to indicate that utilization of resources can influence LIFG students; however, this study will examine these resources based on what is known about their benefits within the college population. Mental health counseling may be especially important as many LIFG students have risks of exacerbated stress and adjustment problems in college (Gallagher, Gill, & Sysko, 2000). Similarly, the student health center can treat students for minimum to no cost at all when they become ill in college, as fees for this service are included in tuition for every full-time student (LSU Student Health Center, 2013). University departments of multicultural affairs can assist LIFG student by addressing the needs of racial and ethnic minority groups, assisting them in becoming involved on campus and promoting ways to make college campuses more diverse and culturally accepting (LSU Office of Multicultural
Affairs, 2013). All of these campus resources provide LIFG students with services that may be protective by giving them the resources needed to ameliorate their risks.

**“Big” Risk Factors**

Engle and Tinto (2007) found that the more risk factors a student possesses, the less likely they are to earn a bachelor’s degree. Their research specifically determined that seven risk factors heightened students’ risk of dropping out of college. These seven risks included: (1) delaying entry into higher education; (2) attending college part-time; (3) working full-time (i.e., 20 hours or more per week); (4) being financially independent; (5) having dependent children; (6) being a single parent; and, (7) having a GED (Engle & Tinto, 2007). These risk factors were consistently found to be interrelated and to positively correlate with students’ background characteristics, such as being a minority student or being low-income. Data from the NCES (2013) showed that students with two or more of the aforementioned risk factors were three times less likely to graduate than students within the same population who had no risk factors whatsoever. Students who had three or more risk factors were 76 percent less likely to graduate in four to five years. In sum, students who had a greater number of these “big” factors were at substantially greater risk of dropout (Engle & Tinto, 2007). Therefore, the number of risk factors a student possesses can put them at risk for not earning a degree and may suggest a tipping point in retention data.

**Resiliency**

Addressing risk factors and increasing protective factors is the key to promoting resilience. Risks exist in various areas of higher education for the LIFG student population. Nonacademic barriers to matriculation include several risk or protective factors to be assessed for students including: socioeconomic status, financial literacy, parental press, valuation of high
school, environment, and race. These factors can either guide LIFG students toward matriculation to college, or exist as barriers to enrollment. High mental health needs can also harm the retention of LIFG students due to the fact that if mental health needs existed, they acted as risk factors to retention.

Demographic characteristics including gender, race, family income, and generational status also act as protective or risk factors for LIFG students. These factors have been found through evaluation of previous LIFG students in college and highlight the growing field of research assessing these students’ risks in higher education. Academic preparation, college experiences, and nonacademic factors affect student’s abilities to persist and graduate. These factors are interrelated in determining the risks or protection of retention for LIFG students. Each of these categories of risk and protective factors further identify specific variables that act in interconnected ways to promote resilience or create risks for students in higher education.

While risks are the focus of reasons LIFG students fail to graduate from college, strengths of this population are made visible when LIFG students actively utilize protective factors that challenge their risks. Many LIFG students are able to succeed by participating in support services on campus or participating in summer bridge programs to better prepare themselves for the adjustment of attending college. The support of their families, engagement in social or academic integration, and utilization of financial aid opportunities may have a positive impact on LIFG students and aid in overcoming potential barriers to degree attainment. Each of the factors may be protective, acting as interventions that facilitate growth and assist in closing the educational gap taking place between LIFG students and their peers. Several theories have been suggested to support the resiliency of the LIFG student population.
Theories that support the resilience of LIFG students promote the allocation of resources needed to impact potential risks for students and create programs that influence positive outcomes. Resources such as first year bridge programs, study skills courses, reprogramming of orientation sessions, and designated counselors for LIFG students are examples of models that identify risks and promote retention for this population (The Pell Institute, 2012). These programs support the premise of resiliency theory as they provide skills and resources needed to overcome barriers. The proposed study and gaps within the literature will be described next.

Gaps in the Literature and Proposed Study

Research on the retention of LIFG students is highly applicable to the current status of higher education in the United States. The bulk of retention research focuses on what predictive factors cause students to drop out of four-year universities (Chen, 2005). Little research, however, focuses on why and how students continue to persist to graduation while they are enrolled at four-year universities. Studies on LIFG students accurately predict or identify risk factors and stressors students have both during and prior to college but fail to assess the protective factors that enable them to move toward degree attainment (Grayson & Meilman, 2006).

Protective factors that affect college retention may include individual variables such as self-efficacy and self-esteem (Zimmerman & Schunk, 2013); while protective services such as financial literacy training, academic counseling, peer mentoring, and tutoring may promote retention as well (Engle & Tinto, 2007). Specifically, however, little is known about the impact of when LIFG students experience these protective factors and if colleges are providing them with the opportunities to overcome their disparities in relation to their non-LIFG peers. It also is unclear when students may experience difficulty during their time in college. For instance,
students may have a number of protective factors but only access available resources and coping techniques during the early years of their college education. Students may also lose the protection that some factors offer, such as parental support, self-esteem, and financial aid, while they are enrolled in college. In turn, this may impact their ability to remain well-adjusted college students. In order to understand the risks and stressors that exist for LIFG students, there is a need to examine the timing of risk and protective factors across different academic cohorts. The timing of students’ engagement in these activities should be evaluated to determine the ability for these variables to increase the probability of retention at a cohort level.

Protective factors should be considered in relation to evaluating students’ mental health needs. It is important to not only take into account the adjustment stressors of this population, also evaluate their need for mental health resources as a potential risk. Understanding the mental health needs of LIFG students can shed light on risk and protective factors and their impact on retention. Together, examining students’ mental health needs, adjustment stressors, and protective factors may aid in understanding the resiliency of this population as it will show the factors students’ engage in to overcome their disparities and graduate from college. Assessment of these multiple factors will contribute to the growing field of resiliency research. In addition, evaluation of the “big” risk factors addressed by Engle and Tinto (2007) can aid in identifying LIFG students who may be at the greatest risk of dropout within the population. These “big” risks may also influence their mental health needs, academic integration, social integration, and academic performance while in college. Assessing the effect of these risks among LIFG students will add to existing data on retention.
Purpose of the Study

The purpose of this study is to examine LIFG students’ adjustment to college by exploring risk and protective factors, as well as their mental health needs. An understanding of these factors will provide insight into the process of degree attainment and persistence of LIFG college students. The following research questions will guide this study:

1. To what extent are the following risk and protective factors evident among the LIFG student population at LSU?
   (a) demographic factors,
   (b) factors related to matriculation, and
   (c) characteristics of the current college experience;

2. What are the mental health needs of LIFG students?; and,

3. How do the identified “big” risk factors relate to mental health, academic/social integration, and academic performance?
CHAPTER 3: METHODOLOGY

This study utilized a cross-sectional survey research design to examine the risk and protective factors of LIFG students at LSU. Additionally, the study examined the mental health needs of these students. A detailed description of the methods is described in this chapter. All procedures for this study were determined exempt from the review of the LSU Institutional Review Board.

Context

LSU is the flagship university within the Louisiana State University System. The total undergraduate student enrollment on the Baton Rouge campus is 29,549 students, and approximately 30 percent of students are either low-income, first-generation, or both (LSU Student Support Services, 2013). Aligning with other post-secondary institutions, LSU aims to retain LIFG students. Student Support Services (SSS) is one program at LSU that is targeted to address the needs of this population. Specifically, Student Support Services targets LIFG students and provides them with academic counseling, tutoring, social activities, mentoring, and academic workshops. The Student Support Services program at LSU assists approximately 280 LIFG or disabled students enrolled at the University (Student Support Services, 2013). This study built upon the efforts of this program to examine this population further.

Data Collection Procedures

Participants were recruited using two strategies: (1) email recruitment and an online survey; and, (2) in-person data collection at the Student Support Services freshman class and program workshops. Online surveys had several benefits for this study, as well as limitations to their use. Dillman, Smyth, and Christian (2009) found the benefits of Internet-based surveys to include easy accessibility by large numbers of people, low costs of distribution, and expedited
returns on survey results. Barriers, however, also exist for Internet-based surveys because of their widespread use. Dillman et al. (2009) stated that Internet-based surveys often produce low response rates and a fear of a break in confidentiality due to use of the Internet. Risks inhibiting Internet-based survey research reaching respondents included: the survey becoming spam, technical errors, or out-of-date software (Dillman et al., 2009). The researcher in the current study used an online survey format due to limited funds and the time-sensitive nature of the study. This format, however, limited data collection efforts. Thus, in-person data collection was also completed within the time-limited frame.

**Online procedures**

The online survey used in this research was distributed to students’ LSU email accounts after obtaining permission from the director of Student Support Services. An online recruitment email was sent to the students asking them to participate in this study by clicking an online survey link. The recruitment email, and two follow-up recruitment emails are shown in Appendix A. The recruitment emails described the purpose of the study, approximate length of the survey, confidentiality, and a weblink to the online survey. Additionally, this recruitment email specified that participation was voluntary. It also informed participants that they may withdraw from the study at any time without penalty, and that responses were completely anonymous. After clicking on the weblink, potential participants were immediately directed to the online survey posted on SurveyMonkey, an online survey tool. The consent form comprised the first page of the survey. By continuing forward with the survey upon indicating “next” at the end of the first page, participants agreed to participate in the study,
In-person procedures

Secondly, the researcher conducted in-person data collection at the Student Support Services freshman study skills course and two academic workshops on the LSU campus. The in-person data collection was administered using paper-pencil surveys. In-person data collection procedures consisted of students being read the recruitment script (provided in Appendix A), which indicated that the survey was voluntary, that students could withdraw from the survey without penalty, and that responses were completely anonymous. If students chose to participate in the study, they deposited their paper-pencil surveys in a designated box in the room when they were finished.

For both the online survey and in-person data collection, students were offered an incentive for participating in the research. According to Dillman, et al. (2009), small incentives such as cash cards or gift cards were found consistently effective in increasing response rates for online surveys. For this study, lottery prizes of $25 iTunes gift cards were chosen for two respondents who completed the survey. Upon completion of the survey, students were asked to provide their email addresses on a list separate from the paper-pencil surveys or to email their LSU email addresses to an account that was unattached to the online survey. These methods were chosen to maintain participants’ confidentiality. Two respondents were then chosen randomly to be the winners of the prizes. The researcher then contacted students via their email address and distributed the incentives by having the students pick them up at a neutral location on campus.

Sample

These procedures resulted in 81 students completing the online survey and 29 students completing the paper-pencil survey. This sample was drawn from the 269 LSU undergraduate
students identified as LIFG through Student Support Services (i.e., maintaining a family income level less than $25,000 and having no parents/guardians who graduated from a four-year post-secondary institution). Thus, this study’s initial sample included 40.89% of students utilizing SSS. Of the participants providing data via the online survey, 10 participants did not complete over 50% of the measures and were removed from the sample. In addition, all students completed the paper-pencil measures. In total, the entire combined sample included 100 participants.

**Sample size**

The number of required participants needed to obtain necessary power was determined based on the recommendations for correlational analyses. This study included descriptive statistics and bivariate correlations; thus, an a priori power analysis indicated that a sample size of 52 would be sufficient to obtain the power necessary to reject the null hypothesis with a large effect size at $\alpha = 0.05$ (Cohen, 1992; Soper, 2014).

Sample demographic information is presented in Table 1. Nearly three-fourths (71%) of participants were female ($N = 100$) and the mean age for all participants was 20.12 years old ($SD = 3.83$). Over one third (39%) of participants indicated their race/ethnicity as African-American/Black, followed by Caucasian/White (37%), Multiracial (10%), Hispanic/Latino (8%), and Asian/Pacific Islander (6%). A vast majority (97%) of participants indicated they were “single, never married” and 3% of participants indicated, “married.” Ninety-one percent of participants indicated English as their first language. Few respondents reported supporting dependents under the age of 25 with the mean number of dependents under 25 at 0.7 ($SD = .30$). Nearly one third (31%) of students surveyed stated they had a disability registered with the LSU Office of Disability Services. Finally, all of the respondents stated they were U.S. citizens and
only two students (2%) reported that they were veterans. Table 1 displays the demographic information of the study sample.

Table 1
Demographic Characteristics of Study Sample

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<td>39</td>
<td>39</td>
</tr>
<tr>
<td>Caucasian/White</td>
<td>37</td>
<td>37</td>
</tr>
<tr>
<td>Multi-Racial</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
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<td>0</td>
</tr>
<tr>
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<tr>
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<td>100</td>
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<tr>
<td>Marital Status</td>
<td></td>
<td></td>
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<tr>
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<td>97</td>
</tr>
<tr>
<td>Married</td>
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<td>3</td>
</tr>
<tr>
<td>Separated</td>
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<tr>
<td>Divorced</td>
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<td>0</td>
</tr>
<tr>
<td>Widowed</td>
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<td>English first language</td>
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<td>91</td>
<td>91.9</td>
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<td>8</td>
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<tr>
<td><strong>Total</strong></td>
<td>99</td>
<td>100</td>
</tr>
<tr>
<td>Registered with LSU Office of Disability Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>No</td>
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</tr>
<tr>
<td>U.S. Citizen</td>
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<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Note. Some participants did not complete all demographic questions.
Measures

This study used online and paper-pencil surveys designed to measure participants’ factors affecting matriculation prior to entering college, current mental health needs, and characteristics of their current college experiences. The survey is provided in Appendix B and specific measures for each study variable are described here.

Factors related to matriculation prior to college

Factors affecting matriculation to college can be academic and nonacademic. For example, the education a student received in high school may have an academic impact on matriculation, while parental press and a student’s valuation of college may have a nonacademic impact on matriculation. Measures of nonacademic and academic factors will be described below.

Nonacademic factors. The following nonacademic factors were assessed for LIFG students prior to entering college: parental press for high school, students’ valuation of high school and financial illiteracy.

Parental press for high school. Parental press for high school was measured using a modified version of the Parental Press Scale from the Chicago School Research Senior Exit Questionnaire (CCSR, 2005). Originally, the seven items within this scale assessed high school seniors’ perceptions of parental press. Because this study’s sample was currently in college, the items from the scale were modified to ask the LIFG college students to reflect on their experiences of parental press in high school. An example item is: “Please state the extent to which your parents encouraged you to work hard in high school.” Responses were measured on a 5-point scale (1=Strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree). In previous research, the original scale demonstrated sufficient reliability with a coefficient alpha of
0.64 (Roderick et al., 2012). In the current study, a coefficient alpha of 0.92 was found for the parental press for high school scale.

Valuation of high school. The Valuation of High School Scale from the Chicago School Research Senior Exit Questionnaire (CCSR, 2005) was used to measure participants’ valuation of high school. Similar to the Parental Press for High School scale, five items for this measure were revised to ask participants to reflect on their high school experiences. Students were asked to rate five items that described the extent to which their high school prepared them for the future. For example, one item was: “My high school classes gave me useful preparation for what I planned to do in life.” Participants were asked to rate each item using a 5-point response scale ranging from 1 = Strongly disagree to 5 = Strongly agree. Roderick et al.’s (2012) study using this scale indicated adequate reliability (α = 0.64) and this measure in the current study also had adequate reliability (α = 0.89).

Financial illiteracy. Previous research used participants’ completion of the Free Application for Federal Student Aid (FAFSA) as an indicator of students’ financial literacy prior to college (Roderick et al., 2012). As such, financial illiteracy in this study was measured by asking participants if they successfully completed a FAFSA when they submitted their application to college. The response options were 1 = Yes, 2 = No, or 3 = Unsure.

Academic factors. In high school, LIFG students were found to have lower GPAs, lower college preparatory test scores, and to have taken lower levels of high school mathematic courses than their peers (Chen, 2005; Choy, 2001; Engle & Tinto, 2007). Therefore, these factors were assessed to determine the status of current LIFG students in college and evaluate if these academic barriers have implications for students’ current academic performances.
GPA, test scores, and high school level of mathematic courses. Participants were asked to input their highest numeric scores on the ACT (ranging from 1 to 36). The SAT was scored using a 7-point scale: 1 = I did not take the SAT, 2 = Less than 600, 3 = 600-799, 4 = 800-999, 5 = 1000-1199, 6 = 1200-1399, and 7 = 1400 or more. The SAT score was aggregated to avoid confusion when reporting scores for participants, as the SAT is divided into categories of critical reasoning, mathematics, and writing. The aggregation of scores for the SAT was similar to questions asked in the BPS (2001). In addition, participants were asked to select their cumulative high school GPA: 1 = 2.0 or below, 2 = 2.0-2.5, 3 = 2.5-3.0, 4 = 3.0-3.5, 5 = 3.5-4.0, and 6 = My GPA was not scaled on a 4 point scale. Research also indicated that students’ level of high school mathematics is an important factor related to academic success in college (Chen, 2005). In this study, participants were asked to indicate the highest level of math course taken in high school by choosing one of the following: 1 = Algebra I, 2 = Geometry, 3 = Algebra II, 4 = Trigonometry, 5 = Pre-calculus or Calculus, 6 = Other mathematics.

Mental health

Mental health was measured using the Mental Health Inventory (MHI-38; Veit & Ware, 1983). The MHI-38 consisted of seven subscales measuring: (1) anxiety; (2) depression; (3) loss of behavioral/emotional control; (4) general positive affect; (5) emotional ties and life satisfaction; (6) psychological distress; and, (7) psychological well-being. This study examined two of the seven subscales – psychological distress and psychological well-being. In addition, an overall measure of positive mental health, termed the mental health index, was obtained by scoring all of the items in the two subscales to create a total MHI score. The MHI-38 has demonstrated good reliability (α = 0.96) and previous research tested the factorial structure as well (Veit & Ware, 1983). In the current study, the subscales of the 22 item scale for
psychological distress (α = 0.92) and the 14 item scale for psychological well-being (α = .90) had good reliability. The total MHI-38 also had good reliability with a coefficient alpha of 0.95 for all 36 items used in this study.

The majority of the MHI-38 items were scored on a 6-point scale (1 = All of the time, 2 = Most of the time, 3 = A good bit of the time, 4 = Some of the time, 5 = A little of the time, 6 = None of the time) and an additional 10 items were scored on a similar 6-point scale (1 = Always; 2 = Very often; 3 = Fairly often; 4 = Sometimes; 5 = Almost never; 6 = Never). The remaining nine items were each scored using different response sets (see Appendix A for the full survey).

High scores on the psychological well-being subscales indicated positive states of mental health while high scores on the psychological distress subscale indicated negative states of mental health. High scores on the Mental Health Index indicated greater psychological well-being and relatively less psychological distress.

**Characteristics of the current college experiences**

This portion of the survey measured participants’ perceptions of their current college experiences. Variables were separated into two categories – those describing academic characteristics and those describing nonacademic characteristics.

**Academic characteristics.** Characteristics related to students’ academics were included in this section such as performance and enrollment behavior.

Performance. Participants also provided information on their academic performance by indicating their first year’s college GPA, their current GPA, and the number of courses they have withdrawn from since beginning college. First year and current GPA’s were scored on a 5-point scale: 1 = 2.0 or below, 2 = 2.0-2.5, 3 = 2.5-3.0, 4 = 3.0-3.5, and 5 = 3.5-4.0. A drop down box
of numerical values ranging from 1 to 10 was also used for participants to indicate their number of withdrawn courses.

Enrollment behavior. First, participants were asked to provide information about their entry to college after high school, specifically: “Did you enter college the summer or fall following the end of high school?” Responses were measured: 0 = No and 1 = Yes. Second, attendance status was assessed by asking participants to choose the option that most closely described their enrollment status during their first year of college: 1= Part-time (attended first year of college for less than 50 percent of the months during that academic year); or, 2 = Full-time (attended first year of college for more than 50 percent of the months during that year).

Nonacademic characteristics. Ten variables were used to measure participants’ nonacademic characteristics related to college.

Mentorship, tutoring, and academic advising. Three separate questions were used to assess participants’ involvement in any type of mentorship program, tutoring, or academic advising while enrolled at LSU. If participants responded that they received any one of the services, they also were asked when they began their involvement in the program (1 = Freshman year, 2 = Sophomore year, 3 = Junior year, 4 = Senior year) and how often they engaged in the activity (1 = Never; 2 = Hardly ever, 3 = Sometimes; 4 = Often). It should be noted that Student Support Services offered formal mentoring and tutoring services to their students in the program, and that academic advising was required by participants in SSS during their first year (SSS, 2012).

Academic integration. In this study, academic integration was defined as the level of engagement a student had with faculty and other students. It was measured using a list of four activities that students may participate in while in college, such as attend career-related lectures,
participate in study groups with other students, talk over academic matters with faculty, or meet with an advisor concerning academic planning (BPS, 2001). A 4-point response set was provided for each indicator (1= Never, 2= Hardly ever, 3= Sometimes, 4= Often). Scores for the four items were totaled to determine an overall score for academic integration. In the current study, a coefficient alpha of 0.69 was found for the academic integration scale.

Social integration. Similar to academic integration, social integration was defined as the level of engagement a student had with his or her peers through campus involvement and extracurricular activities. Three items from the BPS (2001) were summed to calculate a score for overall social integration. Participants were given a list of three social activities that students may participate in while in college, such as have contact with faculty outside of class, participate in school clubs, and go to school assistance centers. The same 4-point response set from the academic integration items were used for the social integration items. A relatively low coefficient alpha of 0.64 was found in the current study for the social integration scale.

Work. In this survey, participants indicated if they were employed indicating 0 = No and 1 = Yes. If they answered “yes”, they were asked to indicate how many hours they worked per week by marking one of the following: 1 = less than 5, 2 = 6-10 hours, 3 = 11-14 hours, 4 = 15-19 hours, 5 = 20-24 hours, 6 = 25 or more. Participants who indicated that they worked 20 hours or more were coded (1) as indicating that they worked full-time, while those noting that they worked 19 or fewer hours were coded as 0.

Housing. Housing is important to evaluate as living on campus has been found to be a protective factor for LIFG students (Bozick, 2007). Participants indicated where they lived during their first year of college and where they currently live (BPS, 2001). Students answered
whether they live in: 1 = Campus housing, 2 = Off-campus housing, or 3 = With parents/relatives, for each of the two questions.

Parental press for college. Parental press was measured using a modified version of the Parental Press Scale from the Chicago School Research Senior Exit Questionnaire (CCSR, 2005). Originally, the items within this scale assessed high school seniors’ perceptions of parental press in high school. Because this study’s sample was currently in college, the items from the scale were modified to ask the LIFG college students to reflect on their experiences of parental press in college. No known research has measured parental press within the college population. An example item is: “Please state the extent to which your parents encourage you to work hard in college.” Responses were measured on a 5-point scale (1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree). In previous research, the original scale demonstrated sufficient reliability with a coefficient alpha of 0.64 (Roderick et al., 2012). A coefficient alpha of 0.89 was found in the current study for the parental press for college scale.

Valuation of college. The Valuation of High School scale from the Chicago School Research Senior Exit Questionnaire (CCSR, 2005) was used to measure the participants’ valuation of college. Similar to the Parental Press for High School scale, items for this measure were revised to ask participants to reflect on their college experiences. Students were asked to rate five items that described the extent to which their high school prepared them for the future. For example, one item was: “My college classes give me useful preparation for what I plan to do in life.” Participants were asked to rate each item using a 5-point response scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. Roderick et al.’s (2012) study using this scale indicated adequate reliability (α = 0.64). A coefficient alpha of 0.80 was found in the current study for the valuation of college scale.
Utilization of campus resources. In this current study, utilization of campus resources was defined as participation in programs that assisted students in gaining access to beneficial resources. Participants were provided with a list of three campus resources available to LIFG students (e.g. Mental Health Services, Student Health Center, Career Services, and the Office of Multicultural Affairs at LSU). They were asked to indicate the extent to which they utilize each resource using a 10-point response scale ranging from 1 = Never to 10 = Very Often. Lastly, students were asked whether they considered themselves active members of Student Support Services, the campus resource that offered targeted support for LIFG students, by checking 1= Yes or 0= No.

**Total “Big” Risks**

According to Engle and Tinto (2007), LIFG students have seven interrelated risks separating them from their peers and putting them at risk for retention: (1) delayed entry into college; (2) part-time enrollment (3) working full-time (20 hours or more a week); (4) being financially independent; (5) having dependent children; (6) being a single parent; and, (7) having a GED. Engle and Tinto (2007) found that students with two or more of these risk factors were three times less likely to be retained by 4-year universities. Within the current study, five of these seven risks were analyzed: delayed entry, part-time enrollment, full-time work, being a single parent, and having dependent children. Participants were given a score of 1 for each of the above-mentioned risks if they indicated that they had one of the five big risks. Then, scores for each of the individual big risks were summed to create a total big risk score for each individual. Scores ranged from 0 to 5 with 5 indicating the maximum number of “big” risks possible.
Demographics

Participants were asked to indicate their gender, race, age, veteran status, marital status, number of dependents, native language, and citizenship status. Participants also were asked if they had a disability documented with the LSU Office of Disability services.

Data Analysis

Data were cleaned and screened prior to analysis. First, data were checked for inconsistencies and errors. Univariate statistics (e.g. mean, median, and mode) were used to summarize the data, and bivariate analyses were conducted to examine the relationships between variables. Pearson’s correlation coefficient ($r$) was used to examine the relationships among variables measured at the interval and ratio levels. Correlations and $t$-tests were considered significant when the $p$-value was less than .05. Data were analyzed using the Statistical Package for the Social Sciences v. 2.1.
CHAPTER 4: RESULTS

This study examined the risk and protective factors among low-income, first-generation students, including their barriers to matriculation prior to college, their mental health needs, and characteristics of their current college experience. Descriptive statistics and correlational analyses were used to examine the study’s research questions.

Factors Related to Matriculation Prior to College

Results indicated that the study participants reported both academic and nonacademic factors related to matriculation prior to college. Table 2 presents the descriptive results for nonacademic factors, and Table 3 presents descriptive results for academic factors.

Table 2
Descriptive Statistics for Nonacademic Factors to Matriculation Prior to College

<table>
<thead>
<tr>
<th>Factor</th>
<th>M (SD)/Frequency</th>
<th>Median/Count</th>
<th>Mode</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Press in High School</td>
<td>3.78 (1.04)</td>
<td>4</td>
<td>5</td>
<td>1-5</td>
</tr>
<tr>
<td>Valuation of High School</td>
<td>3.65 (1.01)</td>
<td>3.80</td>
<td>5</td>
<td>1-5</td>
</tr>
<tr>
<td>Financial Illiteracy</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Yes</td>
<td>77.9%</td>
<td>74</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>No</td>
<td>14.7%</td>
<td>14</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Unsure</td>
<td>7.4%</td>
<td>7</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. a Prior to starting college, had you completed a FAFSA? (Free Application for Student Aid)

Nonacademic factors

In this study, nonacademic factors related to matriculation were defined as characteristics from a student’s background that previous research indicated impact on students’ matriculation into higher education (Nguyen, Bibo, & Engle, 2012). Results indicated that students in this current study reported experiencing several nonacademic factors for matriculation prior to...
college. Students’ nonacademic factors prior to attending college included: parental press for high school; valuation of high school; and financial illiteracy.

**Parental press for high school and valuation of high school.** Descriptive statistics for parental press for high school indicated participants reported moderately high experiences of parental press in high school ($M = 3.78$, $SD = 1.04$) Likewise, the descriptive statistics for valuation of high school indicated moderately high experiences, as the mean scale score was 3.65 and the standard deviation was 1.01.

**Financial illiteracy.** Approximately three-fourths (77.9%) of participants indicated that they completed a FAFSA prior to beginning college, 14.7% reported that they did not complete a FASFA prior to college, and 7.4% indicated that they were unsure.

**Academic factors**

Academic factors related to matriculation prior to college were defined as academic variables needed for matriculation to college that impacted a student’s performance in college.

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Descriptive Statistics for Academic Factors to Matriculation Prior to College</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Factor</td>
</tr>
<tr>
<td>ACT Score</td>
<td>23.41 (2.35)</td>
</tr>
<tr>
<td>High School GPA</td>
<td>--</td>
</tr>
<tr>
<td>3.5-4.0</td>
<td>53.6%</td>
</tr>
<tr>
<td>3.0-3.5</td>
<td>27.8%</td>
</tr>
<tr>
<td>2.5-3.0</td>
<td>13.4%</td>
</tr>
<tr>
<td>2.0-2.5</td>
<td>1%</td>
</tr>
<tr>
<td>2.0 or below</td>
<td>2.1%</td>
</tr>
</tbody>
</table>
(Table 3 Continued)

<table>
<thead>
<tr>
<th>Factor</th>
<th>M (SD)/Frequency</th>
<th>Median/Count</th>
<th>Mode</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA was not measured on a 4 pt. scale</td>
<td>2.1%</td>
<td>2</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>SAT Score</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1400 or more</td>
<td>2.1%</td>
<td>2</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1200-1399</td>
<td>5.3%</td>
<td>5</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1000-1199</td>
<td>1.1%</td>
<td>1</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>800-999</td>
<td>1.1%</td>
<td>1</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>600-799</td>
<td>3.2%</td>
<td>3</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Less than 600</td>
<td>0%</td>
<td>0</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>I did not take the SAT</td>
<td>87.4%</td>
<td>83</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Level of High School Mathematics</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Pre-calculus or Calculus</td>
<td>60.8%</td>
<td>59</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Trigonometry</td>
<td>10.3%</td>
<td>10</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Algebra II</td>
<td>15.5%</td>
<td>15</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Geometry</td>
<td>2.1%</td>
<td>2</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Algebra I</td>
<td>1%</td>
<td>1</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Other mathematics</td>
<td>10.3%</td>
<td>10</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

The current study examined participants’ cumulative high school GPA, ACT and/or SAT scores, and their highest level of mathematics taken in high school. ACT scores have a possible range of 18 to 35. In this sample, participants reported a mean ACT score of 23.41 ($SD = 2.35$) within a range of 19 to 30. Participants largely had high GPA scores in high school, between 3.5 and 4.0 (53.6%). Additionally, over one fourth (27.8%) reported GPA scores between 3.0 and 3.5,
followed by 13.4% reporting scores between 2.5 and 3.0, 2.1% with scores below 2.0, and 1% with scores 2.0 to 2.5. Two students (2.1%) reported that their high school GPAs were not measured on a 4-point scale. In terms of the SAT, the majority of participants (87.4%) reported that they did not take the SAT in high school; yet, 3.2% reported a score of 600-799, 1.1% 800-999, 1.1% 1000-1199, 5.3% 1200-1399, and 2.1% scored a 1400 or more on the SAT. SAT scores ranged from 600 to 1400.

Lastly, results indicated that the majority of participants reported taking a high level of high school mathematics with 60.8% taking Pre-calculus or Calculus. The remainder of participants responded: 15.3% took Algebra II, 10.3% took Trigonometry, 10.3% took “Other,” 2.1% took Geometry, and 1% indicating taking Algebra I. Table 3 displays the descriptive results for participants’ academic factors prior to matriculation to college.

Mental Health Needs

For this study, mental health needs were defined as psychological distress and psychological well-being. The combination of psychological distress and psychological well-being also generated an overall Mental Health Index score used to determine the population’s level of positive mental health. Table 4 displays the mean scores for the study’s three primary indicators of students’ mental health: psychological distress, psychological well-being, and mental health index total score.

Psychological distress

According to the MHI-38, psychological distress was defined as a negative state of mental health. Results for psychological distress indicated a moderately low level of distress with a mean total score of 60.66 and a standard deviation of 15.39. The ranges of scores for psychological distress in this study were 22-114, and the measure ranged from 24-142.
Table 4
Scale Scores of MHI-38

<table>
<thead>
<tr>
<th>Name of Scale</th>
<th>M (SD)</th>
<th>Median</th>
<th>Mode</th>
<th>Scale Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Distress</td>
<td>60.66 (15.39)</td>
<td>60</td>
<td>60.59</td>
<td>24-142</td>
</tr>
<tr>
<td>Psychological Well-being</td>
<td>51.54 (11.45)</td>
<td>51.59</td>
<td>51.59</td>
<td>14-84</td>
</tr>
<tr>
<td>Mental Health</td>
<td>144.26 (25.04)</td>
<td>144.39</td>
<td>144.39</td>
<td>38-226</td>
</tr>
</tbody>
</table>

Note. Mean scores reflect the means of total scale scores.

Psychological well-being

Psychological well-being, defined by the MHI-38 as a positive state of mental health, was found high among participants with a mean total score of 51.54 and standard deviation of 11.45. The ranges of scores for psychological well-being were 27-84 out of a possible range of 14-84.

Mental health

In this study, participants indicated an overall high level of psychological well-being, as indicated by the sample’s mean total score of 144.26 and standard deviation of 25.04. High scores on the MHI indicated greater psychological well-being and less psychological distress (Veit & Ware, 1983). Ranges for overall mental health were between 71 and 215 out of a possible range of 38-226.

Characteristics of Current College Experience

Characteristics of LIFG students’ current college experiences were separated into academic characteristics and nonacademic characteristics. These characteristics described students’ first year and current experiences at the university. Table 5 displays the descriptive results for academic characteristics of the current college experience and Tables 6 and 7 display the nonacademic characteristics.
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>M (SD) /Frequency</th>
<th>Median/Count</th>
<th>Mode</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of credits earned in first year of college</td>
<td>25.34 (14.07)</td>
<td>24</td>
<td>24</td>
<td>0-40</td>
</tr>
<tr>
<td>Current number of credits earned in college</td>
<td>43.67 (35.28)</td>
<td>29</td>
<td>15</td>
<td>0-120</td>
</tr>
<tr>
<td>Number of withdrawn courses</td>
<td>0.97 (1.28)</td>
<td>1</td>
<td>0</td>
<td>0-10</td>
</tr>
<tr>
<td>First year GPA</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>3.5-4.0</td>
<td>16.7%</td>
<td>16</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>3.0-3.5</td>
<td>36.5%</td>
<td>35</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2.5-3.0</td>
<td>22.9%</td>
<td>22</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2.0-2.5</td>
<td>12.5%</td>
<td>12</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2.0 or below</td>
<td>11.5%</td>
<td>11</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Current GPA</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>3.5-4.0</td>
<td>13.7%</td>
<td>13</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>3.0-3.5</td>
<td>36.8%</td>
<td>35</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2.5-3.0</td>
<td>29.5%</td>
<td>28</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2.0-2.5</td>
<td>12.6%</td>
<td>12</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2.0 or below</td>
<td>7.4%</td>
<td>7</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Enrollment</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Entry to college after high school</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Yes</td>
<td>85.4%</td>
<td>82</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>No</td>
<td>14.6%</td>
<td>14</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Enrollment status during first year of college</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Part-time</td>
<td>1%</td>
<td>1</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Full-time</td>
<td>99%</td>
<td>96</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>
### Table 6
Engagement in Mentorship, Tutoring, and Academic Advisement

<table>
<thead>
<tr>
<th>Program</th>
<th>Mentorship (N = 24)</th>
<th>Tutoring (N = 27)</th>
<th>Academic Advising (N = 77)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Freshman year</td>
<td>66.7% (16)</td>
<td>81.5% (22)</td>
<td>84.4% (65)</td>
</tr>
<tr>
<td>Sophomore year</td>
<td>20.8% (5)</td>
<td>14.8% (4)</td>
<td>6.5% (5)</td>
</tr>
<tr>
<td>Junior year</td>
<td>12.5% (3)</td>
<td>3.7% (1)</td>
<td>7.8% (6)</td>
</tr>
<tr>
<td>Senior year</td>
<td>0% (0)</td>
<td>0% (0)</td>
<td>1.3% (1)</td>
</tr>
<tr>
<td>Engagement</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Never</td>
<td>4.2% (1)</td>
<td>3.6% (1)</td>
<td>2.6% (2)</td>
</tr>
<tr>
<td>Hardly Ever</td>
<td>25% (6)</td>
<td>25% (7)</td>
<td>16.9% (13)</td>
</tr>
<tr>
<td>Sometimes</td>
<td>62.5% (15)</td>
<td>50% (14)</td>
<td>41.6% (32)</td>
</tr>
<tr>
<td>Often</td>
<td>8.3% (2)</td>
<td>21.4% (6)</td>
<td>39% (30)</td>
</tr>
</tbody>
</table>

Note. Participants marked more than one of the programs, if they were involved in more than one. Thus, N amounts shown here total to greater than 100.

### Table 7
Descriptive Analysis of Nonacademic Characteristics of Current College Experience

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>M (SD)/Frequency</th>
<th>Median/Count</th>
<th>Mode</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Integration</td>
<td>2.56 (0.65)</td>
<td>2.75</td>
<td>2.75</td>
<td>1-4</td>
</tr>
<tr>
<td>Social Integration</td>
<td>2.31 (0.75)</td>
<td>2.30</td>
<td>3</td>
<td>1-4</td>
</tr>
<tr>
<td>Parental Press for College</td>
<td>3.78 (1.00)</td>
<td>4</td>
<td>4</td>
<td>1-5</td>
</tr>
<tr>
<td>Valuation of College</td>
<td>4.36 (0.63)</td>
<td>4.40</td>
<td>5</td>
<td>1-5</td>
</tr>
<tr>
<td>Utilization of campus resources</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Student Health Center</td>
<td>3.19 (2.80)</td>
<td>1.5</td>
<td>1</td>
<td>1-10</td>
</tr>
<tr>
<td>Characteristic</td>
<td>M (SD)/Frequency</td>
<td>Median/Count</td>
<td>Mode</td>
<td>Range</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>------------------</td>
<td>--------------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>Mental Health Services</td>
<td>1.64 (1.94)</td>
<td>1</td>
<td>1</td>
<td>1-10</td>
</tr>
<tr>
<td>Office of Multicultural Affairs</td>
<td>1.43 (1.33)</td>
<td>1</td>
<td>1</td>
<td>1-10</td>
</tr>
<tr>
<td>Work</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Yes</td>
<td>52.1%</td>
<td>50</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>No</td>
<td>47.9%</td>
<td>46</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Hours worked</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Less than 5</td>
<td>11.8%</td>
<td>6</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>6-10</td>
<td>21.6%</td>
<td>11</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>11-14</td>
<td>25.5%</td>
<td>13</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>15-19</td>
<td>21.6%</td>
<td>11</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>20-24</td>
<td>9.8%</td>
<td>5</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>25 or more</td>
<td>9.8%</td>
<td>5</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>First year housing</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Campus housing</td>
<td>58.9%</td>
<td>56</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Off-campus housing</td>
<td>25.3%</td>
<td>24</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>With parents/relative</td>
<td>15.8%</td>
<td>15</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Current housing</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Campus housing</td>
<td>44.1%</td>
<td>41</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Off-campus housing</td>
<td>46.2%</td>
<td>43</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>With parents/relatives</td>
<td>9.7%</td>
<td>9</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Characteristic</td>
<td>M (SD)/Frequency</td>
<td>Median/Count</td>
<td>Mode</td>
<td>Range</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------</td>
<td>--------------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>Active member of SSS</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Yes</td>
<td>91.4%</td>
<td>85</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>No</td>
<td>8.6%</td>
<td>8</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

**Academic characteristics**

Academic characteristics of the current college experience included performance (i.e., first year GPA, current GPA, hours earned in first year of college, current hours earned in college, and number of withdrawn courses) and enrollment characteristics (i.e., enrollment status in first year of college and time of enrollment).

**Performance.** At LSU, GPAs may range from 0 to 4.0. The first year GPAs of participants were varied, with 36.5% indicating they had a GPA between 3.0 and 3.5, 22.9% indicating 2-3.0, 16.7% indicating a 3.5-4.0, 12.5% indicating 2.0-2.5, and 11.5% indicating first year GPA’s as a 2.0 or below. Similarly, participants’ current GPAs reported in college were varied. The greatest number of students (36.8%) reported GPAs between 3.0 and 3.5, followed by 29.5% indicating 2.5-3.0. Participants also indicated that they had GPAs between 3.5 and 4.0 (13.7%), 2.0-2.5 (12.6%), and some indicated GPAs below 2.0 (7.4%).

The mean number of hours earned in participants’ first years of college was 25.34 (SD = 14.07) with a possible range from 0 to fewer than 30 (defined as freshman), although some students may enter college with hours already earned through AP coursework from high school. Students also reported the current number of hours they have, with a mean number of hours earned at 43.67 (SD = 35.28) with a range of 6 to 118. The possible range of hours for students at LSU is typically 0-120, as the majority of degree programs require 120 hours. A mode of 15
hours, for current hours completed, indicated that the most commonly reported number of current hours is related to freshman students completing the survey. According to the LSU General Catalog (2012-2013), students with fewer than 30 hours are classified as freshman, those with at least 30 hours but less than 60 are classified as sophomore, those with at least 60 but less than 92 are juniors, and students with 92 hours or more are classified as seniors. Lastly, the mean number of withdrawn courses was 0.97 ($SD = 1.28$), indicating that few students withdrew from multiple courses.

**Enrollment behavior.** Enrollment behavior was measured by asking whether students delayed entry when they began college and what their enrollment was during their first year of college. Results showed that 85.4% of students began college in the summer or fall following the end of high school while 14.6% did not (delayed entry). Results also showed that 99% of participants reported full-time enrollment in their first year, and only 1% were part-time in their first year.

**Nonacademic characteristics**

Engagement in mentorship, tutoring, or academic advising, along with academic integration, social integration, work, housing, parental press for college, valuation of college, and utilization of campus resources were considered nonacademic characteristics of participants’ current college experiences. Table 6 displays engagement in mentorship, tutoring, and academic advisement, and Table 7 displays the remaining nonacademic characteristics.

**Engagement in mentorship, tutoring, and academic advising.** Participants were asked whether they had been involved in mentorship, tutoring, and academic advisement to gauge their engagement in these services. If they reported using these services, they were also asked when they began using them and how frequently they used them. Results indicated that 25% of
students used mentoring in college. Of those who reported using mentoring, 66.7% reported beginning their use of this service during their freshman year, 20.8% began during their sophomore year, 12.5% began during their junior year, and none of the participants reported beginning in their senior year. The majority of participants who used mentoring services indicated that they “sometimes” use the mentoring service (62.5%), while 25.6% reported “hardly ever” using the service, 8.3% reported “often” using the service, and 4.2% reported “never” using the service.

Over half of students (55.10%) reported being tutored in college. Over three fourths of students who used tutoring services reported beginning tutoring in their freshman year (81.5%). Fewer students (14.8%) began in their sophomore year and 3.7% began in their junior year. None of the students reported beginning tutoring in his or her senior year. Their frequency of using tutoring was reported moderately high with 50% reporting “sometimes.” Additionally, further results were varied with 25% reporting using tutoring “hardly ever,” 21.4% reporting “often,” and only 3.6% as “never.”

Lastly, a high percentage of students (81.1%) indicated using academic advising with only 18.9% indicating they had no academic advisement in college. This service was used early in student’s college careers as 84.4% began their freshman year, 6.5% began their sophomore year, 7.8% began their junior year, and 1.3% began their senior year. Frequencies of engagement in academic advisement were reported as moderately high as shown by 41.6% reporting “sometimes” and 39% reporting “often.” Fewer reported their frequency of engagement in academic advising as “hardly ever” (16.9%) and 2.6% reported “never.” When considered together, over half (54.5%) of students reported being involved in one of these activities, with the
vast majority involved in academic advising. Also, 10.1% were involved in two of these activities, and 18.2% were involved in all three activities.

**Work and housing.** Over half of participants reported that they currently have jobs (52.1%). Those who worked reported working a moderately high number of hours per week. Specifically, 25.5% worked 11-14 hours, 21.6% worked 15-19 hours, 21.6% worked 6-10 hours, 11.8% worked less than 5 hours, 9.8% worked 20-24 hours, and 9.8% worked 25 hours or more per week. During the first year of college, 58.9% of students lived on campus, 25.3% lived off campus, and 15.8% lived with parents/relatives. At the time of the survey, 44.1% of participants reported that they live on campus, 46.2% reported living off campus, and 9.7% reporting living with parents/relatives.

**Academic integration and social integration.** Participants reported relatively low academic integration with a mean score of 2.56 ($SD = 0.65$) with a range of 1-4. Likewise, social integration was also found relatively low with a mean score of 2.31 ($SD = 0.75$) with a range of 1-4.

**Parental press for college and valuation of college.** Parental press for college was moderately high ($M = 3.78; SD = 1.00$) and valuation of college was also high ($M = 4.36; SD = 0.63$).

**Utilization of campus resources.** Overall, students reported little use of available campus resources. On a scale of 1 (never) to 10 (often), students indicated using the Student Health Center the most ($M = 3.19; SD = 2.80$) followed by use of Mental Health Services ($M = 1.64; SD = 1.94$) and then use of the Office of Multicultural Affairs ($M = 1.43; SD = 1.33$). Even though participants reported using the Student Health Center the most out of the three resources listed, it is important to note that they still indicated very rare use of this resource. Lastly,
students were asked if they considered themselves active members of Student Support Services. Almost all of the participants (91.4%) said they were active members, while only 8.6% reported they do not consider themselves active members of the program.

**Bivariate Correlations**

An examination of bivariate correlations revealed several statistically significant relationships among the study’s variables. Specifically, there was a positive relationship between valuation of high school and academic integration ($r = .23, p < .05$), meaning that participants with greater valuation of high school indicated greater ability to be academically integrated in college. Similarly, both parental press for college ($r = .20, p < .05$) and valuation of college ($r = .23, p < .05$) were also significantly and positively related to academic integration, indicating parental press and valuation of college were positively related to the ways in which students engage at their universities. In addition, social integration was only related to valuation of college ($r = .30, p < .01$), but not parental press for college, parental press for high school, or valuation of high school.

A statistically significant relationship was also found between psychological well-being and psychological distress ($r = -.71, p < .01$), and this relationship was negative. As expected, this means that students who reported high psychological distress experienced lower psychological well-being. Lastly, valuation of high school was the only variable that was significantly related to all of the mental health variables - psychological distress ($r = -.27, p < .01$), psychological well-being ($r = .31, p < .01$), and overall mental health ($r = .31, p < .01$). Therefore, high valuation of high school was related to low psychological distress, high psychological well-being, and positive mental health. Table 8 displays the correlation matrix for the variables in this study.
Table 8
Descriptive Statistics and Bivariate Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>M (SD)</th>
<th>Range</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. P-Press for HS</td>
<td>3.78 (1.04)</td>
<td>1-5</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2. Valuation of HS</td>
<td>3.65 (1.01)</td>
<td>1-5</td>
<td>.32**</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>3. P-Press for CO</td>
<td>3.78 (1.00)</td>
<td>1-5</td>
<td>.81**</td>
<td>.36**</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4. Valuation of CO</td>
<td>4.36 (0.63)</td>
<td>1-5</td>
<td>.11</td>
<td>.32**</td>
<td>.26**</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>5. Academic Integration</td>
<td>2.56 (0.65)</td>
<td>1-4</td>
<td>.10</td>
<td>.23*</td>
<td>.20*</td>
<td>.23*</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>6. Social Integration</td>
<td>2.31 (0.75)</td>
<td>1-3</td>
<td>.099</td>
<td>.14</td>
<td>.13</td>
<td>.30**</td>
<td>.73**</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>7. Psych. Distress</td>
<td>60.66 (15.39)</td>
<td>24-142</td>
<td>-.16</td>
<td>-</td>
<td>.27**</td>
<td>-.06</td>
<td>.01</td>
<td>-.15</td>
<td>-.12</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>8. Psych. Well-Being</td>
<td>51.54 (11.45)</td>
<td>14-84</td>
<td>.12</td>
<td>.31**</td>
<td>.04</td>
<td>.04</td>
<td>.16</td>
<td>.10</td>
<td>-.71**</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>9. Mental Health</td>
<td>144.26 (25.04)</td>
<td>28-226</td>
<td>.15</td>
<td>.31**</td>
<td>.07</td>
<td>.03</td>
<td>.19</td>
<td>.13</td>
<td>-.93**</td>
<td>.89**</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. P-Press for HS = Parental Press for High School; Valuation of HS = Valuation of High School; P-Press for CO = Parental press for College; Valuation of CO = Valuation of College; Psych. Distress = Psychological Distress; Psych. Well-Being = Psychological Well-Being; Mental Health = Mental Health Index. **p < 0.01, *p < 0.05.
The strongest relationships among these bivariate correlations were found between psychological well-being and psychological distress \((r = -.71, p < 0.01)\). Additionally, valuation of high school had strong association with psychological well-being \((r = .31, p < 0.01)\) and overall mental health \((r = .31, p < 0.01)\). Although these results were found statistically significant, these associations are not very strong as the closer a correlation moves to 1 the stronger its association.

**“Big” Risk Factors**

Some participants reported having some or all of the five “big” risks previously identified by Engle & Tinto (2007). Within the sample, eight participants reported having two or more of these big risks. Additionally within the entire sample, 19.6\% \((n = 19)\) worked full-time, 14.6\% \((n = 14)\) delayed entry into college, 6\% \((n = 6)\) had dependent children, 5\% \((n = 5)\) were single parents, and 1\% \((n = 1)\) were enrolled part-time. The mean number of big risks for the entire sample was 0.36 \((SD = 0.80)\), while those with 1 or more risks had a mean of 2.55 \((SD = 0.85)\).

Table 9 shows the frequencies of those at-risk for having at least one of the 5 identified “big” risk factors.

**Table 9**

<table>
<thead>
<tr>
<th>Risk</th>
<th>Frequency</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delayed entry</td>
<td>14.6%</td>
<td>14</td>
</tr>
<tr>
<td>Part-time enrollment</td>
<td>1%</td>
<td>1</td>
</tr>
<tr>
<td>Full-time work</td>
<td>19.6%</td>
<td>19</td>
</tr>
<tr>
<td>Dependent children</td>
<td>6%</td>
<td>6</td>
</tr>
<tr>
<td>Single parent</td>
<td>5%</td>
<td>5</td>
</tr>
</tbody>
</table>
**Relationship among Total “Big” Risk Factors and Mental Health, Academic Performance, and Academic/Social Integration**

Bivariate correlations were conducted to explore the relationships between “big” risks and the following variables: mental health, academic performance while in college (defined as current GPA and number of withdrawn courses), academic integration, and social integration. Table 10 displays the results of this analysis. Results revealed a statistically significant and positive correlation between participant’s total “big” risks and their number of withdrawn courses ($r = .24, p < .05$), indicating that students who experienced more of the big risks also withdrew from more courses. Additionally, psychological distress was negatively related to participants’ current GPAs ($r = -.31, p < .01$). Mental health also was positively and significantly related to current GPA ($r = .26, p < .01$). As such, the results for this sample indicated that students who experienced more positive mental health performed better.

**Table 10**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total “Big” Risk Factors</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2. Psychological Distress</td>
<td>.09</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>3. Psychological Well-Being</td>
<td>-.11</td>
<td>-.71**</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4. Mental Health</td>
<td>-.11</td>
<td>-.93**</td>
<td>.89**</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>5. Current GPA</td>
<td>-.08</td>
<td>-.31**</td>
<td>.20</td>
<td>.26**</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>6. Withdrawn Courses</td>
<td>.24*</td>
<td>.07</td>
<td>-.07</td>
<td>-.09</td>
<td>.30**</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>7. Academic Integration</td>
<td>-.01</td>
<td>-.15</td>
<td>.16</td>
<td>.19</td>
<td>.10</td>
<td>-.13</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>8. Social Integration</td>
<td>.04</td>
<td>-.12</td>
<td>.10</td>
<td>.13</td>
<td>.14</td>
<td>-.11</td>
<td>.73**</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. **p < 0.01, *p < 0.05.
academically as well. Further evidence of this relationship was found in the statistically significant and negative relationship between psychological distress and current GPA ($r = -0.31, p < 0.01$). Neither academic integration nor social integration was significantly related to any of the three variables measuring participants’ mental health. Lastly, the strongest relationships among these bivariate correlations were found between psychological distress and current GPA ($r = -0.31, p < 0.01$). This relationship was the strongest correlation evident in this study ($r = -0.31, p < 0.01$), but it is important to note that this relationship is still moderately weak.
CHAPTER 5: DISCUSSION

This cross-sectional study sought to explore the risk and protective factors among LIFG college students at LSU. It is well documented that LIFG students face significant risks to retention, as this population is six times less likely to earn a four-year degree when compared to their higher income, non-first generation peers (Mortenson, 2007). Disparities for this population are evident as academic preparation, family income, parental level of education, educational expectations, and parental involvement influence LIFG students in their persistence toward completing a postsecondary education. There is a gap in the literature, however, when examining the mental health needs of this population in relation to their demographics, academic characteristics, and nonacademic characteristics while in college and prior to matriculation. Although researchers have examined risks to retention for this population (Chen, 2005; Choy, 2001; Engle & Tinto, 2007; Thayer, 2000), the present study specifically examined the interrelationships among factors for matriculation, mental health, and characteristics of the current college experience among LIFG students.

Variables were assessed to determine if they act as risk or protective factors within the sample, compared to previously documented research. The specific research questions were:

(1) To what extent are the following risk and protective factors evident among the LIFG student population at LSU?

   (a) demographic factors,

   (b) factors related to matriculation, and

   (c) characteristics of the current college experience;

(2) What are the mental health needs of LIFG students?; and,
(3) How do the identified “big” risk factors relate to mental health, academic/social integration, and academic performance?

Interrelationships among the study’s variables and “big” risk factors were examined to further assess the relationships among the risk and protective factors and students’ mental health. A discussion of the results and implications of this study will be described throughout this chapter.

Sample Characteristics

In the current study, students were identified as LIFG through their enrollment in the Louisiana State University (LSU) Student Support Services program. This program serves students who do not have a parent or guardian who graduated from a 4-year university and who have a household income of less than $25,000 (Engle & Tinto, 2007). Therefore, this program created a sample of already screened LIFG students for this study.

Participants in the current study were primarily African American (39%) females (71%) with an average age of 20 years old. These sample characteristics were consistent with previously reviewed studies examining the experiences of LIFG students in college (e.g. Chen, 2005; Engle & Tinto, 2007), in that participants were more likely to be female and racial/ethnic minority students. For example, in the study examined by Engle and Tinto (2007), 64% of LIFG students were female and 54% were minority students. Results from the current study were similar, as the majority (63%) of participants were racial/ethnic minority students, specifically African American/Black and Multi-racial. Participants in this study were slightly younger than LIFG students in previous research, a mean age of 20 was found compared to Engle and Tinto’s (2007) sample with a mean age of 23.
Notably, 31% of participants in this study indicated that they had a registered disability while previous studies found that 14% of LIFG students had a disability (Engle & Tinto, 2007). The occurrence of disabilities among participants in this sample was much higher than reported in previous research, potentially highlighting a risk or protective factor within the LSU LIFG student population. The sample being predominantly African American/Black and having a relatively high number of students with disabilities is important to consider among students at LSU, as they are specific and unique to LIFG students in comparison with the general student population.

**Factors Related to Matriculation**

Nonacademic and academic factors related to matriculation to college were assessed for the LIFG student population. Nonacademic factors related to matriculation were measured using financial illiteracy, parental press for high school, and valuation of high school. In the current study, the majority of participants indicated they completed a FAFSA prior to beginning college (77.9%), which is consistent with prior research indicating that students who complete a FAFSA prior to college are more likely to matriculate to college (Bozick, 2007, Nunez & Carroll, 1998). Still, 14.7% of this sample stated they had not completed a FAFSA prior to college, and 7.4% were unsure if they had or had not completed a FAFSA. It should be noted that 22.1% of the sample indicated that they did not know or did not complete a FASFA prior to college. These students may be at risk for financial illiteracy, defined as lacking the ability to understand finances and money as it relates to their college education. This has previously been noted as a risk to retention (Bozick, 2007). The ability to understand the process of obtaining financial aid was found to be significant for effecting positive decision-making processes once in college.
These factors were important to evaluate among LIFG students as finances play a critical role in their retention.

Parental press and valuation of high school were also considered potential characteristics related to LIFG students’ success in college. Participants in this study reported moderately high parental press for high school, indicating that they had a parent who supported their decision to attend and enroll in college. Similarly, valuation of high school was also moderately high in the current study which means LIFG individuals valued their education and academic achievement while in high school. These high perceptions of press and valuation for high school may serve as protective factors for LIFG students’ enrollment and retention at four-year universities (Roderick, Coca, and Nagoaka, 2011). Their high parental press in relation to positive mental health may informally be an indication of social support (i.e. assistance, nurturance, advice, sense of belonging, etc.) thus lowering their mental health needs.

Academic factors were also assessed through analysis of students’ high school GPAs, ACT and/or SAT scores, and high school level of mathematics. The majority of LIFG students indicated high GPAs in high school and moderately high ACT scores. These results differ from previous studies as Chen (2005) and Choy (2001) reported that LIFG students’ ACT scores in their studies were more likely to be in the lowest quartile (i.e., 18-22.5). ACT scores within the lowest quartile and low high school GPAs were found to be a risk to retention as LIFG students were found less prepared for college than their peers (Chen, 2005; Choy, 2001).

No analyses of participants’ SAT scores were possible in this study, as the majority of students indicated they did not take the SAT. It is possible that the limited use of the SAT among this study’s participants may implicate cultural and regional use of the ACT test being preferable for college matriculation for LIFG students. Lastly, in the current study, the level of high school
mathematics taken by students was found to be moderately high, as they indicated taking pre-calculus or calculus in high school. The ability to take an advanced math course in high school was protective for LIFG students in previous studies by Choy (2001); just as a higher average ACT score and high school GPA within this population may be protective. These factors can be related to positive levels of academic preparation for college. Positive nonacademic and academic factors for matriculation seen in the current study may be considered protective supporting this population of LIFG students’ performances and enrollment in four-year universities.

**Mental Health**

Mental health symptomology has not previously been examined among LIFG students. The current study is the first to evaluate current college students using the MHI-38 to examine mental health within this population. It is also the first known study to compare characteristics of the college experience with LIFG students’ mental health needs while they are in college, thus examining its relationship to persistence. Therefore, this study contributed to knowledge base specifically for mental health needs and LIFG students.

Participants reported low levels of psychological distress, indicating relatively low levels of negative states of mental health across the population. The low levels of psychological distress among students may be related to specific qualities shown in the study’s sample, as a majority of students participated in academic advising and were predominantly identified as freshman and sophomore students. Since these students are engaging in protective resources, their mental health problems may be low due to obtaining sufficient academic and social support. Similarly, being a freshman or sophomore student may be protective for mental health problems as general course requirements are being met in their early years of coursework, thus specific and more
difficult courses will be taken later in their college careers. Therefore, it is possible that freshman or sophomore status may be protective and lead to less academic stress and higher academic performance.

Inversely, participants in the sample exhibited high levels of psychological well-being and high scores for overall mental health, indicating positive states of mental health across the sample. These high levels of psychological well-being are important for understanding the LIFG student population in comparison to their peers in higher education. As previous research has reported an increase in levels of depression and mental health issues across college campuses (Kitzrow, 2003), this study showed that previous research on LIFG students’ mental health may not capture the entire picture in relation to this issue. Students in this sample were not among the students experiencing the mental health challenges found in prior studies.

Similarly, although previous studies found ethnic and minority students to have relatively greater levels of stress and lower educational attainment (which places them at risk for mental health problems; Kitrow, 2003), minority students were not found at greater risk for mental health problems in this study. Participants in this study also reported high academic performance, high parental press, high valuation of high school and college, and low psychological distress, which may help to explain why positive mental health states were identified among the sample. The engagement in these protective factors may promote high psychological well-being, or high psychological well-being may help to engage them in protective factors. It is possible that students in this sample use their high levels of psychological well-being to cope in positive ways when facing barriers in college. It is important to consider the idea that LIFG students may exhibit more resilient traits and this population may draw on the interrelationships of these
characteristics to exhibit positive states of mental health. These positive states of mental health seemed to serve as protective factors among the population sampled.

**Characteristics of the Current College Experience**

Characteristics of the current college experience were examined in terms of both academic and nonacademic factors.

**Academic characteristics**

Academic characteristics were defined by performance (i.e., first year GPA, current GPA, and number of withdrawn courses) and enrollment behavior (i.e., whether they delayed entry and their enrollment status in their first year). LIFG participants indicated relatively high levels of academic performance, as indicated by relatively high reports of first-year and current GPAs (i.e., 3.0-3.5) and a low average of withdrawn courses. These findings indicate that LIFG students in this sample were academically succeeding at LSU, which serves as a protective factor for this population. Chen (2005) found that high GPAs positively correlated with retention among LIFG students. Chen (2005) also stated, however, that increased withdrawal from courses resulted in risks to financial aid, negative motivation levels, and retention. Therefore, high withdrawals from courses would be a risk, but the study showed low withdrawal from courses, which is a protective factor for students within this study.

Similarly, participants’ enrollment behaviors also indicated relatively low risk of dropout or academic failure. Almost all of the participants (99%) enrolled as full-time students in their first year of college and over three-fourths of participants (85.4%) enrolled in the summer or fall immediately following their graduation from high school. The enrollment characteristics of this sample eliminated two major risks to retention as described by Engle and Tinto (2007) – part-
time enrollment in college and delayed entry into college. Thus, these results indicate the presence of protective factors for those sampled from the LIFG student population at LSU.

**Nonacademic characteristics**

Secondly, nonacademic characteristics of LIFG students were assessed including: mentoring, tutoring, academic advising, academic integration, social integration, work, parental press for college, valuation of college, and utilization of campus resources. Mentorship, tutoring, and academic advising will be discussed first as the major activities throughout the college experience.

**Mentoring, tutoring, and academic advising.** Participation in mentorship has previously been identified as protective because it results in positive academic and emotional outcomes (Leyton-Armakan et al., 2012). In this study, however, only 25% of the sample indicated use of this service. Still, of those who used the service, a majority began use as early as their freshman year and indicated using the service “sometimes.” The use of mentoring relatively frequently in the early years of college is protective as LIFG students can be exposed to an understanding of university expectations, encouragement throughout their transition to college, and exposure to cultural/social capital (Leyton-Armakan et al., 2012). While this is protective, 75% of students are not utilizing this activity; and, because these students may not have a family member to model or prepare them for college, this may be a risk to gaining knowledge and support. Therefore, poor utilization of mentorship among the sample is a risk to retention.

Similar to mentoring, tutoring has facilitated positive academic outcomes for LIFG students in previous studies (Engle & Tinto, 2007; Blankenship, 2012). In the current study, approximately half of participants indicated using tutoring, primarily in their freshman year and frequently. The increased use of tutoring compared to mentoring may indicate that LIFG students
have sought out increased levels of academic support in relation to their previously found low levels of academic preparation from high school (Chen, 2005; Choy, 2001). Therefore, the use of tutoring is protective for over half of the sample engaging in this activity because it is known to improve academic outcomes (Blankenship, 2012). This protection in relation to academic achievement is interrelated to other factors such as academic integration as students utilize academic assistance.

Lastly, academic advising was found to have the highest rate of use (81.1%) among the three primary academic support services. Among those reporting use of academic advising, the majority reported beginning use in their freshman year (84.4%) and it had the highest results for frequency of participation. These high rates of participation in academic advisement are protective as guidance for course selection, communication with staff and professors, orientation to campus and resources, and Individual Education Plans decrease LIFG students’ risks to retention (Escobedo, 2007). Thus, academic advising is the most frequently used activity early in the college careers of LIFG students and is protective within this sample of students. Academic and social integration will be discussed next to further examine characteristics of the college experience.

**Academic and social integration.** High scores for academic integration and social integration indicated that the sample was moderately involved in social and academic activities that may promote their retention. Tinto (2003) reported that the ability to engage with other faculty and students had positive effects on persistence for LIFG students and thus improved their current college experiences through this involvement. The high scores reported in these areas might ultimately promote retention among LSU’s LIFG students, as they exhibited positive
educational and social activities. Thus, these characteristics serve as protective factors within this sample. Next, parental press for college and valuation of college will be discussed.

**Parental press for college and valuation of college.** High scores for parental press for college and valuation of college indicated students had high levels of support from parents for college, despite having parents who had never attended or enrolled in college themselves. High levels of support from parents for college challenged previous research that found LIFG students often faced discouragement from family members (Blankenship, 2010). Family support was found protective (Striplin, 1999), and therefore high parental press was protective among this population. High valuation of college is protective as well, indicating increased motivation for college retention (Roderick et al., 2011).

**Work and housing.** Work can be a protective or risk factor as Bozick (2007) found LIFG students were more likely to work full-time (20 hours or more) while being full-time students in comparison with their higher-income, non-first-generation peers. Engle and Tinto (2007) supported that notion as full-time work correlated with part-time enrollment and was a major risk to retention. In the current study, the majority of participants indicated that they had a job in college. Among students who had jobs, they reported higher hours worked per week than previous research completed by Engle and Tinto (2007). With approximately 1 out of 5 students working more than 20 hours a week, this poses a risk within the population for those students. However, those who work less than 20 hours or not at all have protection against lower academic achievement and higher stress levels (Engle & Tinto, 2007). Therefore, the majority of LIFG students who do not work may be engaging in a protective factor during their college experience.

Just as work can be a protective or risk factor, on-campus housing was found protective for LIFG students in previous studies (Bozick, 2007). In the current study, the majority of
students indicated they lived on campus during their first year. This majority within the population is protective in exposing first year students to accountability skills, resources, cultural capital, and independent living skills (Bozick, 2007). Results for students’ current housing locations showed that the majority of students live off-campus. This may be in relation to the sample being older students, as freshman students often comprise those who live on-campus at the university. It indicates that students who now live off-campus, after reporting living on-campus in their first year of college, are at an increased risk to retention because living off campus was found to be a risk for retention (Bozick, 2007).

It should also be noted that 15.7% of students lived with parents/relatives during their first year of college and only 9.7% reported that they lived with parents/relatives at the time the survey for the current study was completed. Although, living with parents and relatives was found to reduce the risk of financial burden, it is a major risk to retention (Bozick, 2007); therefore, the reduced number of students living with parents/relatives could be protective. In summary, first year housing on campus was found protective among the majority of students in the study. Current housing is a risk as the majority now live off campus; and living with parents and relatives was found low among the sample, which is protective within the LIFG student population.

**Utilization of campus resources.** The last nonacademic characteristic assessed in this study was the utilization of campus resources including the Student Health Center, Mental Health Services, and the Office of Multicultural Affairs. Results in the current study showed low levels of use for all three of these services. The most frequently used service was the Student Health Center, followed by Mental Health Services, and then the Office of Multicultural Affairs. All scores, however, were low as they ranged between 1 (never) and 5 (sometimes). These
findings are not surprising, given that previous research also found that minority and low-income students have stigma about mental illness and decreased utilization of mental health services (Lee & Muraskin, 2004). This finding may be due to the low levels of psychological distress and high psychological well-being evident within this sample. Students in this study may not feel as though they need mental health services, or may not identify mental health services as a relevant support for them at this time. Similarly, they may not have been aware that these resources were available to them. There is also very little existing research examining the use of the Student Health Center and the Office of Multicultural Affairs for this population. The current study found the low use of these resources to be a risk for students.

In conclusion, the LIFG student population was found to have various risk and protective factors prior to and while enrolled in higher education. However, the current study found the majority of studied factors to be protective for LIFG students in this sample, which is surprisingly different from results of previously conducted studies. The results showed protective factors in areas regarding factors related to matriculation, mental health, and characteristics of the current college experience. It is important to acknowledge that these protective factors were seen among students in the Student Support Services program, potentially identifying that the program itself is protective and supports these results. Further research must also consider the remainder of LIFG students at LSU, not in Student Support Services, who could also benefit from the support provided by this program. It is possible that the remainder of LIFG students at large universities, who are not in this program or receiving support, are at a much higher risk.

**Mental Health and “Big” Risk Factors**

The five “big” risk factors, identified in studies by Engle and Tinto (2007), were defined as delayed entry into college, part-time enrollment, full-time work, having dependent children,
and being a single parent. These factors put LIFG students at high risk of leaving postsecondary education without earning a four-year degree. Engle and Tinto (2007) found that the more risk factors a student had, the more likely it was that they would not graduate. LIFG students with none of the above mentioned risk factors were found three times more likely to graduate than those who had two or more of the “big” risk factors (Engle and Tinto, 2007). The current study examined the relationships between these “big” risk factors and LIFG students’ mental health, academic integration, social integration, and academic performance in college.

Within the sample, the average number of “big” risk factors (for students with one or more of these “big” risks) was 2.55. This is consistent with Engle and Tinto’s (2007) research that found students to have an average of three “big” risk factors. Eight participants (8%) in the current study were identified has having two or more of the five risks. As previously mentioned, these eight students may then experience an increased risk to retention. Further, the total number of risks for students in this study was significantly and positively related to the number of withdrawn courses students had in college, but not related to GPA. This suggests that the relationship between total risks and academic performance influences the number of credits earned by students. That is, the more total risks a student has, then they are likely to have more withdrawn courses, and less credits earned. GPA may not be reflected by the total risks students have because withdrawing from courses provides academic relief or causes students to seek out more academic support. Withdrawing from courses may protect students from lowering their GPAs as a result of eradicating courses in which their performance was poor. Being able to withdraw from courses, which would negatively impact academic performance, may be protective for students with more risks. On the other hand, it may also be a risk to their persistence as they earn fewer credits as a result of withdrawing. Without knowing when
students withdrew from their courses, a comparison to GPA does not permit inference about their relationship to one another. This inability to measure these relationships points to the need for future research in this area.

Total risks were not significantly related to mental health. This may be due to the overall positive findings of parental press, valuation of high school and college, academic performance, and academic integration among the population in the study. Since students in this sample were receiving more support and performing well academically, their risks may not have had negative effects on their mental health. Moreover, their engagement in Student Support Services may address their risks for both academic and nonacademic factors. Also, students who have children or are married may have familial and financial support that helps in promoting positive states of mental health. Working full-time or attending college part-time may also promote skills such as responsibility, time management, and commitment.

Additionally, total “big” risks were not significantly related to academic and social integration either. This is surprising because Engle and Tinto (2007) found that students’ part-time enrollment status, children, or delayed entry into college were risks related to less engagement with other students and faculty (Engle & Tinto, 2007). In this study, it may be that these students have additional support or engage in activities and resources despite these risks. Student Support Services may be the primary support for some of these risks and be providing academic and social integration for these students through their involvement in this program.

**Limitations of the Current Study**

This study is an initial investigation to identify and measure particular factors contributing to the retention of LIFG students at LSU. Further research can expand upon these findings by addressing the limitations of this study. More specifically, this study relies on a
convenience sample within one university in one geographic region of the U.S., making it susceptible to bias. It also, as a cross-sectional study, limited the researcher’s ability to draw conclusions about changes over time. The current study did not use a random sample and thus the findings cannot be generalized to other populations, but only similar students at similar universities. Moreover, the particular demographic characteristics of this sample limited the generalizability of these findings. Additionally, the relatively small sample size and low response rate warrants even further caution when drawing conclusions about this population of students.

Respondent motivation and ability to self-report is also of particular interest when interpreting this study’s findings, as an incentive was offered. Students may have completed the survey to be entered for the incentive, and therefore not answered the questions without biases. Students who completed the survey may have also been more motivated to share their perspectives due to a variety of reasons (e.g., positive academic performance, higher self-esteem, positive feelings toward SSS, etc.). The small sample size may influence reporting as more academically inclined and higher motivated students may have completed the survey. Other students who chose not to complete the survey could have had particularly negative feelings about the research and therefore were less inclined to participate (e.g., less active in SSS services, negative perceptions of LSU, negative academic performance, poor self-esteem, not reading emails, etc.). By utilizing an online survey format, the researcher cannot determine the motivation of the students who completed the survey.

The measures used for the mental health components also pose limitations for the results of this study, including the reliability of the MHI-38. This study measured specific factors including psychological distress, psychological well-being, and provided the researcher with an overall mental health index score. While these measures are reliable, a more complex
measurement of mental health could allow for greater understanding of this population because little research has specifically targeted mental health needs within the LIFG student population. The current study may have exhibited a sampling bias in which only students with positive states of mental health were willing to answer the survey. This can possibly be explained by previous research noting that low-income populations were found less likely to seek out mental health services and had greater stigmas about accessing mental health services within their communities (Patel et al., 2007). Further research, with a greater sample and greater assurances of confidentiality are recommended to enhance the validity of students’ self-report for mental health needs.

There are limitations inherent to correlational research including the inability to determine causation and only allowing for the discovery of relationships among variables while more advanced statistical analyses can explore moderating and mediating effects among these variables. This is a preliminary study investigating the risk and protective factors inherent to affecting retention for this population, and is one of the first to examine their mental health needs. Further research can address these limitations and expand the knowledge base in these areas.

**Implications for Future Research**

The present study bridges multiple bodies of research to examine LIFG students. This includes key research on retention characteristics (Chen, 2005; Choy, 2001; Engle & Tinto, 2007) and mental health (Veit & Ware, 1983). It is the first known study to use the MHI-38 to specifically examine the interrelationships of mental health, risk factors, and protective factors within the LIFG student population. It showed that the interrelationships of “big” risks in congruence with mental health and academic performance are difficult to assess with a small
sample and only evaluated five of the seven “big” risks so future researchers should evaluate the
other two risks, having a GED and being financially independent. Thus, further research that
compares total risk factors to other retention characteristics is needed to advance the knowledge
about this population. The present study also paves the way for further research regarding the
mental health needs and problems of LIFG students, as well as identifies variables that may
potentially influence the retention of this population, such as academic performance, academic
integration, social integration, and use of resources.

Within the study, the characteristics of LIFG students indicated that they were
predominately African-American students, which was a minority racial/ethnic group within the
university examined. Since African American students made up the majority of LIFG students,
future research should examine what state and local characteristics guide this overrepresentation
of low-income, African American students. This study’s geographic location and historical
segregation may help to explain the disproportionalities evident among this sample’s LIFG
students. Future research should examine the contextual state-level factors related to LIFG
students. For instance, studies could explore regional differences in the demographic
characteristics of LIFG students and their families. Likewise, studies are needed to examine the
ways in which local education systems are engaged in helping these students attend college.

Similarly, a large number of students with disabilities were evident in this sample, much
more than in previous studies. More investigation of students’ disabilities may shed light on the
services LIFG students are obtaining in order to address some of their risks, while also
reinforcing a sense of need among this population. Future research can assess if students are
being identified in high school with disabilities, if there is a bias among minority students for
providing extra support, or if these results infer better reporting of disabilities for the overall
general student population. The examination of disabilities as a risk or protective factor should be evaluated among LIFG students to determine how this increase of reporting is affecting this population.

Just as race and disabilities fueled future research implications, the level of high school mathematics reported in this study showed that the majority of students took the highest level of mathematics (Pre-calculus or Calculus) prior to beginning college. Since pre-calculus and calculus were so largely reported, the current study could not examine if the level of mathematics taken by students was a risk or protective factor among the sample. Future research could examine this area in regard to other variables including academic integration and mental health to better understand how this relates to success in college. Future research may also examine other dimensions of the MHI-38 among LIFG students, as this study only assessed psychological distress, psychological well-being, and the overall mental health index. Subscales including life satisfaction, anxiety, depression, emotional ties, general positive affect, and loss of behavioral/emotional control, could be examined to further enhance the research regarding mental health for LIFG students. In addition, the current study could be used to compare LIFG students with the general student population.

Results from the current study also suggest that what happens for a student in high school is important for academic integration and academic success. Specifically, valuation of high school and parental press for college were related to academic outcomes. Existing research stated the importance of these variables as protective factors, but this study implies they may only be protective for academics. Social integration, for example, was not found related to parental press for high school. The strong correlation found between academic and social integration signify that if one is low, the other is likely low as well. Further research is needed to take a closer look
at variables that are protective from high school in order to understand how they relate to academics and social integration, as well as other variables affecting students while they attend college.

The protection of LIFG students entering state colleges and universities can be further examined to analyze the sample of LIFG students enrolling at these schools. For example, could the admission standards at LSU be high, thus “creaming” the potential LIFG students who are able to matriculate. Similarly, are the requirements for the Tuition Opportunity Program for Students, known in Louisiana as TOPS, so selective that students are unable to attend state universities and colleges? The continued research of this population in public institutions is important to evaluate in order to better understand the results of the current study.

In conclusion, the support and engagement of LIFG students was surprising within this sample, but those who are not receiving services from SSS may still be at an increased risk for drop out. The evaluation of differences among students receiving services, and those who are not, would be important for future research to assess within the LIFG student population. Further, the current study analyzed LIFG students at a single point in their college careers and across their various cohorts. It is important for future researchers to examine the outcomes of programs like Student Support Services over time. Since this study showed the various protective factors among this population while currently enrolled in higher education, it will be important to assess how this program effects students from a longitudinal perspective. The continual evaluation of these students, or among a single cohort, can help to show what factors were protective and helped them to graduate from four-year universities. It can also show how the program influences their entrance into the workforce and their income levels compared to those of their parents who did not attend college. Longitudinal research can also examine specific
pathways of resilience by tracking the engagement in activities and resources, at specific times, helped students to be retained and persist through their coursework toward a degree.

**Implications for Policy**

Just as future research can be influenced through this study, there are also similar implications that can be made for policy. As the nation is experiencing a push for enrollment and retention, the needs of LIFG students and policies for universities surrounding this population will be important to evaluate in the upcoming years. The current federal TRIO program, Student Support Services, provides services to these students to promote their persistence and retention at four-year universities. In 2007, there were 950 Student Support Services programs across the country serving approximately 200,000 students (Engle and Tinto, 2007). While programs across the country have had positive outcomes for LIFG students, only 200,000 of the approximately 4.5 million LIFG students currently enrolled in higher education receive these services. Funding and advocacy through policy reform will be needed to promote the extension of these programs. Ultimately, this may help address students’ risk factors and educational needs.

Additionally, LIFG students need their own funding in order to attend and remain in college. Pell Grants, given to low-income students, dropped from 62% enrollment to 45% enrollment in the year 2007 (Engle and Tinto, 2007; U.S. Department of Education, 2007). This means LIFG students are still experiencing a barrier in obtaining the funding they need to support their matriculation and retention in college. Policymakers, although providing Pell Grants and Work Study programs, are not reaching the intended student population eligible for this funding (Choy, 2001; Engle & Tinto, 2007). With tuition and fees increasing as a result of inflation and budget cuts across the country, grants and other forms of aid are needed at state and national levels to help institutions in supporting these students. The extension of stipends or
fellowships may also be needed to free more LIFG students from work and financial burdens to promote their level of involvement within their universities.

Further, policies of state and local education systems need to integrate college preparatory curriculum into schools. This curriculum can aid in preparing future LIFG students for college including offering study skills, advanced placement, and time management preparation. The ability for advanced coursework to be offered to LIFG students starts in communities and in schools who value and advocate for the funding and training needed to impact these students. The current study showed that this sample of LIFG students received good preparatory educations from their high schools; therefore, the legislature should continue to offer these courses and resources to students in high school. Also, high schools and preparatory programs need to be tailored to inform LIFG students about the various activities they should engage in while in college, including mentoring, tutoring, and academic advising. Policymakers could offer educational support for students on track to attend college by informing them of the benefits of these resources. Incentives, such as priority scheduling (used already by Student Support Services), should continue to be offered to LIFG students in order to help them be involved and promote their retention.

Lastly, policy can continue to promote students’ mental health services in college and university settings through understanding which students are at risk and which students are not. This study showed that positive states of mental health were positively related to higher academic performance in college. In addition, students with negative states of mental health may be at risk for lower academic performance, which is a risk to their retention. The large number of disabilities reported among the LIFG students within this sample also can be related to policy and raise questions about the risks among this population. Disabilities can affect academics and
social integration to college. Catering mental health outreach programs and disability services to students who exhibit academic risk factors such as lower grades, lower test scores, and lower levels of mathematics taken in high school may alleviate the risk factors causing students to drop out.

Provisions in services tailored to this population may also be required through policy reform, as students in this population who exhibit greater mental health needs may need additional support from clinicians who understand their various risk factors. Inversely, students with high levels of psychological well-being can still benefit from mental health services that promote wellness and overall self-care while in college. Outreach for mental health services may need to be changed at a policy level to offer more universal interventions and programs to students regardless of their intensity of need. It can also be reasoned that students from this study already have supports in place from Student Support Services and therefore are utilizing resources that help prevent mental health problems. The positive support of these programs can influence policymakers to understand that these services promote preventative care for this population and further resources are needed to continue to reach more students.

**Implications for Practice**

While policy influences the macro-level strategies for colleges and universities, high school and college-employed social workers provide direct practice and services to LIFG students. The results of this study have several implications for social work practitioners that address the various risk and protective factors of these students. These implications can be attributed to social workers in high school and college settings.

The findings of this study showed that students’ valuation of high school and college, as well as their experiences of parental press, were protective among this population. These results
seem to suggest that what happens in high school is important to a student’s college academic performance. Therefore, it is particularly important that high school social workers promote these factors. More specifically, social workers can provide and advocate for education for parents about colleges, financial aid, and resources. They can further educate students about the benefits of being academically integrated (i.e. relationships with faculty, tutoring, going to assistance centers, etc.) and the positive effects of living on campus and social engagement. Practitioners can assist in helping students be tested for disability services, as well as help minority students seek appropriate funding for college. All of these supports can be provided by high school social workers to help promote the retention and matriculation of LIFG students to colleges and universities across the country.

The current study also found that students, while in college, are primarily engaging in activities such as mentoring, tutoring, and academic advising during their freshman year. This has implications for college-employed social workers. As students are participating and utilizing activities that support their academic and social integration with the university, the ability for universities and counselors to promote and offer these services can be protective for this population. Research shows that living on campus, social integration, and participation in academic advising are protective, thus potentially supporting the use of first year programs or summer bridge programs can help integrate students living arrangements, coursework, and ability to receive resources including advising. Social workers can assist in targeting the risks of LIFG students by supporting their involvement in social activities. Specifically, social workers can educate on the benefits of these programs, advocate for their use, and organize activities for these students that promote engagement. They can establish rapport with students early during their adjustment to college or through summer bridge programs to create safe and support
environments so students feel comfortable attending academic advising sessions. Further, social workers can advocate for incentives for LIFG students who live on campus, while also promoting and organizing tutoring and mentoring programs. All of these resources and actions can promote the factors found protective for LIFG students in this study.

The ability for students to gain academic support is also important as tutoring showed high participation along with high performances of LIFG students thus far in college. Monitoring, warning, and intervening with students who engage in academic risk factors may be important as well for this population. This study shows students used academic advising more frequently than other services; thus the availability of counselors and resources are important in order to continue the engagement of students in these services. The same for mental health intervention and screening can influence practice in providing enough support and resources for students. Although this study did not indicate a high level of psychological distress within the population, a relative amount was expressed. Educating LIFG students on the resources available on their campuses in the event of mental health problems and having an appropriately trained and certified staff who understand the disparities of these students may be protective at large universities.

The integration of students into the campus community is also important for social work practice. Creating an environment that removes stigmas for ethnic/minority students and creates support for success can open communication and goals for students. Since high levels of parental press for college and valuation of college were found, the university in which the sample was selected may be implementing things that promote the coordination of involvement for parents and students in their academic experience. An institutional goal to support the outreach of resources to these students may be needed to eliminate barriers that exist for LIFG students.
Examples of extended services to support LIFG students would be to extend hours of support to accommodate LIFG students who work. Also, supports should provide additional information to students and families, provide free tutoring and printing to relieve financial burdens, and provide additional services of advising and orientation to the university for students.

Social work practitioners can specifically advocate for vulnerable students who have risks within this population. They can promote social justice by obtaining resources and programs targeted toward these students. They can provide quality and effective services to help close the educational gap between LIFG students and their higher income, non first-generation peers; while also adhering to culturally competent practice standards. Social workers are important in connecting the research, policies, and services surrounding LIFG students to influence change and promote the retention of this population.

**Implications for Social Work Education**

The current study also has implications for social work education. As LIFG students and their needs are becoming more apparent in universities and colleges, social work educators should consider infusing specific content related to this population of students into the coursework social workers receive. This study points to the need for social workers to receive continuing education about the changes in practice and policies surrounding disparities in education and the LIFG population. Social work practitioners are obligated to uphold the profession’s values and be attuned to the multifaceted needs of this marginalized and vulnerable, LIFG student population.

Master of Social Work (MSW) programs across the country can assist in educating their future social workers about the risks of these students and their needs in higher education. School social work courses can extend their curriculum to research and policies in college and
universities, rather than just K-12 schools. As this population continues to grow, there will be more social workers needed to assist in ameliorating the risks of these students and providing services that support their retention and individual needs.

Conclusion

It is well documented that LIFG students are six times less likely to earn a four-year degree than their higher income, non-first-generation peers (Mortenson, 2007). As the increasing number of LIFG students enroll and persist through college, their mental health, as well as risk and protective factors are significant in understanding their needs and ability to be retained. The current study shows that risk and protective factors, as well as mental health needs, are interrelated and important in understanding how to close the attainment gap taking place in higher education. This study has important implications for practice, policy, and research and further research can only help to close the educational gap for LIFG students in higher education. This is critical for social work research, practice, and policy because LIFG students are a marginalized and vulnerable population in great need of access to and success in higher education.
REFERENCES


APPENDIX A: RECRUITMENT EMAILS

Online recruitment email

Hello:

Your help is greatly needed. As a Master’s of Social Work Graduate Student at Louisiana State University, I am conducting research to examine the experiences of college students in Student Support Services. I need your help to conduct this research. If you agree to help you will answer some questions on an online survey that will take approximately 10 to 15 minutes to complete. At the end of the survey, you will be given the opportunity to be entered to win one of two 25-dollar Apple iTunes gift cards. Your name will in no way be attached to your answers on the survey.

You get to choose if you want to do this and you don’t have to answer any of the questions that you don’t want to. Or if you decide you don’t want to participate anymore, you can just stop responding to questions and close the survey window. There are no penalties for choosing not to participate.

Your responses, if you choose to participate, will be completely anonymous. The responses you provide will be collected with online survey software that is designed to secure your responses and provide you with confidentiality. We don’t think there are any bad things that could happen to you because you answer these questions. Results from this study however will inform us of college experiences of students at LSU and potentially guide programs within the university.

If you are interested in participating in this survey, the survey can be accessed at the following web address: [insert address]

Please complete the survey by [date three weeks after email sent date]. At that time, the survey will close. If you have any questions, please feel free to contact Annahita Ball at aball@lsu.edu (225-578-6117) or Samantha Bates at sbates6@tigers.lsu.edu. Thank you for your time!
In-person recruitment script

Hello,

This is my research study as a master’s student in social work. I would love to get your help in finding out more about LSU student’s college experiences, especially all of you in Student Support Services. I need your help to conduct this research. If you agree to help you will answer some questions on this paper survey that will take approximately 10 to 15 minutes to complete. At the end of the survey, you will be given the opportunity to be entered to win one of two 25-dollar Apple iTunes gift cards. When entering to win the gift cards, your name will in no way be attached to your answers on the survey.

Incentive next, name won't be attached, everything confidential, nothing bad should happen, will use results for xyz, no penalties, fill it out bring it up in box, email to win gift card, I will be here to answer questions.

Your response, if you choose to participate, will be completely confidential. We don’t think there are any bad things that could happen to you because you answer these questions. You get to choose if you want to do this and you don’t have to answer any of the questions that you don’t want to. Or if you decide you don’t want to participate anymore, you can just stop responding to questions and close the survey window. There are no penalties for choosing not to participate.

Please complete the following survey and turn it in to the box in the front of the classroom. Upon completion please write your LSU email address on the blank sheet of paper in the front of the classroom to enter to win the gift cards. If you have any questions please contact me, Samantha Bates, at sbates6@lsu.edu.

Thank you for your time!
Please read this document carefully before you decide to participate in this study.

**Purpose of the research study:** The purpose of this study is to learn about the experiences of LSU students.

**What you will be asked to do in the study:** This study will require the completion of a survey about your college experiences, demographics, and mental health needs. You do not have to answer any questions which you do not wish to answer.

**Total Time required:** Approximately 10-15 minutes.

**Risks and Benefits:** There are no known risks involved in completing this survey. Because the study involves questions pertaining to a students’ mental health, you may experience some discomfort when answering these questions. You may benefit by participating in this study through increased awareness and self-understanding. You will also be contributing to the knowledge that will help researchers further understand students’ college experiences. Nonetheless, if this study makes you feel uncomfortable, you may consider speaking to a counselor who will be able to help you with your reactions. You can contact a counselor through Louisiana State University Mental Health Services (Infirmary Drive, 225-578-8774). You may also contact the researchers if you have any further questions during or after participating in this study. Every effort will be made to keep the information you provide confidential.

**Confidentiality:** Your name and identifiable information will not be connected to the answers you provide on your survey. Efforts will be made to keep you study-related information confidential. However, there may be circumstances when this information must be released. For example, personal information regarding your participation in this study may be disclosed if required by state law.

**Voluntary Participation:** Your participation in this survey is completely voluntary. There is no penalty for not participating. You have the right to withdraw from the study at any time without consequence.

**Whom to contact if you have questions about this study:** If you have any questions concerning this study, you may contact Samantha Bates (sbates6@tigers.lsu.edu), Dr. Annahita Ball, Department of Social Work, Louisiana State University, Baton Rouge, LA 70808; 225-5786117; aball@lsu.edu. Any questions or concerns about your rights as a research participant in
Thank you for taking the time to complete this survey, which is designed to better understand risk and resilience among low-income, first-generation college students. Your input is important to us. The results of this study will be used to impact programs and influence existing data on retention in higher education.

All responses that you provide are confidential. In addition, no personal identifiers will be used in the reporting of these results.

**PART I: Information about You**

1. What is your age in years? ______ years

2. Please indicate your gender:  O Male   O Female   O Other

3. What is your race/ethnicity? (Choose one)
   
   O African-American/Black
   O Caucasian/White
   O Asian/Pacific Islander
   O Hispanic/Latino
   O American Indian/Alaska Native
   O Other: ______________________
   O Multiracial

4. What is your current marital status?
   
   O Single, never married
   O Married
   O Separated
   O Divorced
   O Widowed

5. How many persons under the age of 25 do you or your spouse support financially?  ________ persons

6. Is English your first language?
   
   O Yes
   O No
7. Do you have a disability documented with the Office of Disability Services?
O Yes
O No

8. Are you a U.S. citizen?
O Yes
O No

9. Are you a veteran?
O Yes
O No

PART II: Information about your mood, thoughts, and feeling over the last month
Mark the box by the ONE statement that best describes how things have been FOR YOU during the past month. All answers remain confidential.

1. How happy, satisfied, or pleased have you been with your personal life during the past month? (Tick one)
O Extremely happy, could not have been more satisfied or pleased
O Very happy most of the time
O Generally satisfied, pleased
O Sometimes fairly satisfied, sometimes fairly unhappy
O Generally dissatisfied, unhappy
O Very dissatisfied, unhappy most of the time

2. How much of the time have you felt lonely during the past month?
O All of the time
O Most of the time
O A good bit of the time
O Some of the time
O A little of the time
O None of the time

3. How often did you become nervous or jumpy when faced with excitement or unexpected situations during the past month?
O Always
O Very often
O Fairly often
O Sometimes
O Almost never
O Never
4. During the past month, how much of the time have you felt that the future looks hopeful and promising?

O All of the time
O Most of the time
O A good bit of the time
O Some of the time
O A little of the time
O None of the time

5. How much of the time during the past month, has your daily life been full of things that were interesting to you?

O All of the time
O Most of the time
O A good bit of the time
O Some of the time
O A little of the time
O None of the time

6. How much of the time, during the past month, did you feel relaxed and free from tension?

O All of the time
O Most of the time
O A good bit of the time
O Some of the time
O A little of the time
O None of the time

7. During the past month, how much of the time have you generally enjoyed the things you do?

O All of the time
O Most of the time
O A good bit of the time
O Some of the time
O A little of the time
O None of the time

8. During the past month, have you had any reason to wonder if you were losing your mind, or losing control over the way you act, talk, think, feel, or of your memory?

O No, not at all
O Maybe a little
O Yes, but not enough to be concerned or worried about
O Yes, and I have been a little concerned
O Yes, and I am quite concerned
O Yes, I am very much concerned about it

9. Did you feel depressed during the past month?

O Yes, to the point that I did not care about anything for days at a time
O Yes, very depressed almost every day
O Yes, quite depressed several times
O Yes, a little depressed now and then
O No, never felt depressed at all
10. During the past month, how much of the time have you felt loved and wanted?

O  All of the time  O  Some of the time
O  Most of the time  O  A little of the time
O  A good bit of the time  O  None of the time

11. How much of the time, during the past month, have you been a very nervous person?

O  All of the time  O  Some of the time
O  Most of the time  O  A little of the time
O  A good bit of the time  O  None of the time

12. When you have gotten up in the morning, this past month, about how often did you expect to have an interesting day?

O  Always  O  Sometimes
O  Very often  O  Almost never
O  Fairly often  O  Never

13. During the past month, how much of the time have you felt tense or “high-strung”?

O  All of the time  O  Some of the time
O  Most of the time  O  A little of the time
O  A good bit of the time  O  None of the time

14. During the past month, have you been in firm control of your behavior, thoughts, emotions, or feelings?

O  Yes, very definitely  O  Sometimes
O  Yes, for the most part
O  Yes, I guess so
O  No, not too well
O  No, and I am somewhat disturbed
O  No, and I am very disturbed

15. During the past month, how often did your hands shake when you tried to do something?

O  Always  O  Sometimes
O  Very often  O  Almost never
O  Fairly often  O  Never
16. During the past month, how often did you feel that you had nothing to look forward to?

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<tr>
<th>Option</th>
<th>Frequency</th>
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<td>Fairly often</td>
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17. How much of the time, during the past month, have you felt *calm and peaceful*?

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18. How much of the time, during the past month, have you felt *emotionally stable*?

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<td>A little of the time</td>
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19. How much of the time, during the past month, have you felt *downhearted and blue*?

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<td>O</td>
<td>A little of the time</td>
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20. How often have you felt like crying, during the past month?

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<th>Option</th>
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<td>Almost never</td>
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<td>O</td>
<td>Fairly often</td>
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21. How much of the time, during the past month, were you able to relax without difficulty?

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<td>A little of the time</td>
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22. How much of the time, during the past month, did you feel that your love relationships, *loving and being loved*, were full and complete?

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<td>A little of the time</td>
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<td>None of the time</td>
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23. How often, during the past month, did you feel that nothing turned out for you the way you wanted it?

O  Always    O  Sometimes
O  Very often O  Almost never
O  Fairly often O  Never

24. How much have you been bothered by nervousness, or your “nerves”, during the past month?

O  Extremely so, to the point where I could not take care of things
O  Very much bothered
O  Bothered quite a bit by nerves
O  Bothered some, enough to notice
O  Bothered just a little by nerves
O  Not bothered at all by this

25. During the past month, how much of the time has living been a wonderful adventure for you?

O  All of the time    O  Some of the time
O  Most of the time   O  A little of the time
O  A good bit of the time O  None of the time

26. How often, during the past month, have you felt so down in the dumps that nothing could cheer you up?

O  Always    O  Sometimes
O  Very often O  Almost never
O  Fairly often O  Never

27. During the past month, how much of the time have you felt restless, fidgety, or impatient?

O  All of the time    O  Some of the time
O  Most of the time   O  A little of the time
O  A good bit of the time O  None of the time

28. During the past month, how much of the time have you been moody or brooded about things?

O  All of the time    O  Some of the time
O  Most of the time   O  A little of the time
O  A good bit of the time O  None of the time
29. How much of the time, during the past month, have you *felt cheerful, lighthearted*?

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<td>Most of the time</td>
<td>O</td>
<td>A little of the time</td>
</tr>
<tr>
<td>O</td>
<td>A good bit of the time</td>
<td>O</td>
<td>None of the time</td>
</tr>
</tbody>
</table>

30. During the past month, how often did you *get rattled, upset, or flustered*?

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th></th>
<th>Sometimes</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>Very often</td>
<td>O</td>
<td>Almost never</td>
</tr>
<tr>
<td>O</td>
<td>Fairly often</td>
<td>O</td>
<td>Never</td>
</tr>
</tbody>
</table>

31. During the past month, have you been *anxious or worried*?

<table>
<thead>
<tr>
<th></th>
<th>Yes, extremely to the point of being sick or almost sick</th>
<th></th>
<th>Yes, very much so</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>Yes, quite a bit</td>
<td>O</td>
<td>Yes, some, enough to bother me</td>
</tr>
<tr>
<td>O</td>
<td>Yes, a little bit</td>
<td>O</td>
<td>No, not at all</td>
</tr>
</tbody>
</table>

32. During the past month, how much of the time were you *a happy person*?

<table>
<thead>
<tr>
<th></th>
<th>All of the time</th>
<th></th>
<th>Some of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>Most of the time</td>
<td>O</td>
<td>A little of the time</td>
</tr>
<tr>
<td>O</td>
<td>A good bit of the time</td>
<td>O</td>
<td>None of the time</td>
</tr>
</tbody>
</table>

33. How often during the past month did you *find yourself trying to calm down*?

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th></th>
<th>Sometimes</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>Very often</td>
<td>O</td>
<td>Almost never</td>
</tr>
<tr>
<td>O</td>
<td>Fairly often</td>
<td>O</td>
<td>Never</td>
</tr>
</tbody>
</table>

34. During the past month, how much of the time have you been *in low or very low spirits*?

<table>
<thead>
<tr>
<th></th>
<th>All of the time</th>
<th></th>
<th>Some of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>Most of the time</td>
<td>O</td>
<td>A little of the time</td>
</tr>
<tr>
<td>O</td>
<td>A good bit of the time</td>
<td>O</td>
<td>None of the time</td>
</tr>
</tbody>
</table>

35. How often, during the past month, have you been *waking up feeling fresh and rested*?

<table>
<thead>
<tr>
<th></th>
<th>Always, every day</th>
<th></th>
<th>Some days, but usually not</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>Almost every day</td>
<td>O</td>
<td>Hardly ever</td>
</tr>
<tr>
<td>O</td>
<td>Most days</td>
<td>O</td>
<td>None of the time</td>
</tr>
</tbody>
</table>
36. During the past month, have you been under or felt you were under any strain, stress, or pressure?

- Yes, almost more than I could stand or bear
- Yes, quite a bit of pressure
- Yes, some more than usual
- Yes, some, but about normal
- Yes, a little bit
- No, not at all

**PART III: Your experiences in HIGH SCHOOL**

Please answer the following questions about your **HIGH SCHOOL** experience.

Please state the extent to which your parents:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Encouraged you to work hard in high school</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>2. Talked to you about your high school classes</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>3. Encouraged you to continue your education after high school</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>4. Talked to you about what you were studying in your high school classes</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>5. Talked to you about homework assignments you had in high school</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>6. Helped you to select high school courses that would prepare you for college or work</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>7. Pushed you in high school to take the steps needed to make your plans happen</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
Please state the extent to which you agree that:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. High school classes gave you useful preparation for what you planned to do in life</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>2. High school taught you valuable skills</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>3. Working hard in high school mattered for your success in the workforce</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>4. What you learned in high school classes was necessary for your success in the future</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>5. You got a good education at your high school</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

SECTION IV: Information about you in COLLEGE
Please answer the following questions about your COLLEGE experience.

Please state the extent to which your parents:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Encourage you to work hard in college</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>2. Talk to you about your college classes</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>3. Encourage you to continue your education after college</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>4. Talk to you about what you were studying in your college classes</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>5. Talk to you about homework assignments you have in college</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>6. Help you to select college courses that prepare you for work</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>7. Push you in college to take the steps needed to make your plans happen</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
Please state the extent to which you agree that:

8. College classes have given me useful preparation for what I plan to do in life
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

9. College is teaching me valuable skills
   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

10. Working hard in college matters for my success in the workforce
    - Strongly Disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

11. What I learn in college classes is necessary for my success in the future
    - Strongly Disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

12. I believe I am getting a good education at my college
    - Strongly Disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

13. Prior to starting college, had you completed a FAFSA? (Free Application for Student Aid)
    - Yes
    - No
    - Unsure

14. Please indicate your highest level of high school mathematics taken:
    - Algebra I
    - Geometry
    - Algebra II
    - Trigonometry
    - Pre-calculus or Calculus
    - Other mathematics

15. Please select your high school GPA:
    - 2.0 or below
    - 2.0-2.5
    - 2.5-3.0
    - 3.0-3.5
    - 3.5-4.0

16. Please select your GPA after or during your first year of college:
    - 2.0 or below
    - 2.0-2.5
    - 2.5-3.0
    - 3.0-3.5
    - 3.5-4.0
17. Please select your current LSU GPA:
   O 2.0 or below         O 3.0-3.5
   O 2.0-2.5             O 3.5-4.0
   O 2.5-3.0

18. Please write your ACT score: (18-36) ____________  O I did not take the ACT

19. Please select your SAT score:
   O I did not take the SAT    O 1000-1199
   O Less than 600            O 1200-1399
   O 600-799                  O 1400 or more
   O 800-999

20. How many credits (hours) did you earn in your first year of college? (If you are a freshman, please list how many hours you will earn upon completion of your first year.)
    ____________  (1-120 hours)

21. Please indicate how many credits (hours) you have currently earned in college (upon completion of your Fall 2013 semester):
    ____________  (1-120 hours)

22. Please indicate the number of courses from which you have withdrawn while in college (received a “W”):
    ______  (1-10)

23. Did you enter college the summer or fall immediately following the end of high school?
   O Yes
   O No

24. What was your enrollment status in your first year of college?
   O Part-time (attended 6 hours or less)
   O Full-time (attended 12 hours or more)

25. Have you been involved in any type of mentorship program while at LSU (been a mentee)?
   O Yes
   O No (move to question 26)

   25a. If yes, when did you begin your involvement in this program?
      O Freshman year          O Junior year
      O Sophomore year         O Senior year

   25b. If yes, how often did you engage in activities or meetings with your mentor?
      O Never                   O Sometimes
      O Hardly ever            O Often
26. Have you ever been involved in any type of *tutoring* while enrolled at LSU (been the one tutored)?
   O Yes 
   O No (move to question 27)

   **26a.** If yes, when did you begin your involvement in this program?
   O Freshman year  O Junior year
   O Sophomore year  O Senior year

   **26b.** If yes, how often did you engage in *activities or meetings with your tutor(s)?*
   O Never  O Sometimes
   O Hardly ever  O Often

27. Have you ever been involved in any type of *academic advising* while enrolled at LSU?
   O Yes 
   O No (move to question 28)

   **27a.** If yes, when did you begin your involvement in this program?
   O Freshman year  O Junior year
   O Sophomore year  O Senior year

   **27b.** If yes, how often did you engage in activities or meetings with academic advisors?
   O Never  O Sometimes
   O Hardly ever  O Often

28. **How often do you…**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Hardly Ever</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Attend career-related lectures?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>b) Participate in study groups with other students?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>c) Talk over academic matters with faculty?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>d) Meet with an advisor concerning academic planning?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>e) Have contact with faculty outside of class?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>f) Go to school assistance centers?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>g) Participate in school clubs?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

29. Do you currently have a job?
   O Yes 
   O No (move to question 30)
29a. If yes, how many hours are you working per week on average?
   - Less than 5
   - 6-10
   - 11-14
   - 15-19
   - 20-24
   - 25 or more

30. Please indicate your primary housing location during your first year of college:
   - Campus housing
   - Off-campus housing
   - With parents/relatives

31. Please indicate your current primary housing location:
   - Campus housing
   - Off-campus housing
   - With parents/relatives

32. Within the past calendar year, how often have you used…
   Please rate on a 10 point scale (1 = Never, 5 = Sometimes, 10 = Very Often)

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Sometimes</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSU Mental Health Services</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>LSU Student Health Center</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>LSU Office of Multicultural Affairs</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

33. Do you consider yourself an active member of Student Support Services?
   - Yes
   - No
THANK YOU!

Please turn this survey in to the box located to the front of the room.

You could win one of two $25 iTunes gift cards!

To enter the drawing, turn in your survey and sign your LSU email on the blank sheet of paper in the front of the room.

We will conduct the drawing mid-semester and email you if you win!
APPENDIX C: LSU IRB APPROVAL

Application for Exemption from Institutional Oversight

Unless qualified as meeting the specific criteria for exemption from Institutional Review Board (IRB) oversight, all LSU research projects using humans as subjects, or samples, or data obtained from humans, directly or indirectly, with or without their consent, must be approved or exempted in advance by the LSU IRB. This form helps the IRB determine if a project may be exempted, and is used to request an exemption.

- Applicants, please fill out the application in its entirety and include the completed application as well as parts A-F, listed below. When submitting to the IRB, please complete the project application to the IRB Office of a member of the Human Subjects Screening Committee. Members of this committee can be found at http://

- A Complete Application Includes all of the Following:
  (A) A copy of this completed form and a copy of parts B through F.
  (B) A brief project description (adequate to evaluate risk to subjects and to explain your responses to Parts A & C).
  (C) Copies of all instruments to be used.
  (D) If this proposal is part of a grant proposal, include a copy of the proposal and all recruitment material.
  (E) The consent form that you will use in the study (see Part 3 for more information.)
  (F) Certificate of Completion of Human Subjects Protection Training for all personnel involved in the project, including students who are involved with testing or handling data, unless already on file with the IRB. Training link: http://phhp nårctraining.com/users/login.php

1) Principal Investigator: Anahita Bari

Rank: Assistant Professor

Dep: Social Work
Ph: 225-578-6117
E-mail: abari@lsu.edu

2) Co-Investigators: Please include department, rank, phone, and e-mail for each.

* If student, please identify and name supervising professor in this space

Samantha Bates, MSW Student, School of Social Work, states@lsu.edu (Anahita Bari, Supervising Professor)

3) Project Title: Analysis of the Risk and Protective Factors among Low-Income First-Generation College Students

4) Proposal? (yes or no) no

If Yes, LSU Proposal Number

Also, if YES, either

- This application completely matches the scope of work to the grant OR

- More IRB Applications will be filed later

5) Subject pool (e.g., Psychology students): Students enrolled with LSU Student Support Services

*Circle any "vulnerable populations" to exclude (children, those with severe mental disabilities, pregnant women, elders, etc.) Projects with incarcerated persons cannot be exempted.

6) PI Signature

Date 11-19-2013 (no per signatures)

** I certify my responses are accurate and complete. If the project scope or design is later changed, I will re-submit for review. I will obtain written approval from the Authorized Representative of all non-LSU institutions in which the study is conducted. I also understand that it is my responsibility to maintain copies of all consent forms at LSU for three years after completion of the study. I will keep LSU before that time the consent forms should be preserved in the Departmental Office.

Screening Committee Action: Exempted

Signed Consent Waived: Yes

Review at

Signature

Date 11-20-13

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VITA

Samantha Bates received her Bachelor of Science in Psychology from Louisiana State University and is currently a candidate for her Master of Social Work (MSW) degree from Louisiana State University. While pursuing her MSW, Samantha interned at Louisiana State University Student Support Services and Mental Health Services over the last two years. These internships have provided her skills in areas of counseling and psychotherapy for students facing personal, familial, developmental, academic, and social issues. Upon completion of her MSW, Samantha plans to enroll in a Ph.D. of Social Work program to continue her research and become a tenured professor in the field. Her career goals include participation in research that supports culturally competent practice and serving the diverse, vulnerable communities in the Louisiana and Delta region. She hopes to generate opportunities for students through scholarship and education to impact social problems and create change.