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Financial Stress in Undergraduate Students

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This is to certify that the doctoral study by

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Walden University
2020

Abstract

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MBA, Coastal Carolina University, 2013

BS, Coastal Carolina University, 2009

Project Study Submitted in Partial Fulfillment

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Abstract

Undergraduate students are a vulnerable population faced with college costs and a lack of financial management knowledge, issues that have led to high student debt, failure to repay this debt, and sometimes dropping out of college. Facing these financial matters often serves as a leading source of stress, which, according to Selye's stress theory, can negatively affect the lives of these college students, but may also be experienced differently by various demographic groups. This quantitative study compared financial stress reported on an anonymous online National Survey of Student Engagement (NSSE) financial stress survey by respondents from a stratified random sample of 2,130 undergraduate students across all 4 years of a public university in the Southeastern United States. Multiple regression analysis was used to determine if a relationship existed between financial stress and demographic characteristics including grade classification (first-year, sophomore, junior, senior), sex, race/ethnicity, and parental educational levels. The only statistically significant relationship was between NSSE financial stress index scores and grade classification ($p = .039$). Most literature on financial stress of college students and the findings reported by NSSE focus on first-year and senior students; however, this study showed an increase in financial stress index scores for sophomores and seniors, suggesting the need for interventions beyond those typically offered in the first and final years of college. Findings were used to develop a policy recommendation on the need for financial literacy education to address financial stress, decrease loan default rates, and improve academic outcomes such as retention and graduation, especially for demographic groups who already face multiple barriers to college success.

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Dedication

This study is dedicated to my husband, Jamal Hicks. When my arms are tired, you hold them up. When my eyes are weary, you brighten the lamp. When my soul is heavy, you lighten the load. Thank you for walking this path with me and never giving up on me, even when I was in danger of giving up on myself.

This study is dedicated to my parents, Herbert and Sharron Kite, my family, and my friends. Everything I am and any success I experience is because of you. Mom, I wish you were able to see me finish this accomplishment, but I know you are proud. Dad, thank you for always being there and teaching me the value of hard work, sacrifice, and that the world is beautiful. Thank you to my friends and family for grace during my absence, help in my distress, and love in my journey.

Finally, this study is dedicated to other first-generation college students who were raised in poverty. Education is such a powerful tool that no one can take from you. May the words in these pages show you that not everyone has financial security, and may my success show you that it doesn't have to hold you back. Keep going!

Acknowledgments

I would like to acknowledge Donna Jacobs. In sixth grade you made me promise that I would send you a copy of my first published work. It took a little longer than I planned, but here it is. Thank you for believing that I would one day finish a journey like this.

I would like to acknowledge the fearless financial aid administrators with whom I have had the pleasure of working throughout my career. Your tireless efforts to fight for college affordability and access despite adversity has inspired me to write this study.

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Section 1: The Problem

The Local Problem

The collegiate experience is heralded as a time of opportunity and growth for students. This opportunity and growth do not come without challenges. Finances are often one of those challenges as most students experience a greater sense of financial responsibility than ever before. The National Survey of Student Engagement (NSSE) reported in 2012 that financial stress existed among 60% of nearly 15,000 surveyed students and affected academic performance, and then followed up by reporting that financial stress remained a concern among college students several years later (NSSE, 2012, 2015). In 2018, the National College Health Assessment indicated that students listed finances as the second most traumatic or difficult challenge faced during their undergraduate experience, following academics (American College Health Association, 2018). Financial stress has been found to be significantly related to anxiety and correlated to academic distress as many college students report shouldering the burden of college tuition alone (P. J. Jones, Park, & Lefevor, 2018). Current research on financial stress is limited and focuses on short-term effects of financial stress on college students. For example, financial stress research often cites financial hardships for students in terms of the inability to buy books and supplies for courses, delayed access to healthcare, and student debt levels. Few studies have attempted to identify or measure the long-term effects of financial stress (Goldrick-Rab, 2016). Although the United States' economy has substantially improved since 2012, with the rising costs of higher education surpassing inflation rates, more students are turning to student loan debt to finance their

degrees (Holter & Seganish, 2014; Nica & Câtâlina-Oana, 2017). Students from all types of backgrounds, often unaware of the exact amount of student debt accrued, are facing negative consequences of this increased financial stress, including lower graduation rates and lower reports of achieving academic goals (Baker, 2019).

Students at State University (pseudonym), a public, 4-year institution in the Southeastern United States, are not immune to financial difficulties. Of students attending the institution in 2018-2019, 68% used some type of student loan. Federal student loans were obtained by 65% of students attending the institution. The yearly average student loan debt was $10,152 (National Center for Education Statistics [NCES], 2019). Despite this accrued debt, the institution had low first-year retention and 6-year graduation rates of 68% and 47%, respectively. Students who leave State University were also increasingly failing to repay student loans, with the number of students in default doubling between 2015 and 2016 to be 8.3% (NCES, 2019).

Although State University participates in the NSSE surveys, they did not participate in the 2012 or 2015 administrations of the NSSE Experimental Financial Stress Scale. Therefore, a gap in practice existed in the assessment of students' financial stress. Failure to recognize students' stress and failure to equip them with coping strategies and financial knowledge may lead to poor financial decision making, negatively affecting the lives of college students and society. Low levels of financial knowledge affect society in saving and investment decisions, debt management, retirement planning, stock market participation, and wealth and income distribution (Lusardi & Mitchell, 2014). Insufficient financial knowledge and skills have been

identified as contributors to economic and financial crisis (Mitchell & Lusardi, 2015). In the current climate of economic changes, identifying and measuring financial stress has great importance locally and globally. Increasing student loan debt and the stress of repaying that debt is not a new issue, but recent research has linked these issues to decreases in consumer spending, slowing the economy, and decreases in public service employment, leaving many vital career fields with critical staffing levels (Cornelius & Frank, 2015).

Rationale

I conducted a quantitative study assessing student financial stress at State University to help determine if State University leaders should consider an intervention to reduce stress and increase financial literacy among the student population. As financial literacy becomes more important in higher education policy, addressing such stress could become very important to State University. Mandates for financial education in institutions using federal funding, like State University, have become a popular topic among legislation, especially in debt education (Perna, Kvaal, & Ruiz, 2017). Recent studies have also highlighted inequities among marginalized demographic groups in perceptions of higher education affordability. Creating avenues to identify and address those inequities is also becoming a very important part of discussing affordability and access in higher education (Warnock, 2016). The purpose of this study was to assess the levels of financial stress for students from several demographic groups at State University and determine if there were differences between them. I used a cross-sectional quantitative survey design (see Creswell, 2012) to measure financial stress for

undergraduate students, with analyses of student subgroup demographic characteristics, including sex, race/ethnicity, and parental education levels. A multiple regression analysis was used to analyze the survey data (see Creswell, 2012). Based on the findings of this study, a policy recommendation addressing ways that students might become more financially literate, thereby reducing their financial stress, was created to propose to institution administrators.

Definition of Terms

The terms listed below appear in the literature as important key elements for financial stress and are examined in greater depth in the literature review.

Academic success: Consists of "academic achievement, engagement in educationally purposeful activities, satisfaction, acquisition of desired skills and competencies, persistence, attainment of educational outcomes, and post-college performance" (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006, p. 5).

Coping strategies: Coping strategies are ways individuals attempt to manage stressors (Lazarus & Folkman, 1984). Positive coping strategies include counseling, exercise, meditation, religious affiliation, and discussion with family, friends, and peers, whereas negative coping strategies include avoidance, social withdrawal, binge eating or drinking, substance abuse, and self-harm (Lazarus & Folkman, 1984).

Financial stress: Anxiety associated with an individual's current personal monetary situation (Britt, Ammerman, Barrett, & Jones, 2017).

First-generation student: Students with neither parent having earned a bachelor's degree (Lundberg, 2012).

Grade classification: An undergraduate student's classification in college: first-year, sophomore, junior, or senior; also referred to as class level (NSSE, 2020).

Persistence: A student's ability to complete a degree at the original institution of enrollment or at subsequent institutions through transferred work (Tinto, 2017).

Stress: A nonspecific response of the body to any demand for change; this response is often a physical reaction to a person's perception that a demand exceeds the ability to mobilize means and resources (Selye, 1956, 1974).

Stressor: An external experience or demand. Stressors can be positive or negative and can range from major life events, such as starting a new job, having a child or the death of a loved one, to minor challenges, such as completing school assignments (Selye, 1956).

Student success: A student's ability to accomplish outcomes in several areas, including academic achievement, satisfaction, skills and competencies, persistence, attainment of learning outcomes, and career success (York, Gibson, & Rankin, 2015).

Significance of the Study

In this study, I addressed the local problem of identifying the level of students' financial stress at State University. Financial stress has been linked to decreased grade point averages, increased overspending, and increased student debt (Letkiewicz, 2016). Furthermore, financial stress is also believed to decrease academic and career self-efficacy in college students (White & Perrone-McGovern, 2017). The negative effects of financial stress on college students requires attention from higher education leadership. Findings from the study are an original contribution to State University in that financial

stress has not been measured in students throughout the history of the institution. This study provided insight into the various levels of financial stress among different student demographic groups and the need to educate students in financial matters.

Providing education on financial management for students may also create positive social change. Increasing knowledge of financial skills could allow students to manage finances successfully, possibly leading to improved academic performance, career advancement, greater lifetime earning potential, and loan repayment success. In turn, the skills developed may help decrease overall student loan debt and encourage students to make beneficial economic decisions. Higher levels of financial literacy among the population may also lead to greater economic activity in the United States through more planning, saving, investing in stocks, wealth accumulation, lower debt levels, increased repayment levels, and retirement planning (Mitchell & Lusardi, 2015). Higher education is becoming more important in the upward social mobility process and those institutions that embrace their role in this process are often advantaged compared to their peer and aspirant competitors as prospective students may be seeking institutions that focus on this type of social change (Cornelius & Frank, 2015).

Research Question and Hypotheses

The research question (RQ) for this study was designed to determine if financial stress can be predicted by grade classification (first-year, sophomore, junior, senior), race/ethnicity, sex, and/or first-generation status. The quantitative question, with its corresponding null and alternative hypotheses, to be addressed was as follows:

RQ: Which of the following demographic characteristics predicts students' financial stress: grade classification, sex, race/ethnicity, and parental education levels?

H_0: None of the demographic characteristics is a significant predictor of students' financial stress levels.

H_1: At least one of the demographic characteristics is a significant predictor of students' financial stress levels.

Review of the Literature

In this section, I present a review of the literature relevant to a quantitative study of financial stress in undergraduate students belonging to various demographic subgroups. Specifically, this section will include the literature-review strategy, theoretical framework of the study, and relevant research studies on financial stress, coping with financial stress, and financial stressors commonly experienced by college students. This review also contains information about how these stressors affect college students from various demographic subgroups, both academically and personally. Finally, this section also incorporates information on financial stressors and the effects of those stressors on college students as a whole and on the local population of the study. Literature related to the social, psychological, and educational aspects of financial stress in college and university students is reviewed.

Literature Search Strategy

I used several databases from different disciplines to identify and analyze research articles. These databases included EBSCOhost, Psych Info, ERIC, Academic Source Complete, Education Source, and ProQuest. The key search terms included *stress*,

coping, *financial stress*, *financial anxiety*, *financial wellness*, *financial situation*, *financial help-seeking*, *financial self-efficacy*, *undergraduates*, *student debt*, *barriers*, *social class*, *socioeconomic status*, *first-generation*, *academic stress*, *indebtedness*, *financial health*, *financial therapy*, and *financial adaptations*. Advanced searches were conducted with Walden University library resources and included these terms: *Selye*, *stress theory*, *college students* or *undergraduates*, *coping* and *adaptation*, *financial* or *debt stress* and *financial strain* and *financial anxiety*. Google Scholar was also used to find more recent articles that cited the literature found in my search of the electronic databases.

Theoretical Foundation

Selye's (1956, 1974) theories on stress guided this study. *Stress* is defined as a physical reaction to a demand often originating due to the absence of an individual's means and resources or due to an external demand (Selye, 1956, 1974). A *stressor* is an external experience or demand. The interaction of the condition of an individual and stressor can produce stress (Smith, 1987). Stressors can be positive or negative and can range from major life events, such as the death of a loved one, to minor challenges, such as completing school assignments. Stress is increasingly becoming a challenge for college students and their mental health. Studies have found that up to 75% of students admit to experiencing stress at various levels throughout their time in college (Garett, Liu, & Young, 2017). Successful students see stressors as controllable, but unsuccessful students view stressors as outside of their control. People react to stressors and stress by forming mental and behavioral ways to manage or minimize the effects of conflicts that

occur either within themselves or because of external demands (Lazarus & Folkman, 1984). These reactions, thought processes, and behaviors are often referred to as *coping*.

Coping processes and behaviors are used to manage situations, relationships, and problems in the environment. Coping occurs in three stages: appraisal of a stressor, evaluation of how the stressor should be managed, and execution of a coping strategy (Lazarus & Folkman, 1984). Coping strategies often vary between individuals, even to the same stressor. These strategies can be categorized as problem-focused or emotion-focused. Problem-focused strategies are used when individuals try to change their relationship with the stressor by changing their behavior (Lazarus & Folkman, 1984). These strategies allow college students to take action to alter a stressful situation, increase resilience, and increase productivity. Emotion-focused coping strategies are used when individuals try to reduce their emotional responses produced by interacting with stressors (Lazarus & Folkman, 1984). Examples of students' use of these strategies include exercising, watching TV, studying more, or talking to a counselor about their emotions. Maladaptive emotion-focused coping strategies often include substance abuse, smoking, excessive drinking, and depressive behavior, all of which are becoming increasingly common in the list of challenges faced by college students (Thomas, Hodge, Kotkin-Jaszi, & Mencia Ripley, 2017). Emotion-focused strategies, especially those that are avoidant, are often associated with higher stress levels in college students (Deatherage, Servaty-Seib, & Aksoz, 2014). Selye (1956) proposed that the ability to form successful coping strategies in reaction to stressors decreased the probability of an individual experiencing the negative effects of stress. Selye's theories on stress can form the

foundation for researchers to understand the effects of various stressors on the performance and behaviors of undergraduate college students. Selye's theory can also help leaders in higher education develop programming to help students form the successful coping strategies needed to negate negative effects of stress.

Review of the Broader Problem

Stress as a risk factor to college students. Anxiety caused from stressors is often cited as the most common mental health concern in college students (Center for Collegiate Mental Health, 2018). Samuolis, Barcellos, LaFlam, Belson, and Berard (2015) found that 12.4% of college students were diagnosed or received some type of treatment for an anxiety disorder. Even more concerning are the high estimates of those students experiencing stress and anxiety who do not seek assistance (P. J. Jones et al., 2018). Stress has been recognized as a significant risk factor for diminished physical and mental health in college students and can present several barriers to college persistence (Britt et al., 2017). College students are more at risk for stress and, consequently, at risk for decreased mental and physical health due to the precarious nature of adolescents' transitioning to adulthood (Sweet, Nandi, Adam, & McDade, 2014). Stress is frequently recognized as a barrier to academic performance (ACHA, 2018) and has been linked with increased levels of depression, as well as lower levels of sleep, body image, and self-esteem in undergraduate college students (Beiter et al., 2015). The relationships between stress and these unhealthy behaviors make research about stress and college students a priority for educators and policy makers.

Stress has negative effects on both personal and academic success (Bennett, McCarty, & Carter, 2015). Those students who identify as experiencing stress are more likely than their peers to take fewer credits, drop out of school, and place higher emphasis on working part- or full-time while enrolled in college (Britt et al., 2017). They are also more likely to experience concerns about grades, course load, and developing various types of relationships (Joshi, 2013). Stress and anxiety also have been found to be significantly increased in those students with lower levels of peer and familial support (P. J. Jones et al., 2018). Stress, therefore, becomes a barrier for many students to educational success in terms of retention, academic performance, and graduation (Coccia & Darling, 2016).

College students experience several stressors. They are often faced with the challenge of adapting to changes such as leaving home, being more independent, making autonomous decisions, competing with new students, obtaining greater responsibility, making new friends, maintaining positive study habits, learning how to navigate a new environment, and establishing overall positive well-being habits (Joshi, 2013). Other stressors also emerge in college students outside of academics, such as changes in social activities, the pressure to succeed, postgraduate planning, working with unfamiliar people and situations, changing eating habits, and changes in living environments (Acharya, Jin, & Collins, 2018; DaSilva et al., 2019). These changes, more academic course work, and taking on a new role as a college student can affect overall well-being (Choi, Bartholomae, Gudmunson, & Fox, 2016) and are possible threats and barriers to college students' academic success.

At-risk demographic groups. Selye (1956) explained that different individuals can react to stressors in different ways. Stressors often pose various degrees of risk to students in different demographic groups. Individuals from different racial/ethnic groups, socioeconomic statuses, and sexes are affected by stressors differently than their peers. While studies have found that stress and anxiety are experienced across most sociodemographic groups (P. J. Jones et al., 2018), several demographic groups have been identified as being at risk in terms of college access, college affordability, and college completion (Adams, Meyers, & Beidas, 2016; Knaggs, Sondergeld, & Schardt, 2015; Murphy & Murphy, 2017). These groups are typically female, Black, Hispanic, first-generation, or students from low socioeconomic status backgrounds.

Grade classification. Beiter et al. (2015) conducted a survey of college students to determine if any relationships existed between depression, anxiety, and stress. Students who visited the Franciscan University Counseling Center were asked several questions to identify demographic characteristics of respondents, such as age, sex, marital status, and major. The researchers found significant differences within the sample depending on the grade classification of the respondents. The findings revealed that junior and senior students were the most stressed, anxious, and depressed when compared with first- and second-year students. The authors discussed the fact that although beginning college students are experiencing new challenges, they are also targeted more by institutional intervention programs. However, studies differ in findings concerning the period in which students experience the greatest amount of stress. Bayram and Bilgel (2008) suggested first-year students have the highest stress, but Naushad, Farooqui,

Sharma, Rani, Singh, and Verma (2014) found that juniors were more stressed. The discrepancy in these studies and the limited amount of literature in this area reflects the need for further research.

Sex. Male and female undergraduate students equally reported experiencing stressors, but females reported experiencing higher levels of academic stress and general anxiety, sometimes as much as 20% more than their male student peers (Joshi, 2013; Tran, Lam, & Legg, 2018; P. J. Jones et al., 2018). Gibson et al. (2014) studied the scores of college students on the Perceived Stress Scale and suggested that females were more vulnerable to perceived stress. Jones, Mendenhall, and Myers (2016) cited sex as an important consideration in measuring stress of college students. The authors found significant differences in levels of perceived stress between male and female students, but unlike Gibson et al., Jones et al. found that female students showed significantly lower levels of stress compared with their male peers. These studies and the discrepancies within them indicate that colleges and universities should continue sex-based research in the area of stress of college students.

Race/ethnicity. Race/ethnicity and social class are important variables to examine because they affect the experience of stress, coping, and health among individuals. Some researchers insist that race/ethnicity and socioeconomic status are inseparable and must be examined in combination (e.g., Brittian, Toomey, Gonzales, & Dumka, 2013). Higher socioeconomic status has been found to mitigate the negative effects of stress and coping; however, some studies have indicated that racial/ethnic minorities have differing abilities to use their available resources, leading to higher stress

levels (Assari, 2017). Racial/ethnic minorities who have long-term exposure to socioeconomic disadvantages tend to have higher rates of morbidity and mortality (Brittian et al., 2013). Those individuals with multiple marginalized minority identities may experience compounded effects of stressors. Race/ethnicity and social class are often examined as categorical or control variables (Dirette, 2014), but few studies explored the effects of an individual's race/ethnicity and social class as a source of stress. Assari (2017) studied socioeconomic status as a risk factor for those individuals from marginalized race/ethnicities. Life experiences of students related to their racial/ethnic and social class positions are critical experiences that must be studied.

In college, students from minority racial and ethnic groups are faced with stressors like other undergraduate students and emerging adults, but they may also be faced with other stressors such as racial discrimination, less access to resources, and lower familial support (Pittman, Cho Kim, Hunter, & Obasi, 2017). Students from minority racial and ethnic groups are at risk of undetected mental health concerns, elevated rates of negative mental health symptoms (suicidal ideations, attempts, etc.), and inability to self-advocate for treatment (Chen, Stevens, Wong, & Liu, 2019). In addition, students from minority racial and ethnic groups report minority status stress, imposter phenomenon, and poverty survival guilt (McClain et al., 2016). While these stressors are not exclusive to minority racial and ethnic groups, they are more commonly experienced by these students than their nonminority counterparts. Black and Hispanic undergraduate students are more likely to experience stress (Arbona & Jimenez, 2014). Fewer than 10% of Hispanic students are even minimally prepared for college entrance after high school

(Knaggs et al., 2015), and Black students, often less prepared for college-level curriculum, also have a more difficult time adjusting to a university setting (Cokley, Obaseki, Moran-Jackson, Jones, & Vohra-Gupta, 2014). Race/ethnicity may be a significant factor in determining how students are affected by stress in college.

Socioeconomic status. Those students who come from families with lower socioeconomic status also show lack of preparation for college entrance (Walsemann, Ailshire, & Gee, 2016). A 30% college enrollment gap and a 16% graduation gap has been reported between low-income students and those who are from families with higher incomes (Knaggs et al., 2015). Flores and Lin (2013) conducted a meta-analysis of the 2010 census and the 2003 and 2007 National Surveys of Children's Health and determined that several disparities existed between different race/ethnicity groups, including socioeconomic status. While only 8% of White households have been noted as poor, one third of Hispanic and Asian households and one quarter of Black households had poverty-level household incomes (Flores & Lin, 2013). This disparity in socioeconomic status is important to remember when studying college students because persons from lower socioeconomic status households often do not have access to vital resources for collegiate success. Students' socioeconomic status is often linked to educational attainment of their parents (Assari, 2018).

First-generation student status. Family barriers exist, especially in lower socioeconomic status families, including lower educational attainment of parents, having children or dependents at home, and income changes at home. These students face unique challenges in terms of degree completion because they are often the first in their

families to attend college. Assari (2018) found that parental educational attainment was a protective factor against mental health concerns in college students, especially those from lower socioeconomic statuses and minority racial/ethnic groups. Petty (2014), through a meta-analysis of various studies on low-income students, found the following:

> First-generation students were nearly 4 times more likely to leave higher education institutions without a degree when compared to their counterparts; were more likely to be older, married, have children, be employed, attend college less than full time; and were less involved in college activities. (p. 258)

These students often struggle with balancing their academic course load and working. Because their parents do not have a college education, support for higher education at home is lower. These students also have "poorer academic abilities, lack of social preparation, lack of self-esteem, and more financial constraints than their counterparts" (Petty, 2014, p. 258).

These combined challenges make it nearly impossible for students from these at-risk demographic groups to attend college. Those who can enroll in college often enroll in 2-year institutions and are less likely to complete their education (Knaggs et al., 2015). These students often face a barrage of academic and interpersonal barriers that can affect degree completion and mental well-being. Understanding the differences in stress experienced by students belonging to different demographic groups can help educators determine the most effective coping strategies for stress and the best methods to educate students on these coping strategies.

Coping strategies. Coping strategies are significantly related to levels of stress and anxiety in college students (Mahmoud, Staten, Lennie, & Hall, 2015). The most common coping strategies used by college students include using support groups comprised of family and friends to address these stressors (Solis & Durband, 2015). Other coping strategies include participating in extracurricular activities, exercise, relational attachments with friends and significant others, religious affiliation, and avoidance (Solis & Durband, 2015). Some students use maladaptive coping strategies that do not help with stress levels. These activities include drug and alcohol abuse, self-injury, poor eating habits, smoking, social withdrawal, and avoidant behaviors (Richardson, Elliott, & Roberts, 2013). Of concern in college students is the association of stress with alcohol consumption (Mahmoud et al., 2015). Heavy binge drinking is, and has been, a common coping mechanism among college students (Pedersen, 2017). College students have been more likely to consume alcohol than their counterparts who did not attend college (Harrell & Powell, 2014). While every individual copes with stress differently, early research suggested that resilience helped individuals cope with stressful events (Lazarus & Folkman, 1984). First, First, and Houston (2018) found that college students using coping resources as interventions are effective in reducing stress. Learning how to increase resilience can be a successful way to help manage and reduce stress. Interventions such as workshops, courses, programs, or other training opportunities are ways to increase resiliency by helping students develop coping mechanisms such as problem-solving skills (Beiter et al., 2015). Implementation of these

interventions needs to be tailored to college students to help them form resiliency to cope with stressors.

While many researchers have focused on coping mechanisms for managing college students' stressors, there is limited research on what causes the stress and meaningful ways to reduce that stress (Baker & Sgoutas-Emch, 2014). This is especially true in the area of financial management. Knowledge, beliefs, and behaviors in the areas of managing finances are an important part of the cognitive development of young adults (Britt, Cumbie, & Bell, 2013). This development has been linked to the overall well-being of young adults, and is, therefore, an important process to consider (Serido, Shim, & Tang, 2013). Financial independence, an important component of self-sufficiency, can often be a source of strain to students (Sorgente & Lanz, 2016). The lack of financial knowledge has been identified by researchers as indicative of a major issue that needs to be addressed in higher education (Archuleta, Dale, & Spann, 2013). Research on financial stress also illustrates that financial stress is often driven by emotions that lead students to react or cope with avoidant or maladaptive behaviors (Doehring, 2018).

Financial stress. *Financial stress* is defined as anxiety associated with an individual's current personal financial situation (Britt et al., 2017). Financial stress has been ranked as one of the top five stressors for college students (Britt, Mendiola, Schink, Tibbetts, & Jones, 2016) and has been linked with increased anxiety and depression as well as decreased academic performance among college students (Archuleta et al., 2013). P. J. Jones et al. (2018) found that financial stress was significantly related to anxiety and accounted for the most unique variance in anxiety after academic distress. Financial

stress has also been linked to decreases in student retention and the general well-being of college students (Britt, Canale, Fernatt, Stutz, & Tibbetts, 2015).

In a national study, approximately one third of students described their finances as "traumatic" or "very difficult" to handle (ACHA, 2018, p. 15). In another study that focused specifically on financial stress, one third of the participants indicated that financial stress negatively affected academic performance (Trombitas, 2012). Financial strain in college has also been linked to dropping out of college, general anxiety, depression disorders, and overall lower academic performance (Archuleta et al., 2013). Financial stress can cause barriers to education. Students experiencing financial stress and higher student loan debt are more likely to discontinue college, disengage from campus involvement, and disengage from social activities (Britt et al., 2017). In addition, research has linked financial stressors with decreased grade point averages (Britt et al., 2016). The financial decisions made by college students can affect many areas. Some students may be unaware of the effect their current financial decisions will have on their future such as academic performance, the ability to find a job after graduation, and the ability to graduate (Heckman, Lim, & Montalto, 2014). Students who report being stressed about finances often have lower academic performance and are less likely to complete their degree (Bennett et al., 2015). These serious consequences reflect the importance of investigating financial stress among college students.

Another area of financial stress that must be considered by higher education professionals is that of college affordability. The inflation-adjusted cost of attending public, 4-year institutions is 37% higher than 2008, continuing the 20 year trend of tuition

cost significantly increasing compared to the median income of families (Mitchell, Leachman, & Saenz, 2019). The costs of room and board and opportunity costs of attending school have also been increasing, raising the net price by 24% since 2008 (Ma & Baum, 2016; Mitchell et al., 2019). Several of these factors result in increased time to degree attainment, which also leads to higher debt amounts (Hogan, Bryant, & Overymyer-Day, 2013). As students are faced with these higher costs, many are turning to student debt. Most undergraduates rely upon federal or private loans to finance their collegiate education. Approximately 44 million borrowers currently hold student loans, with the total debt owed being about $1.5 trillion (Hornsby, 2020). Some type of loan is taken out by 69% of college students, borrowing on average $30,000 (Hess, 2019). The cost increases, combined with decreases in federal and state funding for these costs, have caused parents and students to worry about how they will afford college, and students to worry about their ability to obtain careers paying high enough to repay these loans after graduation (Gilligan, Bartholomae, Ray, Ray, & Gudmunson, 2019). Students who used loans to pay for college also reported higher levels of financial stress than those students who did not use student loans, sometimes disproportionately among different races (Baker & Montalto, 2019; Elliott & Lewis, 2015).

The link between student debt and personal well-being has been well-established through research (Ray et al., 2019; Richardson et al., 2013). Studies have linked financial problems related to student debt with poor mental health, decreased academic performance, and complete abandonment of higher education (Robson, Farquhar, & Hindle, 2017). Cost of living increases can have damaging consequences for students

with higher levels of debt (Robson et al., 2017). Even perceived debt (versus actual debt) has been linked to lower levels of retention and graduation (Britt et al., 2017).

For these reasons, administrators of institutions of higher education need to have a solid understanding of student vulnerability to debt, including the stressors that lead them to this debt. The combination of these stressors leaves students in a vulnerable position financially, which often leads to students continuing to make poor financial decisions and causing more financial strain (Boatman & Evans, 2017). Studies have also identified students who are self-funding their education, are under high financial stress, or perceive that they have a high level of student loan debt as being at higher risk of dropping out (Britt et al., 2017).

Student loan debt significantly affects many young Americans previously enrolled in college as well as those currently enrolled (Hornsby, 2020). Increased student loan debt has been linked to delayed financial decisions, such as marriage, family initiation, and home ownership (Hess, 2019). The stress from student loan debt has been associated with lower psychological functioning and decreased mental health (Brüggen, Hogreve, Holmlund, Kabadayi, & Löfgren, 2017). Increased educational debt has often led stressed students to accept jobs for monetary gain instead of professional career development (Johnson, O'Neill, Worthy, Lown, & Bowen, 2016). These decisions are leading to delayed interaction with the economy, having an overall effect on society (Mountain, Cao, Kim, Gutter & Michael, 2020). The increased debt and stress patterns of undergraduate students in the United States have also been found in other countries, such as the United Kingdom, Australia, New Zealand, and China (de Gayardon, 2018;

Norvilitis & Mao, 2013). Students are not only stressed about the cost of attending college (Beiter et al., 2015), for many students, college is the first time that they are responsible for the cost of everyday living expenses, leading to the need to understand other areas of financial management, such as budgets, paying bills, and credit cards (Oman, Vesely, Aspy, & Tolma, 2015).

Credit card debt is another area in which college students experience financial stress. More than two thirds of college students have experience with some type of debt (Sallie Mae, 2016). After student loans, credit card debt has been the next most common type of credit used. Over 60% of students reported worrying about credit card debt, both present and future debt (Sallie Mae, 2016). Students belonging to at-risk demographic groups are especially at risk in terms of credit card debt (Limbu & Sato, 2019). The highest influencer of obtaining and successfully managing credit card debt is parental input. When parents lack education and financial literacy, students report higher credit card debt and higher debt stress (Limbu & Sato, 2019; Peltier, Pomirleanu, Endres, & Markoo, 2013). Higher credit card debt has been linked to depression as well as high-risk health behaviors, such as drinking while driving, and drug use (Walsemann, Gee, & Gentile, 2015).

Other financial stressors also exist for college students. Bennett et al. (2015) found grade disparities between those students who were able to afford course materials such as books and those who were not. Working more hours to meet financial obligations is another stressor. Those students who worked during college had less time to study for their courses, reflected in lower grades and lower academic performance

(Bennett et al., 2015). Given the negative effects of financial stress on college students amid the overall stressors for college students, an important consideration is the effect of financial stress on students within various demographic groups.

Sex. Sex is has been found to be a significant variable in studies of financial stress (P. J. Jones et al., 2018). Taft, Hosein, Mehrizi, and Roshan (2013) administered a questionnaire to measure financial literacy. The data were then compared to the participants' responses to other questionnaires on financial wellbeing and levels of financial stress. The authors found a positive relationship between sex, financial literacy, and financial stress. Male students typically score higher in financial literacy than female students; research has also shown that men are typically more concerned with financial matters than women (Taft et al., 2013). However, women often report higher levels of financial stress (Serido, Shim, Xiao, Tang, & Card, 2014) and the highest confidence in financial knowledge but consistently score the lowest on financial literacy tests, typically lower than their male counterparts (Chinen & Endo, 2012). Females are more likely to be in debt compared to male students (Barboza, Smith, & Pesek, 2014). Males are often financially protected by more complex social support systems than their female counterparts (Tran et al., 2018). Financial strain for females is compounded when the female identifies with a racial minority group (Britt et al., 2017).

Race/ethnicity. Hispanic and Black students reported higher levels of financial stress than their White peers (Cadaret & Bennett, 2019; Olson-Garriott, Garriott, Rigali-Oiler, & Chao, 2015). In the literature on financial stress, race and ethnicity have been identified as factors related to the lack of financial knowledge needed for coping. For

example, Flores and Lin (2013) reviewed the literature on race/ethnicity and financial issues. Their analysis determined that Black and Hispanic students accrued higher levels of debt than other students (see also Scott-Clayton & Li, 2016). Many racial and ethnic minorities in the United States tend to struggle with psychological and financial difficulties due to their minority statuses and their low social class statuses that stem from their racial/ethnic minority statuses (Flores & Lin, 2013). Racial and ethnic minorities tend to be strongly represented among the lower social classes, have higher numbers of stressors and experience stress as more harmful than Whites, have a significant lack of resources, and have high exposure to risk factors and chronic stress (Flores & Lin, 2013). Racial and ethnic minorities have higher levels of poverty and lower levels of health insurance coverage (Assari, Nikahd, Malekahmadi, Lankarani, & Zamanian, 2017). The financial concerns found within these demographic groups create issues for college students from these racial and ethnic minority groups.

Socioeconomic status. First-generation college students (Sages, Britt, & Cumbie, 2013), students whose parents are more financially stressed (Serido et al., 2015), and students who come from lower socioeconomic statuses (Serido et al., 2013) report increased levels of distress. With higher levels of education, financial stress decreases in students from these demographic groups, but is still higher than their counterparts in other groups (Drever et al., 2015). Actual and qualifiable financial hardships or circumstances within a household have been determined to intensify the level of perceived stress surrounding the family financial situation (Park, Heo, Ruiz-Menjivar, & Grable, 2017).

These risks, combined with the already higher risks of attrition for these demographic groups of students, suggest a large problem for colleges. Although research exists on differences in academic performance, general stress, and college completion for these demographic groups, few studies have focused on financial stress. Because students within the various demographic groups have been shown to experience these issues to different degrees, in this study I will determine if financial stress also varies among these demographic groups at State University.

Coping strategies for financial stress. Most college campuses offer some assistance for college students who experience stress, such as counseling services (Choi, Bartholomae et al., 2016). However, little assistance is offered throughout most college students' experiences in areas of money management (Britt et al., 2015). While many campuses have sought ways to reduce students' stress and anxiety, financial stress has often been left out of these efforts or have not been consistently and cohesively addressed (Walstad et al., 2017; Warner & Agnello, 2012). This is unfortunate because several studies have shown that financial interventions early in college can have positive effects on financial behavior of students throughout their entire collegiate experience (Amagir, Groot, Maassen van den Brink, & Wilschut, 2018; Xiao, Ahn, Serido, & Shim, 2014). Due to a lack of financial experience, knowledge, and resources, students are left with very few coping mechanisms to prevent financial stress (Baker & Sgoutas-Emch, 2014). Many students who find themselves experiencing financial strain are not making positive financial decisions or seeking help to reduce their strain. They are increasing their

educational debt and increasing their credit card debt (Limbu & Sato, 2019). This cycle of poor decision making only adds to their financial stress.

Without financial education programs, this cycle continues. The Council for Economic Education (2020) reports that only 25 U. S. states require students to take a course in economics, only 21 states require a course in personal finance, and only 10 states include economic topics on standardized testing. Increased financial knowledge, positive attitudes towards finances, and better financial behaviors can help alleviate stress, but the lack of such educational efforts to teach college students how to obtain these resources provides no way to bring about these changes (Bhushan & Medury, 2013).

In the face of increasing financial strain and the public focus on educational debt, colleges and universities are seeking ways to provide resources to affected students. Financial counseling is offered in a variety of mediums (Britt et al., 2015; Festa, Holderness Jr., Neidermeyer, & Neidermeyer, 2019). Financial counseling has also become a part of successful academic advising (Karmelita, 2020). Colleges and universities are developing various financial literacy programs to increase financial knowledge and influence financial behaviors. Some researchers, however, feel that the counseling offered is not sufficiently comprehensive to assist students from the various demographic groups represented in college populations (Choi, Gudmunson, Griesdorn, & Hong, 2016).

Financial Stress at State University

Financial stress levels of undergraduate students were measured as an optional addendum to the 2012 and 2015 administrations of the NSSE, an annual survey of first-year and senior students at 4-year institutions across the country. This survey examines institutional supports for academic and personal developments in students. The NSSE survey is a measure of how undergraduates allocate their time and the outcomes achieved by going to college. The survey includes core questions and typically includes a set of optional experimental items appended to the survey for students taking the survey online (NSSE, n.d.). In 2012 and 2015, the survey included experimental questions related to financial stress. Although State University participated in the 2012 and 2015 surveys, the University did not opt to participate in the experimental items.

In 2012 and 2015, the survey asked approximately 15,000 first-year and senior students at 43 institutions about their experience with financial stressors. Examples of survey items included worrying about paying for college, having enough money for regular expenses, not purchasing required course materials, etc. Financial strain was a significant concern for more than a third of the students who participated in 2012. Notably, the findings also indicated that financial concerns were more important in decision making than academic concerns for many participants (NSSE, 2012). NSSE repeated the survey in 2015 and found that college students still were experiencing similar levels of financial strain, despite the improved national economic conditions. Because State University did not participate in this subset of questions in 2012 or 2015, financial stress has never been measured at the institution, nor has the effect of financial

stress among the student population been systematically examined using other methods. To answer the research question for State University, the same survey questions as used by NSSE in 2012 and 2015 were administered to student participants. In this study, I aimed to quantitatively measure financial stress and the differences in levels of financial stress among various demographic groups within the undergraduate students at the study site.

Implications

As they pursue a bachelor's degree, students at State University face significant obstacles, as indicated by the retention rate of 69% and lower graduation rate of 44% (NCES, 2019). Failure to obtain a degree prevents students from experiencing advantages as employment, economic self-sufficiency through higher earning potential, increased career options, and career satisfaction. Financial strain is a major issue in discussions on college affordability, retention, and academic performance. Based on the need to fully understand financial strain as an important area of student wellness, financial stress of undergraduate students must be measured. Measuring this stress in students, and particularly in students from already at-risk demographic groups, is the first step toward removing financial barriers to retention, graduation, higher income levels, and overall well-being. Identifying the extent of students' financial stress and presenting these results in a white paper with a policy recommendation may signal a call to action for higher education leaders at State University to implement financial literacy interventions. These efforts could affect positive social change by assisting in decreasing

the effect of identified barriers for undergraduate students, especially those from at-risk demographic groups.

Summary

In this section, I identified the problem of stress as a barrier to academic performance and overall wellbeing, and financial stress as a major stressor for undergraduate college students. Financial stress was also identified as a concern at State University and in society. In this section, Selye's theories on stress were examined to provide the theoretical background for the negative effects financial stress and adverse coping strategies can have on undergraduate students. Financial stress was identified as being even greater for students who are in various at-risk demographic groups, such as those who are female, those who are first-generation, and those students who belong to a racial/ethnic minority group. The review of literature indicated that although the effects of stress on college students are a major concern in higher education, financial stress research has been limited and therefore the topic needs to be further studied. This need for research is the foundation and rationale for my study, specifically to address the gap in practice created by lack of financial stress assessment at State University. Lastly, this section presented the positive implications of this project study for State University and societal change.

Section 2 contains the methodology of the study. The quantitative research design and approach are presented, as are the population, study site setting, and sampling strategy. Section 2 also contains a description of the survey instrument used to collect data in the study, which was derived from the experimental financial stress questions on

the NSSE 2012 and 2015. Data collection with procedures to protect participant rights is also described in this section, as are the methods used to analyze the collected data, identified assumptions, limitations, delimitations, and the scope of my study.

Section 2: The Methodology

Research Design and Approach

Researchers in social science fields use one of two research approaches: quantitative and qualitative (Creswell, 2013). Qualitative research is used to gain understanding of complex social and psychological problems by examining reasons, opinions, and motivations. Quantitative research examines problems in terms of measurable data, variables, and relationships between variables (Creswell, 2013). Relationships between variables are studied either by comparing groups or by relating the variables directly. The differences in these types of studies further categorize quantitative research into experimental, correlational, and survey designs (Creswell, 2013).

In my review of literature on stress and college students, I found that empirical studies were typically used in this research. In methodological terms, such studies were usually quantitative in nature and used self-reporting questionnaires or surveys to measure stress and stressors (see Richardson et al., 2013). Survey research was most often used to help identify trends within a given sample or population. Few studies were longitudinal or qualitative. In the area of financial stress, most studies were based on students in North America.

Survey research does not identify causality between variables (Jann & Hinx, 2016). It does, however, help researchers identify trends in data (Jann & Hinz, 2016). This research design is very useful when determining the characteristics of a specific population such as undergraduate students at State University, in this case.

Several limitations are found in measuring levels of financial stress. Financial stress, or the financial strain concept, has been limited by being defined by measurements of student loan debt, credit card debt, difficulties paying bills, difficulties in affording supplies for school, encountering stressful financial events, and students' inadequate methods of managing financial stress (Cadaret & Bennett, 2019; Richardson et al., 2013). Several studies (e.g., Archuleta et al., 2013; Lim, Heckman, Letkiewicz, & Montalto, 2014; Robb, 2017; Trombitas, 2012) measured financial stress based on the occurrence of stressful events instead of how stressed the student felt in the face of the event. Although this approach allowed stressors to be identified, it did not allow researchers to measure the degree of stress experienced by these college students.

Many instruments used in financial stress research included stressful events that only pertain to a limited sample of students, preventing the instruments from being considered sufficient for generalization (Richardson et al., 2013). Several studies (e.g., Hodson & Dwyer, 2014; Robb, 2017; Sweet et al., 2014; Turenan, & Hiilamo, 2014;) used the relationship between debt and health in college students as the primary indicator of financial stress. Other stressors, such as family financial difficulties, work habits, and cost of school supplies have been omitted from many studies on financial strain. Although most of these studies used nationally representative survey instruments for more specific populations, these instruments tended to focus on overall health risks and credit card debt (Limbu & Sato, 2019; Richardson et al., 2013). Using a survey instrument that measures several financial stressors and provides comparisons with

national-level data can provide a clearer understanding of levels of student financial stress at State University.

For this study, I used a cross-sectional quantitative survey design (see Creswell, 2012). The survey design was based on research conducted by NSSE in 2012 and 2015 regarding financial stress in college students. The experimental survey questions (Appendix C) were developed by NSSE and offered as a topical module addendum to the standard self-report survey for students (NSSE, 2012, 2015). For this research, data were collected using an online questionnaire at a 4-year public postsecondary institution. Approvals were obtained from the institutional review boards at the study site and Walden University (approval number 02-22-19-0475344).

Setting and Sample

For this study, State University's Office of Institutional Research, Assessment, and Analysis assisted me in surveying a random selection of 2,130 students stratified by grade classification at State University, a 4-year, public institution in the Southeastern United States that offers baccalaureate degrees in over 70 areas of study to an undergraduate population of approximately 10,000 students. I used a random sample of approximately 25% of the student population, stratified by grade classification in the pool of potential respondents. An invitation to participate in the study was emailed to 2,130 students at their school-issued email addresses obtained from the Office of Institutional Research, Assessment, and Analysis.

Statistical power analysis is often used to determine if the number of responses received will support a statistical test with sufficient power to draw a reasonable

conclusion. The statistical power refers to "the long-term probability, given the population, significance criterion, and sample size, of a null hypothesis being rejected" (Cohen, 1992, p. 156). Power of .8 is generally acceptable in quantitative research (Cohen, 1992). A power analysis for multiple regression conducted using G*Power 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009) with five predictor variables, alpha = .05, power of .8, and a small effect size of .02 indicated the need for 647 respondents, but a medium effect size of .15 would require only 92 respondents. When planning the study, it was determined that for approximately 2,000 students receiving the invitation, 647 respondents would indicate a response rate of 32% and 92 respondents would reflect a response rate of 5%, with the anticipated response rate being between these two possibilities. When the survey was conducted, the invitation email was sent to 2,130 students with 134 responses received, 127 of which were valid with no missing data, resulting in a 6% response rate. Using a stratified random sample of the entire population by grade classification created a sufficient sample, even with a low response rate, providing the ability to better generalize findings to the student population.

Instrumentation

For this study, I obtained permission (Appendix B) to use the experimental questions on financial stress from the 2012 and 2015 NSSE administrations that asked students to estimate how often they did or did not engage in certain activities and the extent to which they agreed with statements related to financial stress, along with five demographic items from the same survey (Appendix C). The NSSE survey has undergone extensive testing for validity and reliability; experimental survey questions are

exposed to the same standards (NSSE, 2012, 2015). The instrument has been tested for several types of validity including response process, content, construct, concurrent, predictive ability, known groups, and consequentiality (NSSE, 2012, 2015). The NSSE instrument has also been tested for reliability with Cronbach's alpha of various questions measuring from .76 to .79 (NSSE, 2012, 2015). The instrument has been screened for internal consistency, temporal stability, and equivalence (NSSE, 2012, 2015). These were important factors that were considered in determining the appropriateness of the instrument for this study.

The first nine items of the financial stress scale are measured on a 4-point scale from 1 (*Never*) to 4 (*Very Often*). These items ask students to estimate how often they did or did not engage in certain activities. The remaining five items are on a 6-point scale from 1 (*Not at All*) to 6 (*Very Much*) and ask students the extent to which they agree with statements related to financial stress. The responses to these 14 items were used to calculate a score for each respondent on NSSE's 66-point financial stress index (NSSE, 2015). The selected responses determined the score for each question, which were then totaled for the entire instrument, providing a financial stress index score ranging from 14 to 66.

Data Collection

This section describes the data collection process and describes the sample overall. The purpose of this study was to determine whether a relationship existed between financial stress in undergraduate students and their demographic group standings (grade classification in college, race/ethnicity, sex, and first-generation student status) at

State University. I wanted to know if the demographic characteristics of the students influenced their level of financial stress. This question was based on literature concerning financial stress of undergraduate students. Additionally, the selection of the independent variables was based on an experimental study conducted by NSSE to measure similar items (NSSE, 2012, 2015). NSSE (2015) found that first-generation, non-White students reported higher levels of stress; I also focused on these variables in my study. Stress levels at State University were predicted to be significantly related to these demographic variables.

In Spring 2019, volunteer participants were recruited through email invitations to students at State University sent by the Office of Institutional Research, Assessment, and Analysis to a stratified random sample of the student body from all grade classifications through school-issued student email accounts. The emails included the required consent information about the survey and a link to the survey. The instrument was administered, and data collected, through software maintained by the Office of Institutional Research, Assessment, and Analysis at State University and provided to me in a spreadsheet of anonymous survey responses. The frequency of responses to each demographic question and corresponding response percentages can be found in Table 1. The dependent (criterion) variable, the score from the 66-point financial stress index as defined by NSSE (2012), is a continuous interval-level variable. Five NSSE items related to the students' demographic characteristics, including sex, race/ethnicity, parental education (as an indicator of first-generation and socioeconomic status), and grade classification were also administered online with the survey.

Table 1

Response Frequencies for Demographic Questions

Demographic Question	Frequency	Percentage
Current Grade Classification in College?		
First Year	34	27.0
Sophomore	26	20.6
Junior	36	28.6
Senior	30	23.8
Select your sex:		
Male	33	26.2
Female	9	73.8
What is your racial or ethnic identification?		
American Indian or other Native American	1	0.8
Asian, Asian American, or Pacific Islander	2	1.6
Black or African American	23	18.3
White (Non-Hispanic)	90	71.4
Mexican or Mexican American	0	0
Puerto Rican	3	2.4
Other Hispanic or Latino	1	0.8
Multiracial	4	3.2
Other	2	1.6
I prefer not to respond.	0	0
What is the highest level of education that your parent completed (father)?		
Did not finish high school	9	7.1
Graduated from high school	40	31.7
Attended college but did not complete degree	23	18.3
Completed an associate's degree (A.A., A.S., etc.)	17	13.5
Completed a bachelor's degree (B.A., B.S., etc.)	30	23.8
Completed a master's degree (M.A., M.S., etc.)	6	4.8
Completed a doctoral degree (Ph.D., J.D., M.D., etc.)	1	0.8
What is the highest level of education that your parent completed (mother)?		
Did not finish high school	5	4.0
Graduated from high school	28	22.2
Attended college but did not complete degree	25	19.8
Completed an associate's degree (A.A., A.S., etc.)	20	15.9
Completed a bachelor's degree (B.A., B.S., etc.)	24	19.0
Completed a master's degree (M.A., M.S., etc.)	21	16.7
Completed a doctoral degree (Ph.D., J.D., M.D., etc.)	3	2.4

Note. $N = 126$.

The independent (predictor) variables sex and race/ethnicity are nominal categorical variables, whereas grade classification and parental education were ordinal. Parental education levels of father and mother were transformed into one nominal variable to identify first-generation college students (with neither parent having a bachelor's degree or higher).

Data Analysis

The Statistical Package for the Social Sciences (SPSS Version 25) software was used to analyze data. A total of 134 students responded to the survey, but only 126 responses were valid with no missing data. The overall mean score on the 66-point financial stress index was 38.80, with a standard deviation of 7.97. The range of respondents' scores was 19 to 55 on the scale that ranged from 14 to 66, which indicated a wide range of financial stress in the respondents.

Descriptive Statistics

Of the 2,130 invited participants, 134 students at least began the survey. There were several missing data points as not all respondents completed the entire survey. One respondent left Question 6 blank about the father's education status. Because all other questions were answered, I assumed the father had no 4-year college degree. Seven other respondents who left several survey questions blank were excluded from my data analysis. Omitting these missing data points left me with 126 valid responses to analyze

The respondents were predominately White and predominately female; 93 participants were females and 33 were males; 90 participants were White (non-Hispanic), 20 were Black or African American, and 13 were Other. The pool of respondents was

comprised of individuals from all grade classifications (34 first-year students, 36 sophomores, 36 juniors, and 30 seniors). The respondents were equally represented in terms of first-generation status: 66 of the respondents were first-generation college students, compared to 60 who had at least one parent with a 4-year degree.

The summarized responses to the first and second questions that were used to calculate the financial stress index score are provided in Tables 2 and 3. Perhaps the most profound response was that almost 50% of respondents worried about having enough money for regular expenses and worried very often about paying for college. In addition, 48% of respondents have investigated working more hours to pay for costs. Increased work has been linked to mental health issues and decreased academic performance (Bartolj & Polanec, 2018). Another response of concern was the high level of respondents who stated that they were not at all prepared for an unexpected expense of $500 or $1000, evidence of lack of financial preparation.

Table 2

Response Frequencies for Question 1

In your experience at your institution, about how often have you done each of the following?	Never (1)		Sometimes (2)		Often (3)		Very Often (4)	
	N	%	N	%	N	%	N	%
a. Worried about having enough money for regular expenses.	7	5.6	26	20.6	34	27.0	59	46.8
b. Worried about paying for college.	18	14.3	17	13.5	30	23.8	61	48.4
c. Carried a balance on a credit card,	53	42.1	19	15.1	22	17.5	32	25.4
d. Chose not to participate in an activity due to lack of money.	6	4.8	39	31.0	31	24.6	50	39.7
e. Chose not to purchase required academic materials (books, course packs, supplies) due to their cost.	25	19.8	37	29.4	29	23.0	35	27.8
f. Investigated transferring to a less expensive college.	48	38.1	39	31.0	16	12.7	23	18.3
g. Investigated withdrawing from college due to costs.	49	38.9	38	30.2	14	11.1	25	19.8
h. Investigate working more hours to pay for costs.	10	7.9	29	23.0	26	20.6	61	48.4
i. Investigated increasing your borrowing to pay for costs.	30	23.8	28	22.2	24	19.0	44	34.9

Note. $N = 126$

Table 3

Response Frequencies for Question 2

Please indicate the extent to which you agree with the following statements.	Not at all (1)		(2)		(3)		(4)		(5)		Very much (6)	
	N	%	N	%	N	%	N	%	N	%	N	%
a. Financial concerns have interfered with my academic performance.	17	13.5	19	15.1	13	10.3	21	16.7	22	17.5	34	27.0
b. Work schedule has interfered with my academic performance.	30	23.8	13	10.3	13	10.3	18	14.3	19	15.1	33	26.2
c. I could pay for an unexpected expense of $500.	70	55.6	22	17.5	14	11.1	11	8.7	3	2.4	6	4.8
d. I could pay for an unexpected expense of $1,000.	95	75.4	13	10.3	6	4.8	5	4.0	4	3.2	3	2.4
e. Considering what I pay for my college education, attending my institution is a good investment.	13	10.3	14	11.1	32	25.4	30	23.8	18	14.3	19	15.1

Note. $N = 126$.

Recoding of Data

The relationships between the variables were analyzed with multiple regression using SPSS software. This type of data analysis is often used to analyze the relationship between a dependent variable and two or more predictor variables (Creswell, 2013). Researchers typically use multiple regression to determine how much of the variation in the dependent variable is explained by the independent variables. In other words, multiple regression analysis is often used to determine the relative contribution of each of the predictor variables to the total variance of the dependent variable. Researchers can then predict dependent variable values given the independent variables (Creswell, 2013). In

this study, multiple regression was conducted to identify relationships between financial stress as the dependent variable and, as predictors, the various demographic variables—grade classification, sex, race/ethnicity, and parental educational levels.

Multiple regression requires data to be formatted as either continuous or dichotomous (Tabachnik & Fidell, 2001). The dependent variable in this study (the score on the financial stress index) is a continuous variable. The demographic group variables were nominal, except for grade classification and parent education level, both of which were ordinal. The nominal variables with more than two categories were recoded to dichotomous variables. Race was recoded into new dummy variables: Black or African American and Other. Because of the small numbers of respondents who identified their race/ethnicity as American Indian or other Native American; Asian, Asian American, or Pacific Islander; Mexican or Mexican American; Puerto Rican; Other Hispanic or Latino; Multiracial; Other; or preferred not to respond, these students' responses were reported in the Other group of races. The frequencies for these demographic groups can be seen in Table 1. Parent education data were transformed from ordinal to nominal by coding the responses into a new variable with two categories, first-generation participants and those who were not first-generation students. These dichotomous variables allowed the data to be correctly entered in the multiple regression analysis.

Tests of the Assumptions

Several tests were also conducted to determine if the multiple regression analysis was the best means to analyze the data. These tests addressed several assumptions that must be met in order to conduct a meaningful regression analysis. The first assumption

that must be met in a multiple regression analysis is that there is one dependent variable that is measured at the continuous level and that two or more independent variables are measured at the nominal level. In this study, the financial stress index serves as the continuous dependent variable and the demographic categories serve as the nominal, independent variables.

Another assumption that must be met is independence of observations. This was assessed by using the Durbin-Watson statistical test in the SPSS software. The Durbin-Watson value can range from 0 to 4; if the residuals are uncorrelated, meaning that there is independence of observations, the value will be approximately equal to 2. Based on the analysis, there was independence of observations, as assessed by a Durbin-Watson statistic of 1.831. Another assumption that must be met is that there is a linear relationship between the independent and dependent variables collectively and between each independent and dependent variable. This assumption was addressed by creating scatterplots and partial regression plots in SPSS. The normal P-P plot showed the points were close to the diagonal line indicating linearity as shown in Figure 1 with the financial stress index score as the dependent variable. Transforming the variables into dummy dichotomous variables also reiterated a linear relationship.

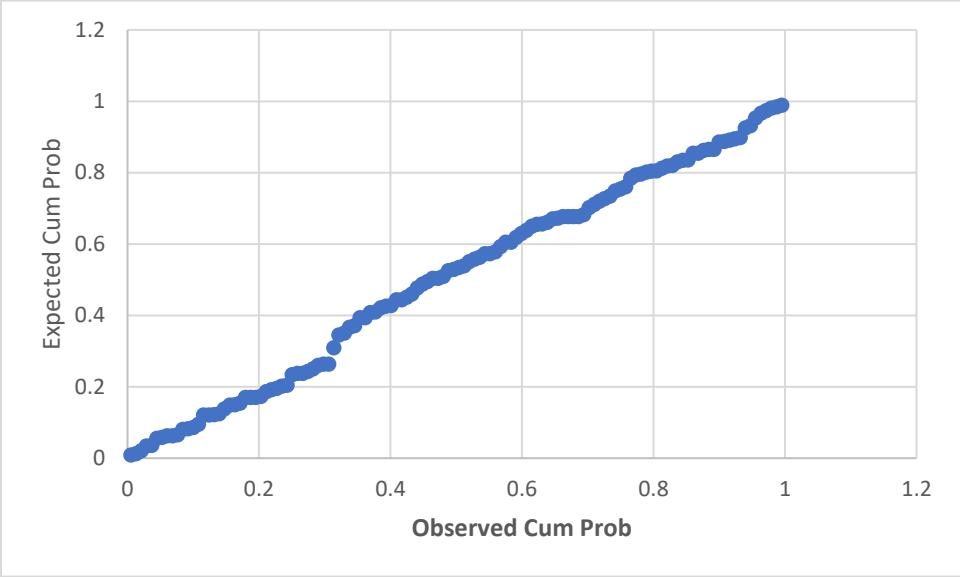

Figure 1. Normal P-P plot of regression standardized residual.

The data also must show that the variances along the line of best fit are similar to meet the assumption of homoscedasticity. There was homoscedasticity, as assessed by visual inspection of the plot of studentized residuals versus unstandardized predicted values in Figure 2. The data also must not indicate multicollinearity, highly correlated independent variables. This assumption was also tested in SPSS by reviewing correlation coefficients and tolerance values. There was no evidence of multicollinearity, as assessed by coefficients between independent variables being less than 0.7. The highest correlation coefficient (r = .191) was found between first-generation status and grade classification. Along with a very low correlation, there was no statistically significant relationship between these two variables (p = 0.16). The tolerance values for these variables were greater than 0.1 (ranging from 0.933 for the Black independent variable to 0.973 for the Female independent variable). The data were tested to ensure that no significant outliers existed more than 3 standard deviations from the mean and that there

were no cases that were influential, using Cook's Distance Values (Cook & Weisberg, 1982). There were no studentized residuals greater than ±3 standard deviations, no leverage values greater than 0.2, and no values for Cook's Distance above 1. Lastly, the residuals need to be approximately normally distributed, also tested in SPSS by creating a normal P-P plot (shown in Figure 1), histogram of standardized residuals, and a normal Q-Q Plot as shown in Figures 3 and 4 (see Laerd Statistics, 2018).

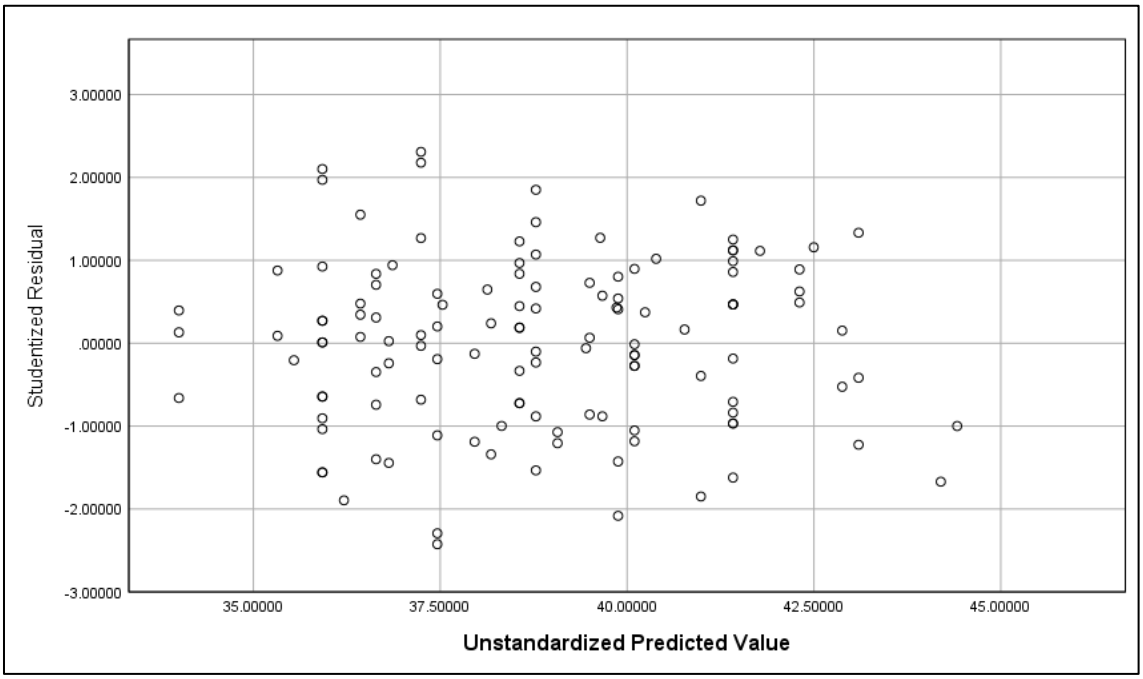

Figure 2: Scatter plot of studentized residuals by unstandardized predicted values.

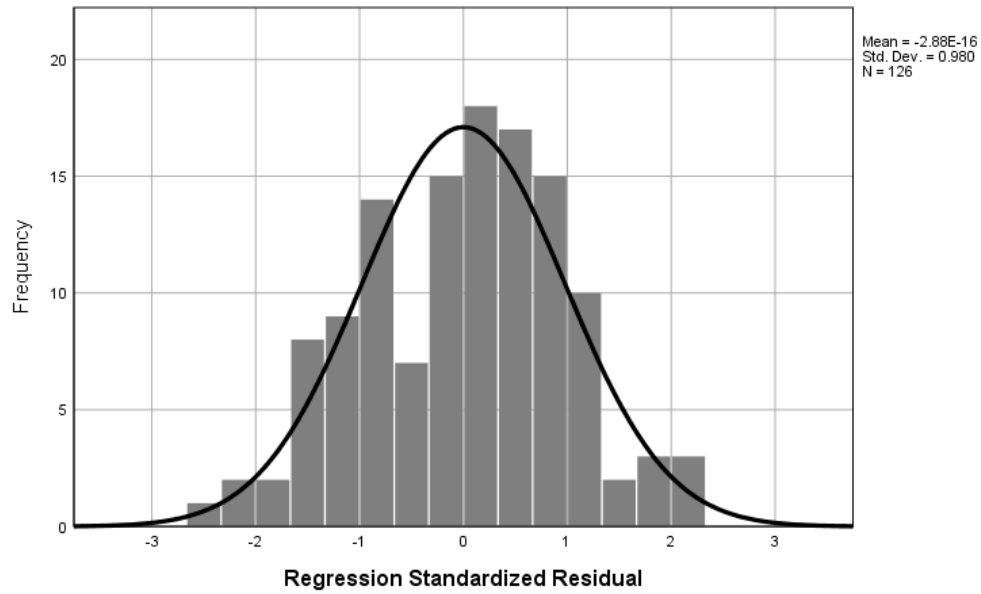

Figure 3: Histogram of standardized residuals of financial stress index score.

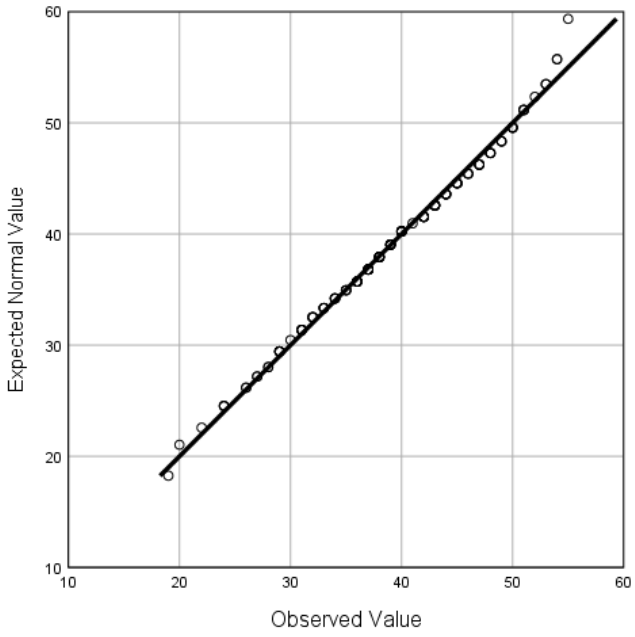

Figure 4: Normal Q-Q plot of financial stress index score.

Multiple Regression Analysis

The purpose of this study was to investigate the extent to which the variables that identify the demographic groups (grade classification, sex, race/ethnicity, and first-generation status) are predictive of financial stress as measured by the financial stress index score. To accomplish this purpose, I explored relationships between the predictor variables and the financial stress index score using standard multiple regression. Table 5 presents the regression coefficients table. For my research question, the null hypothesis stated that the demographic group predictor variables were not related to financial stress index scores. Initial regression results indicated that the overall model with four independent variables did not significantly predict financial stress, $R^2 = .084$, $R^2_{adj} = .046$, $F(5, 120) = 2.202$, $p = .058$.

Table 4

Coefficients Table for Regression Analysis of Financial Stress Index Score

	Unstandardized Coefficients		Standardized Coefficients		
	B	*SE*	β	*t*	*p*
(Constant)	32.685	2.170		15.062	.000
Female	1.919	1.599	.106	1.200	.232
First-generation	1.538	1.431	.097	1.075	.284
Black	.889	1.858	.043	.478	.633
Other	4.318	2.329	.166	1.854	.066
Grade classification	1.319	.633	.187	2.085	.039

This model accounts for 8% of the variance in financial stress scores. After reviewing the beta weights, it was determined that only one variable significantly contributed to this model, grade classification (p = .039). Table 5 shows the mean financial stress index score and standard deviation for each grade classification.

Table 5

Grade Classification and Financial Stress Index Scores

Grade classification	*N*	Mean Financial Stress Index Score	*SD*
First year	34	35.59	8.29
Sophomore	26	41.27	8.51
Junior	36	38.36	6.59
Senior	30	40.83	7.64

A one-way ANOVA was conducted to determine if the mean financial stress index scores were significantly different for the grade classifications. There was homogeneity of variance, as assessed by Levene's test (p = .360). The mean financial stress scores were significantly different among the grade classifications, $F(3, 122) = 3.571$, p = .016, ω^2 = 0.58. Tukey post hoc analysis revealed that the mean increase from first year to sophomore year (5.68, p = .028) was statistically significant, as well as the increase from first year to the senior year (5.25, p = .038), but no other mean differences were statistically significant. Financial stress increased from the first year to the senior year; however, the greatest increase was from the first year to the sophomore year.

My hypothesis for this study was that at least one demographic variable would have a significant relationship with financial stress. Multiple regression was used to

answer the research question for this study. The multiple regression produced overall nonsignificant results, but a low correlation indicated a weak but significant predictive relationship for one of the independent variables. Based on these results, grade classification appears to be related to financial stress, although the relationship is not very strong. Of particular importance is that sophomores and seniors reported significantly higher mean stress scores than their first-year and junior counterparts. The null hypothesis, therefore, was rejected.

Discussion of Predictor Variables

NSSE's studies in both 2012 and 2015 examined financial stress among students from various demographic groups. NSSE's (2015) reporting on first-year students indicated that subtly different academic performance or greater difficulty engaging in academics were present for those students who reported higher stress, suggesting the need to incorporate supports to combat financial stress in the first-year experience. NSSE found that seniors evidenced higher financial stress than first-year students, that financial stress was inversely related to parental education, and that women, Black, and Hispanic students had higher financial stress levels than their counterparts (NSSE, 2015). My research was consistent with the findings of available literature and identified several areas where further research and action are needed.

Grade classification. While NSSE (2012, 2015) only measured financial stress in first-year students and seniors, this study measured stress in students across all four grade classifications. In the studies conducted by NSSE where only first-year and senior students were surveyed, a key point may have been missed in the increase in financial

stress for sophomore students. In my study, approximately 25% of participants were from each grade classification (first-year, sophomore, junior, senior). Grade classification was found to be statistically significant in predicting financial stress levels. First-year students demonstrated the lowest financial stress scores and sophomores demonstrated the highest scores, as seen in Table 5. NSSE focused on the first and senior years in relation to financial stress in their 2012 and 2015 surveys and reported that seniors had higher levels of financial stress than first-year students. While this was also found to be true in the present study, seniors in this study actually reported lower financial stress than students in their sophomore year; thus, the increase shown from the first to senior year appeared to have actually occurred during the sophomore year. This new insight into the different grade classifications is important to the body of literature on financial stress and grade classification.

These findings were similar to those of Beiter et al. (2015) who found that first-year students often report lower levels of stress. However, other studies comparing financial stress of students in various grade classifications in college found higher stress in first-year students (Montalto, Phillips, McDaniel, & Baker, 2019; Robb, 2017. While many institutions offer financial literacy supports only in the first year, if at all, the finding that students in all years may also have high levels of financial stress highlights the need for more efforts throughout the entire collegiate experience. The discrepancies among research findings provides an opportunity for further research into other factors that may drive financial stress in undergraduate students. Reviewing other predictor

variables in relation to respondents' grade classifications provides more insight into the demographic groups.

Parent education levels. Parent education levels were used to measure socioeconomic status and first-generation status. NSSE's (2012, 2015) finding that financial stress is inversely related to parental education levels was also found in my study, although it was not a significant predictor. First-generation was defined as having no parent who completed a bachelor's degree or higher. Of the participants surveyed, 52.4% of the respondents were first-generation college students whose mean financial stress score (M = 39.89, SD = 8.02) was higher than for students with at least one parent having a 4-year degree (M = 37.60, SD = 7.80). These findings are consistent with other studies of financial stress of first-generation college students (Cadaret & Bennett, 2019; Montalto et al., 2019**;** Robb, 2017).

Sex. The literature reviewed for this study (see Gibson et al., 2014; K. Jones et al. 2016; P. J. Jones et al., 2018, Joshi, 2013; Tran et al., 2018) indicated that females tend to report higher levels of stress than their male counterparts. Of surveyed respondents, 73.8% were females whose mean financial stress score (M = 39.30, SD = 8.23) exceeded that for males (M = 37.39, SD = 7.10). The findings of this study support the trend found in the literature and reflected in NSSE's survey administrations in 2012 and 2015.

Race/Ethnicity. Previous research also indicates that Black and Latino students are more affected by financial stress levels than their White counterparts (Arbona & Jimenez, 2013; Cokley et al., 2014; Knaggs et al., 2015; McClain et al., 2016;). Data from the NSSE (2012, 2015) surveys indicated that White students reported lower levels

of financial stress. In this study, that trend was also evident. Students who identified as Black or African American had higher mean financial stress index scores (M = 38.96, SD = 8.15) than those who identified as White, Non-Hispanic (M = 38.30, SD = 7.98), although the difference was not statistically significant. Students in the group recoded as Other had higher mean financial stress index scores (M = 42.0, SD = 7.33) than those who were White (Non-Hispanic) or Black or African American. The Other group, primarily Hispanic and Asian students, were the least represented in this study, and least represented at State University; however, this group of students is very important to State University as enrollment becomes more competitive, especially in these demographic groups. Wang (2018) projected that enrollment within the next 10 years will lead to smaller, more diverse classes, particularly increasing in Hispanic and Asian students. The lack of statistically significant differences for race/ethnicity could also suggest that financial stress may be an issue across all racial and ethnic groups.

Interaction of Variables. I was also interested in how the interaction of the independent variables affected the mean financial stress index score. With grade classification being statistically significant in my findings, I was interested in how financial stress index scores varied across combinations of grade classification and the other variables. For example, as seen in Figure 5, sophomores and seniors were significantly more likely to report higher levels of financial stress; however, there are differences in the mean financial stress index score for each race across these grade classifications. Mean financial stress index scores for first-year students in the Other race category were higher than their White (Non-Hispanic) and Black or African American

peers, but the mean for senior students in the Other group was lower than the other race/ethnicities. This is likely an artifact of only one student responding from the Other group at the senior level. Black or African American students had slightly higher mean financial stress scores in their first year than their White peers. Although their mean financial stress scores decreased in their sophomore year, their financial stress index scores were the highest of all groups in their senior year.

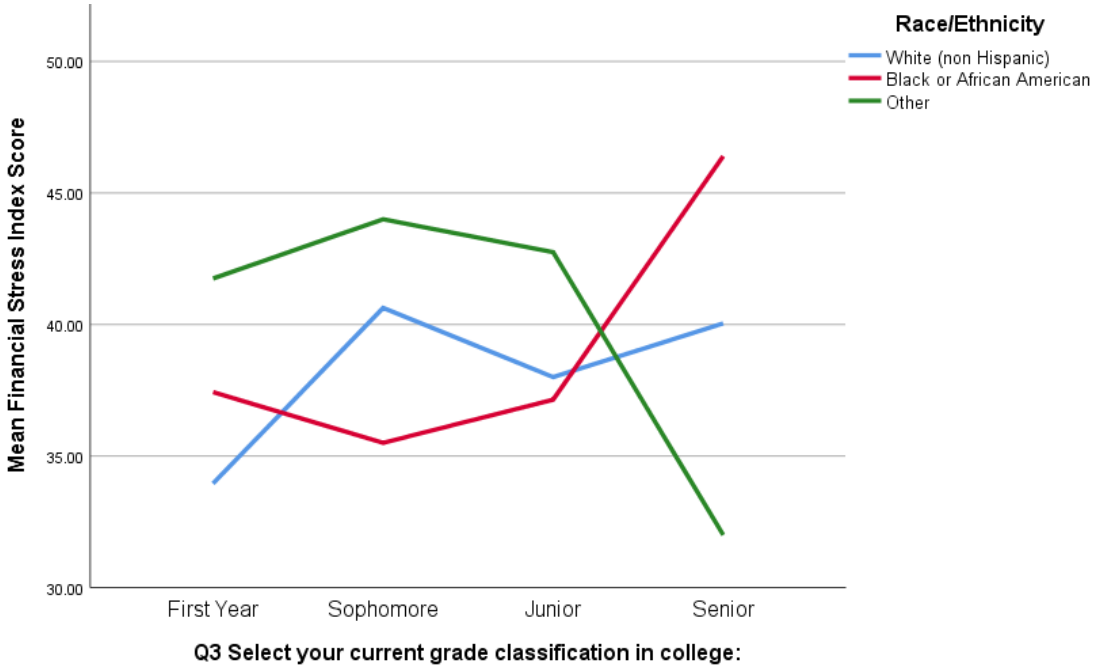

Figure 5: Means of financial stress index score by race and grade classification.

Mean financial stress index scores for first-generation students as compared to their counterparts who had at least one parent with a 4-year degree were slightly higher in the first and sophomore years and slightly lower in the junior year; however, as shown in Figure 6, in the senior year the difference in mean financial stress index scores for these

two groups was greater than in the first year, with first-generation students having higher scores.

Assessing the interactions of these variables provided some insight into the potential risk of financial stress for students in terms of degree completion and academic performance, especially when compounded with other barriers that are already known for these demographic groups.

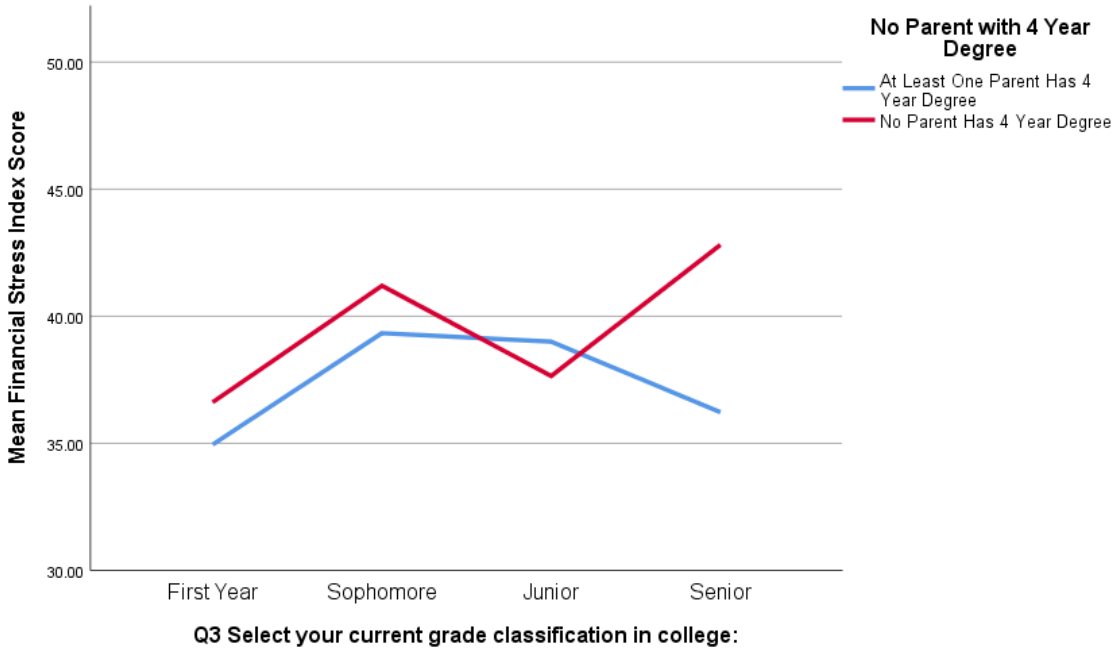

Figure 6: Means of financial stress index score by first-generation status and grade classification.

As shown by these data, financial stress is a significant issue in the lives of many college students. For many students it is a barrier to degree completion, wellness, and social mobility. The findings of this study identified a weak, but statistically significant, relationship between the level of financial stress and grade classification. This relationship suggests that financial stress increases in the sophomore and senior years.

No other statistically significant differences were found between demographic groups identified by the predictor variables, which may indicate that financial stress is a widespread issue across all demographic groups and increases after students complete their first year and as they near degree completion. Therefore, the findings from this study indicate that financial stress does exist at State University and varies among different demographic groups at different points in time. These findings highlight a gap in practice—State University's lack of financial education to support these students. State University and other institutions would do well to continue to explore these variations and provide supports to these students. As financial stress is a widespread student issue, State University can take action to help students cope with financial stress. The project section of this study identifies recommendations for the University.

Assumptions, Limitations, Scope, and Delimitations

Assumptions

An assumption in research is something that is believed to be true despite inadequate evidence supporting the belief (Hu & Plonsky, 2019). Several assumptions influenced this study. The first assumption was in using Selye's theory of stress as an accurate means to define stress in college students. The decision to use this theoretical framework developed from the literature review on financial stress. Other assumptions included the assumption that college students experienced the stressors presented in the survey, that college students were sufficiently aware of their experiences to provide valid responses, and that participants would answer the questions honestly. In order to mitigate issues related to these assumptions, I used the NSSE instrument in my study; this

instrument asks questions that are widely used, valid, and reliable. Some benefits of online surveys are that more people are willing to give honest information due to the easy access and anonymity (Nicol, Thomson, & Breslin, 2014).

Limitations

There are several limitations in this study that must be considered. The sample was comprised solely of college students from a particular university, and therefore cannot be generalized to all institutions. Additionally, the sample size (N = 126), while statistically valid, was small, and a larger sample size may have yielded more useful results. A possible concern with the email invitation process is that the link to the survey could be shared among students. This was not a concern in this study because the chance of students sharing the link was minimal and link sharing could result in additional responses which is positive in survey studies. Using online methods to reach participants presented several challenges. Email invitations to complete a survey are often flagged as junk mail by email providers and automatically moved to a junk folder or deleted, and therefore not viewed by the holder of the email address (Lefever, Dal, & Matthiasdottir, 2007). This concern was addressed by working with the Office of Institutional Research, Assessment, and Analysis at the University. One example of how the department addressed this issue is sending emails out at different times to smaller groups instead of one email being sent to a large group of students. The email is then less likely to be viewed by the server as spam and more likely to be sent to the main inbox (Lefever et al., 2007). Another way to combat this limitation is to send a reminder email 5 days after the initial invitation to all students. A second method is to send an email announcing the

survey prior to sending the survey invitation. In this study, I used the reminder email because an announcement email can be confusing and lost in the amount of email that students receive.

Another limitation is the reliability of the data collected. Because the survey used self-reporting, participants may have misinterpreted a question, or reported an answer inaccurately. Some responses were also incomplete and were excluded from the data analysis.

One of the largest concerns in survey research is the response rate. In a recent study, Glazer, Farberg, Svoboda, and Rigel (2018) found that online response rates were significantly lower than other modalities, 30% for mail surveys and 95% for in person surveys. However, the authors also suggested that when the study sample is representative of the target population, low response rates have negligible effect on results (Glazer at al., 2018). Although my survey resulted in a lower response rate of 6%, the sample size was sufficient for the purposes of the study.

Lastly, the respondents who returned the questionnaires may not have been a representative sample of the entire group. The sample of students to whom the survey was sent was stratified by grade classification and the responses received were nearly equal across grade classifications (ranging from 26 to 36), indicating that the sample was likely representative of the grade classifications. However, the results may not be representative of all demographic groups. More White females responded to the survey than other demographic groups, but this was not surprising because 67% of the student

population at State University was White (non-Hispanic) and 55% was female (NCES, 2019).

Scope

The study includes responses to a survey about financial stress from one public postsecondary institution located in the Southeastern United States. A stratified random sample of students including all four grade classifications were invited to participate in the survey.

Delimitations

Delimitations are decisions the researcher intentionally makes to define the study (Theofanidis & Fountouki, 2018). The NSSE (2012) survey only included first-year and senior students; I chose to survey a stratified random sample from the entire student population to better measure the financial stress at State University. In my study, I also used parental educational levels to define socioeconomic status instead of household income because some college students may not know the level of household income in their families. Using this variable also mirrors the NSSE (2012) survey items. However, unlike the NSSE (2012) survey, these parental educational levels were combined into State University's definition of first-generation college student, having no parent with a bachelor's degree or higher.

Protection of Participants' Rights

Before beginning the data collection process for the survey, approval for contacting the selected students was obtained from the Institutional Review Boards of both Walden University and State University. The students were provided a description

of the study in the email invitation that informed them of details about the survey as well as their rights as participants including confidentiality and protection from harm. The respondents provided informed consent within the online survey process. After using the link provided to access the survey site and clicking on a link indicating their agreement to participate, the students were presented the survey questions.

This section described the data collection, the protection of study participants, and the data analysis in a quantitative cross-sectional study measuring financial stress in undergraduate students at State University. This section also discussed how predictor variables interacted with one another and financial stress. A statistically significant relationship was identified between the level of financial stress and grade classification. Lastly, this section described the assumptions, limitations, delimitations, and the scope of my study. In Section 3, I will present the project (a policy recommendation white paper) that I developed based on the findings of this study and a literature review focused on the white paper as an effective way to introduce policy recommendations in higher education.

Section 3: The Project

Introduction

In this quantitative study, I addressed the problem of financial stress in undergraduate students. High student debt, low knowledge of money management skills, and few financial education opportunities in higher education are significant issues, particularly regarding the effect these issues may have on students from different demographic groups based on sex, race/ethnicity, first-generation status, and year in college. The purpose of this study was to determine if relationships existed between these demographic group variables and levels of financial stress. Data were collected using an online cross-sectional survey administered to a stratified random sample of 25% of students in each grade classification at State University. Analyses of quantitative data from these students indicated differences in financial stress levels that highlighted a gap in practice at State University and resulted in recommendations for policy changes at State University to create a financial literacy program. A white paper with policy recommendations for creating such a program was created to share with State University administrators and leadership. A copy of the policy recommendation white paper can be found in Appendix A.

Rationale

The findings of my study indicated that financial stress crosses all demographic sectors at State University. The implementation of financial literacy education may aid students at State University by providing educational supports that currently do not exist. A white paper was an appropriate genre for my project as it allowed me to address the

problem of financial stress at State University by presenting the findings of my study as they relate to implementing a comprehensive financial literacy education program based on strategies and recommendations found in recently available literature as a possible solution to the problem.

For the policy recommendation paper, I chose to use the white paper genre to inform key administrators at the university of the problems highlighted in my study and the value of financial literacy strategies in addressing those problems. The study findings pointed to a possible need to provide widespread educational supports to students in money management and to do so across all college years. Therefore, the problem of financial stress is addressed within the policy recommendation by proposing implementation of a financial literacy education program at State University.

White papers are effective means to educate readers on issues and problems, explore solutions to those issues and problems, and to help in implementing those solutions (Malone & Wright, 2018). White papers are used in different disciplines and in many professional settings and help combine information and sound reasoning to promote recommendations and solutions to a problem (Malone & Wright, 2018). I will use the white paper to provide the policy recommendations to State University's provost and other institutional administrators at the research site for consideration and possible adoption.

Review of the Literature

The purpose of conducting this literature review was to gain detailed knowledge about policy recommendation white papers. I also sought to find evidence and

appropriate strategies that would comprise the content of the policy recommendations. I searched several of Walden University's electronic databases including Academic Search Complete, Education Research Complete, ERIC, and PsychINFO. I limited the search to peer-reviewed publications between 2015 and 2020, but found limited literature, so I chose to remove these restrictions. For the strategies to be included in the policy recommendation paper, I used keyword search terms such as *educational policy*, *educational policy development*, *educational policy implementation*, *policy implementation*, *financial literacy*, *financial education*, *financial wellness*, *money management*, and *financial health*. This search yielded several publications. For information about policy recommendations, I used different keyword search terms such as *policy*, *policy recommendation*, *position papers*, *white papers*, *policy development*, *policy development* and *higher education*, *policy change*, and *financial literacy* and *policy*. However, this search yielded a limited number of articles or books on the subject. Although position papers are an appropriate and widely used means to share policies, writings on the subject are lacking (Powell, 2012).

History of White Papers

The term *policy* is used to refer to a set of rules, regulations, or guidelines that define specific actions or procedures to be followed in identified situations (Tseng, 2012). A policy recommendation refers to written advice that is prepared and presented to constituents and appropriate decision makers, the goal being to obtain adoption of the recommendations within the proposed policy (Doyle, 2013). White papers are

increasingly becoming a common genre used to develop and present policy recommendations (Herman, 2013).

White papers originated in England to deliver governmental policy data. The name of the paper came from a color-coding system used by the British government (Willerton, 2012). These papers were used to disseminate information on strategic assessments and plans. They are still used in government with public policies but are increasingly being used in other areas of policy as well (Powell, 2012). The authors of white papers provide readers with an authoritative viewpoint mandating solutions to existing problems (Hyde, Sakamuro, & Stolley, 2015). Mattern (2013), on the other hand, indicated that white papers are effective tools for education and persuasion. Policies are often followed at an organizational level, regulating practices and actions of those within the organization (Tseng, 2012). Policy is also used in many industries, such as public strategic plans, education, health, social sciences, etc. Examples of public policy include laws, regulations, and government mandates (Jenkins-Smith, Nohrstedt, Weible, & Sabatier, 2014). Other types of policies are health policy, recommendations or actions for improving health, and social policy, regulations and laws that help improve society. Policies are also often used in education to regulate and provide guidelines for how to administer educational organizations. For my project, I created an educational policy at the organizational level for the institution and used a white paper to present the recommendation for such a policy.

White Paper Formatting

A policy document in education should use clear but simple language. These types of documents should avoid industry specific technical language and jargon. The audience of the white paper may be wide, so the paper should be written in a manner that all readers can understand (Doyle, 2013). Decision makers presented with policy recommendations often have limited time, so these recommendations must be short, logically sound, and sufficiently persuasive to evoke the desired action, which is adoption of the policy (Biswas & Paczynska, 2015).

Many policies are written in a white paper format with the objective of presenting solutions to a specified problem or issue (Herman, 2013). A white paper in its most basic form is typically a document that describes a problem and attempts to persuade readers to use described solutions to address the problem (Stelzner, 2007). Policy papers are often written in the white paper genre for that reason. A policy paper provides guidance or recommendations that are based on theory exploration or analysis of collected data (Rotarius & Rotarius, 2016). Due to the quantitative nature of this study, the white paper presented follows the formatting of an empirical white paper, discussing methodologies to analyze data, results of the data, and the relevance of those results to the recommendations being presented.

Policy papers are often formatted similarly, regardless of whether they are exploring theories to offer recommendations or offering recommendations based on data analysis. The paper is typically around 25 pages, excluding references and appendixes (Rotarius & Rotarius, 2016). Executive summaries or abstracts are the starting point of

any policy recommendation, summarizing the key points of the document for the readers. The executive summary should comprise about 5% (or less) of the total document length (Herman, 2013). Policy papers should also include an exploration of a specified problem, evidence of the problem, review of literature on the problem, recommendations on how to address the problem, plans for implementation of the recommendations, plans to evaluate those recommendations, consequences of policy implementation, and a conclusion (Herman, 2013; Rotarius & Rotarius, 2016).

Purpose of a White Paper

White papers are used in many different industries and meant for many different types of audiences (Willerton, 2012). White papers are often used to persuade strategic implementations of new policies (King, 2006). White papers are based on Grunig's (1997) situational theory of publics. Grunig postulated that people from different audiences will often be motivated to act upon information when the presented information connects with ideas and concerns of those in the audience (Kim & Grunig, 2011). White papers provide writers an opportunity to make that connection. A policy paper should objectively describe the problem and present any evidence of the problem, which could be any qualitative or quantitative data, that suggests the problem or issue exists. The policy paper should provide the data as evidence, describe the methodology used to analyze the collected data, and link the analysis to appropriate recommendations (Herman, 2013; Rotarius & Rotarius, 2016). The data presented and analyzed should convince readers that the recommendations will help solve the problem presented. A policy writer should also establish an implementation and evaluation plan laying out how

and when the policy implementation would occur and be evaluated. The implementation plan should include a discussion of feasibility and barriers or challenges to policy implementation and means to overcome such challenges (Herman, 2013). The evaluation plan will help measure the effectiveness of the goals of the implementation plan in addressing the problem (Lilford et al., 2010). The policy recommendation should conclude with a summary of the identified problem, the data evidenced by the problem, the list of new recommendations or changes, how these changes will help resolve the problem, and the immediate and social benefits of making the recommended changes (Herman, 2013). A white paper recommending policy change is an appropriate genre to use to present a financial literacy education program at State University.

Theoretical Support for the Project

Research regarding the effect of financial literacy education efforts on financial behaviors is limited. Financial education programs are designed to teach students the satisfactory financial behaviors that lead to financial wellness and often disregard the factors that contribute to the likelihood that the strategies learned will lead to such behaviors (Fernandes, Lynch, & Netemeyer, 2014). For this reason, researchers often question the relationship between financial education and improved behaviors and/or critique the strategies used in efforts that do not improve financial behaviors (Fernandes et al., 2014). Financial education programs that merely aim to increase knowledge are not enough to produce improved financial behaviors, so other aspects must also be considered (Peeters, Rijk, Soetens, Storms, & Hermans, 2016).

Psychological and environmental factors of individuals in financial literacy education efforts must also be examined. Shephard et al. (2017) found that psychological factors of individuals can play an important role in financial behaviors, regardless of financial education strategies. The wide array of discourse in current research on appropriate tactics in a financial literacy program and the effects of education on financial behaviors makes it critical to establish theoretical support for suggesting and implementing a financial education program. This support is found within human behavior theories that have helped shape modern day education. Specifically, this project was based on Bronfenbrenner's (1977) ecological systems theory and Bandura's (1977) social learning theory.

Bronfenbrenner (1977) postulated that human learning development occurs within the context of the system (or layers) of relationships that form one's environment including family, school, neighbors, cultural values, customs, norms, and time. Changes to environmental systems cause different reactions at different times in a person's life (Bronfenbrenner, 1977). Bronfenbrenner's theory is relevant to this project because of the focus on demographic group variables. Students in financial literacy education programs are coming from different environments and will interact differently with attempts to increase knowledge. Bronfenbrenner's theory also reminds educators that learning can take place in different contexts and should be taken advantage of in both formal and informal formats.

Bandura's (1977) social learning theory also examined the interaction between personal, behavioral, and environment factors. However, Bandura focused more on the

role of self-efficacy and people's ability to exercise greater control over themselves, proposing that consequences, observations of others, and similarity of the observed and observer can have great influence on learning and behavioral outcomes. In this project, Bandura's theory provides the framework for strategies of modeled behavior, increased social supports, and increased self-efficacy. Based on the components of these theories, a policy recommendation that includes modeled behaviors, social supports, and building self-efficacy, while keeping a student's environment in mind is the most appropriate method to discuss the problem of financial stress at State University among various demographic groups, present my research findings in relation to the problem, and suggest a financial education program that is based on these theoretical models.

Implications for the Financial Education Program

Bronfenbrenner (1977) postulated that education must address students within their environments. In the case of undergraduate students, a large part of transitioning into college centers on finances. College students are gaining independence and responsibility, managing their own schedules, and facing important financial matters for the first time (Hagadorn & Lahousse, 2019). While these students are beginning their own personal journeys into the global economy, governments and organizations have realized that people who are knowledgeable about their finances are essential to national wellbeing (Ergun, 2017). Many students start their undergraduate career ill prepared for important financial decisions. This may be correlated to a low number of high school course requirements regarding personal finances (Council for Economic Education, 2018). To best meet the needs of students in this area, higher education administrators

and accrediting bodies are beginning to realize that the burden to provide financial literacy education lies with the institutions these students attend. Higher education institutions play an important role in educating college students on financial matters (Jacobsen & Correia, 2019).

Not only do students have a need for this education, but students are also very much interested in learning in the areas of financial literacy. The U.S. Bank (2017) found that students were interested in studying several topics regarding financial matters, including saving money, investments, credit, and managing debt. Hagadorn and Lahousse (2019) also conducted a study in which students at a liberal arts institution were asked to rank their interest in learning about financial literacy on scale of 0 to 5, with 5 indicating the highest level of interest. The mean score of participants was 3.97. These students were also asked to rank the importance of their institution offering educational opportunities on financial matters, which resulted in a mean of 4.39 out of 5. With students' need and demand for such education, higher education institutions should consider offering a comprehensive financial literacy educational program.

Financial education programs have been linked to increased knowledge of finances, improved attitudes about financial matters, and higher incidents of positive financial behaviors (Potrich, Vieira, & Mendes-Da-Silva, 2016). Financial education programs have also been reported to significantly help students make important financial decisions (Bar-Or, Fessler, Desai, & Zakaria, 2018). Creating avenues for students to be informed of the benefits of such a program is crucial to improved attitudes and behaviors as a result of the program (Jacobsen & Correia, 2019). Providing such education and

incentives may help address financial stress by giving students the resources and motivation to be redirected to more appropriate financial behaviors. Research on the long-term effects of financial literacy education is scarce, supporting the need for more work in this area.

While providing such educational programs has been shown to be beneficial, there are factors to be considered in choosing strategies to be implemented in these programs. These factors include successfully positioning the program within the structure of the institution, ensuring that the program inclusively meets the needs of all students, providing learning experiences through delivery methods that meet the mission of the program, and assessing the success of the program in meaningful ways. The Consumer Financial Protection Bureau (CFPB; 2017) suggested that higher education institutions provide clear, timely, and customized information to inform student borrowing; effectively engage students in financial literacy education; and target different populations in financial education efforts. Financial education programs are the most effective strategy to put these recommendations into practice. However, program developers should ensure that the design of the financial education program considers environmental influences on students to help promote true financial literacy and create true social change (Al-Bahrani, Weathers, & Patel, 2019). Often, programs are put in place without soliciting input from the demographics represented at the institution (Schaffer & Mohs, 2016). Reich and Berman (2015) found that offering financial literacy programs can be beneficial but at varying degrees dependent on income level, which is indicative of a need to consider demographics in programmatic design. Current

research suggests addressing social inequalities that affect financial literacy, including race, income level, gender, education, participation, and family connections (Firli, 2017; Kramer, 2016; Lusardi & Wallace, 2013).

When creating new programs, effective leaders seek common goals, diversity, communication, and group buy-in (Campos, Aubert, Guo, & Joanpere, 2020). Methods to meet these goals include creating a mission statement for the program, creating a central body that is involved in the development of the program, and creating delivery methods that meet the needs of students. Academic researchers have also suggested that campus-wide buy-in occur for program success (Kezar, 2010).

Delivery methods are important to consider in establishing a financial literacy education program. According to Bandura (1977), strategies of modeled behavior, increased social supports, and increased self-efficacy should be included to reinforce learned information. Before determining specific strategies, institutions should determine an overall model for the program. There are several models that institutions may choose to implement for their financial education program: the Academic Model, the Money Management Center Model, the Branch Model, and the Seed Program Model (Danns, 2014). The Academic Model offers financial education as classroom instruction, often seen as a personal finance course or a unit in a freshman seminar course. This model may reach a wide audience and foster higher student involvement, but is dependent on instructors, marketing, and consistent curriculum. The Money Management Center Model consists of an organization unit or department being devoted to educating students on financial literacy topics. This model may also reach a wide audience, but the reach

may be less in-depth and depend on campus partnerships for success. The Branch Model is used when financial education comes from several departments, leading to duplicated efforts. The Seed Model is often exhibited when the seed of financial education is planted in one individual on campus who then becomes responsible for educating students on financial matters. This model faces several challenges, being championed by only one person, having no funding structure, and being made up of disjointed efforts. Most financial education programs fall into one of these four models (Danns, 2014).

Institutional leaders must determine which model best fits the needs on their campus and then determine methods that fit within the model. These models were derived from combining elements of Cude's (2016) original four models of financial education programs: financial education/counseling centers, peer-to-peer programs, programs delivered by financial professionals, and distance learning programs. Financial literacy programs are typically offered through distance learning programs, in class programs, or other types of programming (Cude, 2016). Institution administrators must decide which methods meet the needs of the student population. One major issue with offering online learning is that some racial/ethnic minority groups, specifically Black or African American and Latino or Hispanic students may lack access to online resources or prefer for educational experiences to occur within the classroom (Eichelberger, Mattioli, & Foxhoven, 2017). Students from racial/ethnic minorities have often reported preference for in-person delivery of education courses (Kumi Yeboah & Smith, 2016). Chaiphat (2019) did find that financial education lessons included in a course can increase financial knowledge, making it a viable option for financial literacy efforts.

Eichelberger, Gerbing, and Gillpatrick (2019) also found that students who completed a personal finance course were more likely to persist in college and complete their degree, making a course in financial literacy beneficial to both the student and the institution. Castleman and Page (2015) found that student peer-to-peer mentorship programs can be both cost-effective and significantly influential on college student behavior. Ma and Feng (2018) introduced a peer-to-peer student ambassador program to teach financial literacy topics and found improved financial knowledge after the student ambassadors' presentations on financial topics. These results suggest that the peer-to-peer programs are effective in financial education programs. Providing meaningful experiences can help students in understanding and learning financial knowledge.

Institutions wishing to develop a financial literacy program must also provide administrative and budgetary support and recognition (Danns, 2014). A financial literacy education program must be interdisciplinary and cross-functional, consisting of programming and partnership support from all areas of the institution (fiscal management, enrollment management, academics, student affairs, residential support, student health, etc. (Danns, 2014). Given the negative effects of financial stress and the positive effects financial education programs have on that stress makes designing a financial education program that meets student needs and is successful in meeting outcomes a strategic priority for institutional leaders. To make important programmatic decisions and apply these best practices, institutions should create an entity to oversee the implementation and oversight of the program, create a representative task force to develop the program and its mission, and determine the best learning outcomes and

activities to produce those learning outcomes. Using these recommendations to implement a successful financial literacy education program may lead to improved academic performance, career advancement, greater lifetime earning potential, and loan repayment success (Cornelius & Frank, 2015; Mitchell & Lusardi, 2015)

Project Description

The goal of the policy recommendation paper is to suggest how to implement literacy education efforts to reduce financial stress in undergraduate students. The white paper describes the existing situation at State University related to the study I conducted on financial stress, introduces several recommendations to address the issues around financial stress, and provides evidence-based support for those recommendations. The policy recommendations include a review of and plan for introducing various strategies used in financial education methods that may be implemented at State University. The plan for implementation includes creating a clear mission statement, gathering stakeholder buy-in from administrators, faculty, and students, partnering with supports already in place, developing a student peer-to-peer component, evaluation of the program, and delivery methods. Lastly, the project will describe the potential effects that a program may have on the problems presented. The white paper with policy recommendations will be shared with State University administrators and leadership, including the university president, vice president for student affairs, vice president for academic affairs, vice president for diversity, equity, and inclusion, and the associate provost for enrollment management.

Project Resources Needed

Expertise, time, technology, and funds from the institutional budget are needed to implement the project successfully. The project requires the expertise and time of staff members to direct, develop, and implement the financial education program, as well as train and supervise student staff employed in the program. Technological resources will also be needed to create materials, presentations, online modules, and other educational materials. Financial resources will be needed to support the proposed structural changes in promotional materials and to pay the professional and student staff. While budgetary issues must be considered, they are easily accommodated by housing this project in the pre-existing structure of the Office of Financial Aid at State University. The director of that office will also serve as a resource for the project.

Barriers to the Project

Barriers to implementing the policy recommendations include lack of administrative support such as housing the program within the Office of Financial Aid as a strategic use of financial resources. Limited staffing within the Office of Financial Aid at State University compared to the workload may not allow for a staff member to continue their work and take on implementing a financial education program. Job duties and functions may need to be reallocated across staff members. Limited funding for student workers may also require limiting student workers only to those who are eligible for Federal Work Study funds, limiting the students available to participate in the peer education program component. Competing campus programs may also be a barrier to

implementation of the project; as new programs are deemed necessary for students' success, interest and resources may not support a financial education program.

Solutions

To overcome the challenges of implementing a financial education program, support must be garnered from university stakeholders. Administrators must be informed of how this program can help State University and promote social change. They must also publicly promote their support for such a program internally and externally. Administrators should also consider reallocating funds to support this initiative.

Another way to overcome financial challenges is to use partnerships of campus and community departments and organizations. Many campus organizations have connections to programming and promotional materials that are little to no charge. Community organizations also offer low-cost or no-cost resources for financial education opportunities and materials. Technology is another means to create and secure materials with minimal budgetary implications.

Lastly, adding the financial education program to the responsibilities of staff members already employed in the Office of Financial Aid and using students for peer-to-peer interaction can assist with financial and staff concerns. A staff member working within the office can split duties between the office and the financial education program, allowing State University to receive full benefits from fulltime staff equivalencies. Student pay is relatively less costly than professional staff and can be subsidized through the Federal Work Study program from the United States Department of Education.

Students can also work nonstandard times, which can help to minimize overtime pay for professional staff.

Proposal for Implementation

Implementing a new financial literacy program will take approximately one year. The target date to start the program would be the Fall 2021 semester. This will allow ample time to evaluate current resources, make budgetary decisions for fiscal year 2022, and roll out the program when students arrive in Fall 2021. The implementation timeline outlined in Table 6 displays the rollout of the financial literacy education program.

Table 6

Implementation Timeline

Task	Implementation dates
Program division approval & budgetary support decisions	January 2021
Financial education listening sessions with key stakeholders	February-March 2021
Financial education task force developed	April 2021
Task force assessment of current & missing practices, learning outcomes, & organization of program elements	May-July 2021
Professional & student staff hired & training	June 2020-August 2021
Promotion of program	May 2021-August 2021
Start of program	August 2021
End of program year 1	June 2022
Formative evaluation of program	June 2022-July 2022
Task force meeting to modify program, as needed	July 2022
Program year 2	August 2022-July 2023
Task force evaluation of program & modifications	Annually

Roles and Responsibilities of Student and Others

My role is to share the results of the study conducted and recommendations for a financial education program presented in the white paper with key stakeholders. It will be the responsibility of the university president, vice president of academic affairs, and the associate provost for enrollment management to read the white paper and to decide whether or not State University should implement the recommendations presented in the project. The financial aid director may also be tasked with implementing any recommendations that are accepted.

Project Evaluation Plan

The primary evaluation of the project is through its implementation. If the recommendations are implemented, the goal of the project, itself, was successfully met. However, the program described in the project is just as important to evaluate to ensure it meets the needs of stakeholders including administrators, faculty, and staff at State University, but most importantly, that the students achieve the learning outcomes to be determined for the program. The evaluation plan is based on Astin's inputs-environment-outcome (I-E-O) model of change (Astin, 1991). In the model, Astin proposes that student outcomes are functions of inputs and environment. This model was chosen to evaluate the project because it allows for the effect of the interaction of the environment and experiences of a college student on the learning outcomes, which is relevant to this study, particularly the different demographic groups. The basis of this model is setting learning outcomes, which are crucial to the assessment of the financial education program participants and should be a part of developing the mission and purpose of the

program. Another important tenet of evaluating this program is collecting data on inputs and environment which can help determine if relationships exist between the inputs, the environmental factors, and the outcomes reached. One example would be to evaluate the scores of a posttest on financial education competencies compared to a pretest considering student demographic groups and comparing the outcomes to the goals of the program to see if they were met.

Project Implications

Financial stress is a barrier to degree completion and has been measured across the student population at State University. Students who are first-generation, low SES, and in minority racial and ethnic groups are at greater risk in terms of higher debt, increased student loan default rates, and degree completion (Martin, 2017; Perna et al., 2017). Retention and graduation rates at State University are especially concerning considering these issues. Offering students education in areas of financial knowledge and management can assist them with better academic performance, attaining their degree, minimizing student debt, and being better informed consumers in the global economy. A financial education program will also allow for State University to pioneer positive social change in the state by offering such programs, building a competitive advantage for students from marginalized demographic groups.

Section 4: Reflections and Conclusions

In this section, I discuss the strengths and limitations of my project in addressing the problems at State University and examine recommendations for alternative approaches to addressing these issues. I reflect on my own personal growth in the process and reflect on the importance of the work and implications for future research.

Project Strengths and Limitations

I measured financial stress at State University and compared it across various demographic groups at the institution. After reviewing the literature and analyzing data from my study, I determined that I wanted to make policy recommendations suggesting that a financial literacy education program be developed and implemented at State University. I decided to make these policy recommendations using a white paper.

White papers have several strengths and limitations. One strength of the white paper is that it concisely provides context on the issue being addressed and the background on the issue to those who read it, in this case State University's administrators (see Herman, 2013). The white paper is also an effective mechanism to summarize my study and findings, create awareness of the issues presented, and provide recommendations to help address these issues (Rotarius & Rotarius, 2016).

Another strength of using a white paper is the ability to invoke discussions on campus about the issues being presented and the strategies being recommended (Rotarius & Rotarius, 2016). This cross disciplinary communication will be vital to the successful implementation of the program. This buy-in starts with the administration but

disseminates into faculty, staff, and students. A white paper is a method that can cross these borders as needed.

A limitation of using a white paper is that it may require extended reading time, a resource that is scarce to university leadership (Herman, 2013). The white paper must be interesting to its audience to capture their attention and invoke discussion. With the limited research on financial stress, some administrators may not see the importance of the white paper and not take it seriously enough to implement its recommendations. Another limitation of using a white paper is that it does not ensure that all recommendations are followed (Herman, 2013). Readers may pick apart recommendations, may selectively implement strategies, and may not suitably address the issues intended by the white paper. Complementing the white paper with an introductory conversation with university leadership may be vital to the successful implementation of the project.

Recommendations for Alternative Approaches

Many universities are turning to technology and third-party vendors to address topics of financial literacy (Danns, 2014; Grable, Law, & Kaus, 2012). Limited financial resources, human capital, time, and energy make technology-based education efforts a popular solution to addressing issues of financial literacy. However, there is little research that reflects a consensus on the benefit of these strategies (Cude, Danns, & Kabaci, 2016). One major issue with offering online learning is that some racial/ethnic minority groups, specifically Black or African American and Latino or Hispanic students may lack access to online resources or prefer for educational experiences to occur within

the classroom (Eichelberger et al., 2017). Peer programs have also emerged as a successful education tactic. One of the challenges with peer programs is the necessity to have students with enough knowledge to help train other students. With no current structure in place to identify knowledgeable students, the peer program cannot be established without providing other supports (Danns, 2014; Maurer & Lee, 2011). For these reasons, an in-house developed financial literacy program using low- to no-cost resources, campus partnerships, and student peer-to-peer interactions is beneficial.

Scholarship, Project Development, and Leadership and Change

Scholarship

The completion of this study and development of this project have led to my personal growth as a scholar and taught me about the processes of scholarship. Walden University has taught me the value of being a scholar-practitioner. I have learned to think critically and evaluate research publications and to think about the real-life implications of such research. One improvement in my journey has been in my written communication and scholarly voice. Over the years of writing in Walden's program, I have learned the value of word choice, voice, and being concise. I have also improved my ability to consume and evaluate research and information for credibility.

Project Development

My research study has helped me in project development. I have learned the value of data driven project development. Using data can be a valuable tool in the driving purpose for a project. Data also helps with obtaining stakeholder buy-in. Lastly, this project helped me to think about how to overcome various barriers to project

implementation. Learning how to successfully develop and implement a project has been critical to my experience at Walden University.

Leadership and Change

My research study has also helped me develop as a leader, especially in times of change. I have learned to seek out multiple perspectives on the issue at hand, evaluate evidence-based observations, and even evaluate my own biases and limitations. I find myself asking my colleagues for the reasons behind their decisions and seeking evidence behind claims made. Most notably, I have truly learned my own personal strength. My professional responsibilities and commitments increased as I progressed through my career and doctoral program; other responsibilities also increased. My personal challenges with grief, work-life balance, and burnout presented great barriers to finishing my degree. I have learned that I do have persistence and the importance of setting measurable goals and holding myself accountable to those goals. I have also learned how passionate and timely my study is and have been driven by the need to bring this project to fruition, which has helped me progress. News stories on student loan debt, racial inequality, and higher education changes inspired me to finish my work. Lastly, I have learned the value of friendship, colleagues, and partnerships in life. I would not have made it this far without my support system, including my dissertation committee.

Reflection on Importance of the Work

Working in financial aid administration and seeing the need to advocate for access to affordable education is a personal passion. Walden University's mission to create

social change invited me to use that passion to complete this study and project to promote positive social change.

Students experience several barriers to degree completion related to the area of financial stress. Debt levels are increasing while the cost of tuition is increasing even faster. Disparities between demographic groups also prove to be challenges for many students. Many colleges are implementing strategies that do not fully address the issue or are not timely and relevant. I hope that my study will allow other institutions to find ways to help improve the financial education of their undergraduate students to better improve these student success outcomes.

Implications, Applications, and Directions for Future Research

State University had never measured the financial stress of its undergraduate students. The data presented in my study showed that financial stress is present and reaches across various demographic groups. The study highlights several problems evident at State University: high debt levels, high default levels, low retention rates, and low graduation rates. Implementing the recommendations found in the white paper will allow State University to address these issues and provide resources for students, especially from those underrepresented demographic groups. Ideally, implementing a financial education program can also lead to positive social change for State University students through better retention rates, better graduation rates, and producing more successful global citizens.

This study has also highlighted some opportunities for future research in this area. While the present study focused on measuring the financial stress of undergraduate

students at State University, further research can be conducted on the effect of such stress on student engagement and academic success. Another area of research is how experiencing financial literacy education efforts directly affects student success indicators: retention, graduation rates, and job placements. Lastly, further research can be conducted on the interaction between financial stress and other stressors, like natural disasters, academic stressors, and personal events.

Conclusion

Due to the increasing financial issues faced by undergraduate students and the re-evaluation of the costs and benefits of higher education, financial stress and its effects on college students must be examined. My study measured the levels of students' financial stress at a university and compared those stress levels within different demographic groups to determine whether a relationship existed between the demographic group identifiers and the level of financial stress. The results of my study indicated that sophomore students and senior students were significantly more likely to experience financial stress than their counterparts. My study also serves as a call to action to the leadership of State University and similar institutions of higher education that they must provide supports and resources for their students to be better educated in financial literacy. Providing this important part of students' education can help them be successful students and successful citizens in a global economy.

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Appendix A: The Project

Implementing a Financial Education Program: A Solution to Addressing Inequities in Financial Stress

Samantha Hicks, MBA

Executive Summary

Access, inclusion, and affordability are often touted in higher education as goals to be attained for the success of any institution. Yet, while retention and graduation rates decrease, tuition, student loan debt, default rates, and overall concerns on financial wellness increase. Enrollment trends exacerbate these concerns by projecting highly competitive markets for a lower number of students and an increased focus on students from at-risk demographic groups (Wang, 2018). While some institutions implemented practices to address these financial issues, few focused specifically on meeting the needs of students from various demographics. This white paper discusses how an on-campus financial education program can be used to decrease financial stress and potentially increase retention and graduation rates of students from different demographic groups (grade classification in college, sex, race/ethnicity, and first-generation status).

A quantitative study was conducted at State University, a public 4-year institution in the Southeastern United States, to determine if a relationship existed between financial stress and student characteristics such as various demographic groups. Analysis of survey data identified a statistically significant relationship between grade classification and financial stress. The study also indicated that financial stress was widespread among all demographic groups. The analysis of these data and a review of literature on the issue of financial stress led to five recommendations for implementing an on-campus financial education program at State University.

Financial Stress in Undergraduate Students

Stress and Coping Strategies in College Students

Stress is increasingly becoming a challenge for college students, with as many as 75% of students experiencing stress at various times throughout their collegiate career (Garett, Liu, & Young, 2017). Stress has been linked to higher depression, lower sleep levels, and lower self-esteem, diminishing the physical and mental health of many college students and presenting barriers to college persistence (Beiter et al., 2015; Britt, Ammerman, Barrett, & Jones, 2017). Students who report experiencing stress are more likely to take fewer credits, drop out of school, and place higher emphasis on working full time while being enrolled in college (Britt et al., 2017). They have lower rates of retention, academic performance, and graduation (Coccia & Darling, 2016). Concerns have also been expressed about college students' knowledge of coping strategies to successfully navigate stressful situations, many turning to maladaptive coping strategies, such as drug and alcohol abuse, self-injury, poor eating habits, smoking, social withdrawal, and other avoidant behaviors (Richardson, Elliott, & Roberts, 2013; Pedersen, 2017). Teaching college students the strategies needed to manage stress and develop positive coping behaviors has become a priority in higher education mental health discussions.

These concerns become especially important in terms of diversity and inclusion efforts on campus. While stress and anxiety are experienced across

WHILE STRESS AND ANXIETY ARE EXPERIENCED ACROSS MOST SOCIODEMOGRAPHIC GROUPS, THEY ARE OFTEN COMPOUNDED WITH OTHER ISSUES OF COLLEGE ACCESS, COLLEGE AFFORDABILITIY, AND COLLEGE COMPLETION FOR THOSE GROUPS ALREADY IDENTIFIED AS AT RISK.

most sociodemographic groups, they are often compounded with other issues of college access, college affordability, and college completion for those groups already identified as at risk. This is particularly true for female, Black and Hispanic, or first-generation students (Adams, Meyers, & Beidas, 2016; Knaggs, Sondergeld, & Schardt, 2015; Murphy & Murphy, 2017). Applying research findings that address life experiences of racial and ethnic minorities has become crucial to overall wellness of college students (Assari, 2017). However, little research goes deep enough to measure specific stressors experienced by college students or how those stressors affect them. Even fewer studies examine college students in relation to their individual demographic group classifications and how those stressors may be experienced differently by those different groups.

Financial Stress

One of the top stressors facing college students is financial stress. *Financial stress* is defined as anxiety associated with an individual's current personal monetary situation (Britt et al., 2017). Finances have been consistently listed as a top traumatic or difficult challenge in the undergraduate student experience, usually only falling second to academics (National Survey of Student Engagement [NSSE], 2015; American College Health Association [ACHA], 2018). Students are worried about paying for college, paying for course materials, paying bills, and paying credit card debt (Oman, Vesely, Aspy, & Tolma, 2015; Sallie Mae, 2016). In the face of financial issues, students are turning to loan debt to help finance their degrees (Holter & Seganish, 2014; Nica & Câtâlina-Oana, 2017). Increased student debt has been linked to higher stress, lower levels of retention, and lower graduation rates (Britt et al., 2017). The cost increases of

higher education, combined with the decreases in federal and state funding for education have caused parents and students to worry about how they will afford college, obtain a successful career, and experience the social mobility that colleges often promote as a benefit to graduation with a degree (Johnson, O'Neill, Worthy, Lown, & Bowen, 2016; Pan & Ost, 2014).

Financial Stress and Demographics

Students from all types of backgrounds are facing negative consequences of increased financial stress, including higher debt, lower graduation rates, and lower reports of achieving academic goals (Baker, 2019). Financial stress seems to compound those issues already arising within demographic groups susceptible to other issues, such as increased mental health issues due to sex-based or racial discrimination, less access to resources, and lower familial support (Chen, Stevens, Wong, & Liu, 2019). Recent studies have highlighted inequities among marginalized demographic groups in their perceptions of higher education affordability. Creating avenues to identify and address those inequities is becoming a very important part of discussing affordability and access in higher education (Warnock, 2016). Examining the effects of financial stress on these different groups then becomes very important to higher education leaders.

This paper focuses on the student characteristics of sex, race/ethnicity, first-generation status, and grade classification in college. Sex has been found to be a significant variable in studies of financial stress, especially for females (Jones, Park, & Lefevor, 2018). Females report higher levels of financial stress, higher debt levels, and financial stress creates more complex interactions with other factors when identified with

a racial or ethnic minority group (Britt, Ammerman, Barrett, & Jones, (2017). Racial and ethnic minorities often show evidence of struggles with psychological and financial difficulties (Flores & Lin, 2013). Hispanic and Black students report higher financial stress than their White peers (Olson-Garriott, Garriott, Rigali-Oiler, & Chao, 2015). First-generation students also experience higher levels of financial stress (Drever et al., 2015) than their peers whose parents have obtained a 4-year degree. Lastly, students in different grade classifications also report varying levels of financial stress. Different studies debate which year in college is the most financially stressful for students (first year, sophomore, junior, senior) but often agree that the first year seems to be the most targeted by institutions for financial education efforts (Beiter et al., 2015; Naushad et al., 2014).

Negative Implications of Financial Stress & Insufficient Coping Strategies

For many students, college is the first time that they are responsible for the cost of everyday living expenses. Being a college student, vulnerable to debt and the stressors that lead to this debt, often leads to a cycle of poor financial decision making, higher risk of dropping out of college, delayed financial decisions (marriage, starting a family, home ownership), and poor career performance (Britt et al., 2017; Rohlfing, Navarro, Maniya, Hughes, & Rogalskly, 2014; Turenan & Hiilamo, 2014). These issues affect the student individually and society as a whole. Insufficient financial knowledge and skills have been identified as contributors to economic and financial crisis (Mitchell & Lusardi, 2015). Recent research has linked increasing student loan debt and the stress of repaying that debt to decreases in consumer spending, slowing the economy, and decreases in

public service employment, leaving many vital career fields with critical staffing levels (Cornelius & Frank, 2015).

Considering these issues, college students often turn to various coping strategies to help them manage financial stress. Unfortunately, these strategies are often maladaptive behaviors, such as binge-drinking, which is an increasingly concerning issue for higher education administrators, and creating increased credit card debt (Doehring, 2018). For those students who do attempt to seek out assistance with financial stress, they often turn to the resources provided by their colleges. Unfortunately, while most colleges offer some type of general counseling services, very few offer assistance in money management (Britt, Canale, Fernatt, Stutz, & Tibbetts, 2015) and even fewer are comprehensive enough to assist with the disparity of the strain of financial independence experienced by the different demographic groups represented in college populations (Choi, Gudmunson, Griesdorn, & Hong, 2016; Sorgente & Lanz, 2016). The lack of financial knowledge among college students has been identified by researchers as indicative of a major issue that needs to be addressed in higher education (Archuleta, Dale, & Spann, 2013).

WHILE MOST COLLEGES OFFER COUNSELING SERVICES, VERY FEW OFFER ASSISTANCE IN MONEY MANAGEMENT AND EVEN FEWER ASSIST WITH THE DISPARITY OF FINANCIAL STRAIN IN DIFFERENT DEMOGRAPHIC GROUPS.

Financial Literacy & Education

Researchers have used the terms financial literacy and financial education both separately and interchangeably. For the purpose of this paper, *financial literacy* is the mastery of knowledge of, attitudes on, and behaviors surrounding money management, and *financial education* is the methods used to teach the desired knowledge, attitudes, and behaviors surrounding money management (Potrich, Vieira, & Mendes-Da-Silva, 2016). Literature is limited on the effect financial education programs can have on financial literacy for college students. However, research has linked financial literacy and increased knowledge about federal aid to lower levels of student debt (Boatman & Evans, 2017). Xiao and O'Neill (2016), in the National Financial Capability Study, found a positive relationship between financial education, financial knowledge, and positive financial behaviors. Chaiphat (2019) also found positive relationships between offering financial education lessons and improved financial behaviors and attitudes. Providing education on financial management for students may help address the issue of financial stress and create positive social change through more appropriate financial behaviors.

Research is also limited on the specific benefits of financial literacy and financial education for students from various demographic groups. Atkinson and Messy (2013) found that financial knowledge increases with education, even when demographic group factors are held constant. Mauldin, Henager, Bowen, and Cheang (2016) focused on income levels and found that financial literacy decreases when income is lower and that those people with lower incomes perceive financial knowledge as a barrier to success.

Studies have shown that individuals who are African-American or Black are more likely to have lower levels of financial wellness in terms of payment behavior, credit card balances, asset liquidity, and debt-to-income ratios (Bashara, Emmons, & Noeth, 2015). While these studies are limited and show a need for more research, the trend of at-risk demographic groups potentially benefiting from financial education is evident.

With such limited literature available on financial education programs and even fewer focusing these efforts for demographic groups, it is no wonder that many universities are left without explicit knowledge of the benefits of such programs, without direction for implementation of such programs, and often are left to either develop their own programs or decide to not offer any programs at all. Geddes & Steen (2016), in a review of 322 colleges and universities, found that only 8% of liberal arts colleges were offering personal finance courses and that most institutions that offered financial education only focused on investment education. The review found that liberal arts colleges were least likely to provide courses in financial education. Reasons for not offering these courses may include limited resources, lack of strategic fit into traditional curriculum, and failure of faculty to see the value of and need for financial literacy education efforts at the higher education level (Geddes & Steen, 2016). Other institutions may include a limited amount of money management instruction in their first-year seminar or rely on financial aid administrators or financial social workers to serve as the primary contacts of financial education. On the other hand, some institutions have

created entire departments to offer financial education programming for the campus with well-developed curriculum and staff (Kezar, 2010).

Yet still, these efforts are not enough, especially to meet the needs of those students from at-risk demographic groups. Many of the financial literacy programs in place seem to have been created without any input from the demographics that they serve (Schaffer & Mohs, 2016). The failure to address the needs of low income and racial/ethnic minority groups by these programs is concerning. Reich and Berman (2015) found that offering financial literacy education programs does in fact improve financial literacy and financial behaviors, but that students from low-income families are less likely to benefit. The mere availability of these programs, then, is ineffective in addressing the financial needs of these demographic groups. The very structure and design of a financial education program must consider environmental influences on students from these at-risk demographic groups to help promote true financial literacy and create true social change (Al-Bahrani, Weathers, & Patel, 2019).

MANY OF THE FINANCIAL LITERACY PROGRAMS IN PLACE HAVE BEEN CREATED WITHOUT INPUT FROM THE DEMOGRAPHIC GROUPS THEY SERVE

Best Practices in Financial Education Programs

While academic research is limited on best practices for financial education programs in higher education, there are some common themes offered for best practices from both academic researchers and governmental agencies. The Consumer Financial

Protection Bureau (CFPB) offers five principles of general financial education: know the individuals and families to be served, provide actionable, relevant, and timely information, improve key financial skills, build on motivation, and make it easy to make good decisions (CFPB, 2017). The U.S. Financial Literacy and Education Commission (2019) adds three recommendations to that list: develop standards for professional educators, provide ongoing support, and evaluate for impact.

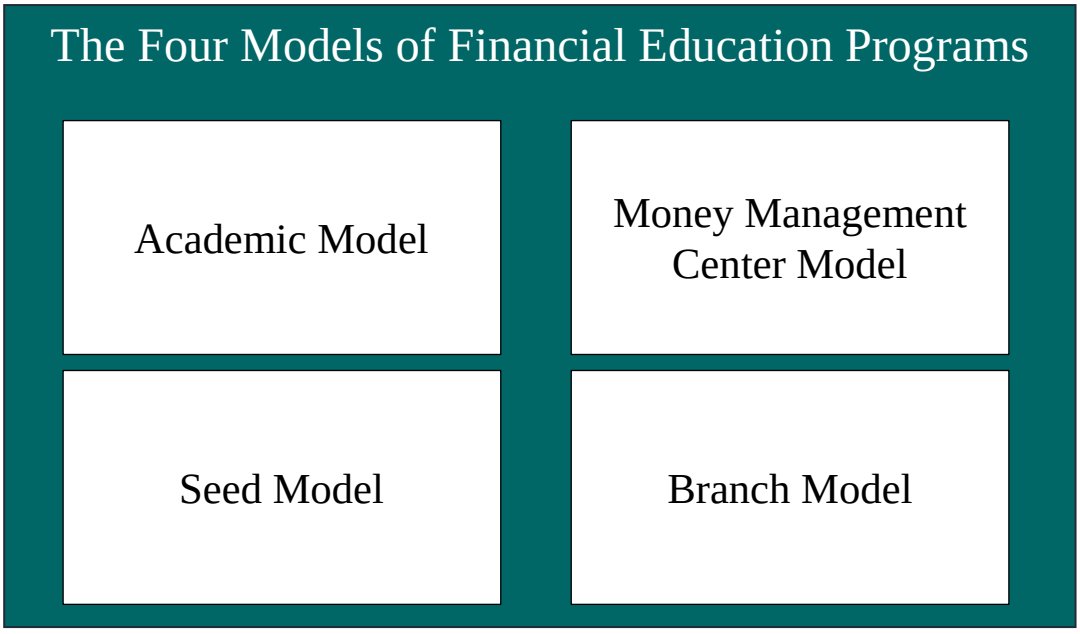
The U.S. Financial Literacy and Education Commission (2019) specifically suggested that

> financial literacy programs in higher education should also provide clear, timely, and customized information to inform student borrowing, effectively engage students in financial literacy and education, target different populations by use of national, institutional, and individual data, and communicate the importance of graduation and choice of academic major on repayment of student loans. (p. 3)

Academic researchers echo those best practices with calls for attaining campus-wide buy-in, using teachable moments with peer-to-peer modeling, using active and experiential learning techniques, and using systematic evaluations as a tool to improve program effectiveness (Kezar, 2010). Taking these best practices and applying them should include creating an entity to oversee the implementation and oversight of the program, creating a representative task force to develop the program, and determining the best learning outcomes and activities to produce those learning outcomes.

Financial Literacy Education Program Models

Traditionally, financial literacy education programs fall into one of four models: the Academic Model, the Full-Fledged Money Management Center Model, the Branch Model, and the Seed Program Model (Danns, 2014). These models were derived from combining elements of Cude's (2016) original four models of financial education programs: financial education/counseling centers, peer-to-peer programs, programs



delivered by financial professionals, and distance learning programs. Institutions using the Academic Model offer financial literacy education through classroom instruction, often for credit. Institutions using the Full-Fledged Money Management Center Model have an entire organizational unit and/or department devoted to educating students on financial knowledge, skills, and behavior. The Branch Model is used when financial literacy education occurs from several branches (departments) of the institution. Seed programs are those financial literacy education programs that exist because the seed of financial literacy education has been planted in an individual person or department but

not fleshed out into an entire program, which often occurs when an administrator has a desire to see financial literacy education happening on campus but assigns the task of making it happen to someone else. Most institutions that offer any type of financial education fall into one of these four models (Danns, 2014).

When determining which model to use, institutions must weigh the pros and cons of each model. The Academic Model has the potential to reach a wide array of students, be tailored to meet individual needs, provide timely, relevant instruction to students, and foster widespread student involvement. However, its success depends on instructors, marketing of the class, faculty support, and initiatives to ensure consistency among all course offerings. The Money Management Center model also has the capability to reach a significant number of students with timely, relevant knowledge. This model has its own space within the structure of the university. While it boasts less bureaucratic challenges due to the centralized structure and more student-focused efforts, the student reach is not as in-depth unless partnered with other models. The Seed Program has inherent issues with being championed by only one person, no funding structure, limited student reach, and disjointed efforts. Lastly, the Branch Model also suffers from these issues and often leads to duplicated programming all vying for student attention, decreasing student reach. What is clear from these models is that successful financial literacy education programs must have champions of the program who understand that the program needs administrative support and recognition, budgetary support and recognition, connectivity to other departmental units within the institution, and meets

competition within the overall broader academic landscape of the institution (Danns, 2014).

The Money Management Center Model provides the most effective way to meet the goals of financial literacy education. A financial literacy education program must be interdisciplinary and cross-functional, consisting of programming and partnership support from all areas of the institution (fiscal management, enrollment management, academics, student affairs, residential support, student health, etc.). Due to increased federal requirements surrounding financial education and student borrowing, accreditation requirements on financial literacy, scrutiny of financial literacy education in enrollment management practices, institutional accountability in student success outcomes (retention rates, graduation rates, and job placement rates), and the ever-increasing need for alumni relations for endowment campaigns, financial aid offices are often held responsible for compliance assurance for these requirements (Danns, 2014). While the staff in these offices are already educating students on various financial decisions ranging from investing in higher education through student borrowing to budgeting and saving for future financial investments, they are often limited with staff focused on processing applications for federal, state, and institutional aid and have little time to devote to full-on programming for financial literacy education. Other departments may also offer services that are important components of a financial literacy program, such as a personal finance course being offered in a specific academic discipline, weekly counseling for students experiencing financial stress, and/or programming specific to connecting food- and housing-insecure students with community resources for assistance. Disjointed,

inconsistent efforts have no real measures of effectiveness on student learning outcomes. A money management center can assist in organizing these efforts. The negative consequences of financial stress and its widespread existence call for an organized comprehensive financial literacy education center, encompassing all aspects of financial management for college students. This centralized division can be devoted to ensuring that a financial literacy education program meets all compliance requirements, best practices, and assessment goals as set by the federal government, accrediting bodies, and institutional strategic plans.

Financial Literacy Education Program Task Force+

Advisory boards and task forces have often been used to increase funding for program development, improve relationships with various constituents of an institution (faculty, staff, alumni), examine curriculum considerations, and increase campus visibility of financial literacy education programs (Hicks, Hancher-Rauch, VanSickle, & Satterblom, 2011). Including stakeholders from various demographic groups on such boards has also helped to more effectively reach targeted students from at-risk demographic groups (Atkinson & Messy, 2013). Because financial stress affects students from diverse demographic groups in different ways and because financial education learning can occur in various forms, institutions should strive to include perspectives from various members of the campus community. One simple way to ensure that these perspectives are considered is to create a task force or advisory board comprised of representatives from the various financial services departments represented in the money management center, as well as academic, enrollment, advising, student wellness, and

student affairs (including orientation, alumni support, and career services) units. The task force should include representatives from faculty, staff, and the student body (student orientation leaders/student government representatives are excellent sources for student representation). Efforts should also be made to ensure that the task force is sufficiently diverse to include perspectives from various demographic groups, especially those underrepresented groups discussed in this paper. The purpose of the task force is to create a clear mission statement for the financial education program, develop specific learning outcomes of the financial education program, and develop the learning experiences that will produce those outcomes. The task force will also serve to anticipate any challenges that will need to be overcome in the implementation of these learning experiences and will be the central group to facilitate the incorporation of these learning experiences into the student experience. The task force should also meet at least annually to evaluate the effectiveness of the academic program and offer suggestions for necessary changes. Lastly, the members of the task force can serve as a crisis management team to connect individual students experiencing major financial crises to resources to assist them with managing stress or to make institutional plans when major events, such as natural disasters or pandemics create financial crises for large groups of students at the institution.

Financial Literacy Education Program Elements

The task force will also be responsible for the development of the elements of the financial literacy education program. Before developing new programming, the task force should assess the institution's current practices. The program should ensure that

best practices for financial education are occurring throughout various stages of the student experience: admissions, financial aid, orientation, academics in the classroom, student support experiences outside of the classroom, community service outreach, and supports for graduating seniors and alumni. Practices that should be examined include timeliness and customization of financial aid award letters, distribution of information on student borrowing and retaining scholarship eligibility, orientation presentations on financial wellness, communication to students regarding financial aid refund checks, money management curriculum in freshman seminar classes, availability of personal finance courses, information regarding academic major selection and anticipated salaries, residential support training events, financial counseling, and career services/alumni support on financial education programming. Practices at peer and aspirant institutions should also be examined to identify implementation opportunities. Expanding practices already occurring may be easier than starting practices from the ground up and may help prevent duplicated efforts. Examining the practices already occurring may also help identify gaps in the support needed for students. These gaps will provide insight into opportunities for new programming and educational experiences on financial management.

After identifying gaps in programming, new learning experiences should be created to meet the needs of students throughout their collegiate experience. Possible learning experiences should include (but not be limited to) customized financial aid award letters available in at least English and Spanish that clearly communicate the cost of attending the university, the financial assistance available, and the net price of

attending State University; one-on-one sessions with financial aid counselors; text, video, and live or virtual workshops dedicated to educating prospective students on college affordability, borrower education, and scholarship eligibility retainment; communication regarding student loan indebtedness acknowledgements; entrance loan counseling; required unit on money management in all freshman seminar courses; online financial education module giving information on accessing financial education resources required for sophomores; required counseling for students failing to retain eligibility for federal, state, or institutional financial aid; referral programs for academic advisors to connect students with financial aid and/or financial counselors at signs of distress; a for-credit personal finance course taught by faculty; a required senior seminar on salary expectations, student loan repayment counseling, budgeting, saving, and investments; readily available materials presenting information on key financial skills; on-demand presentations and workshops; academic advisors trained on key financial skills; social media and other marketing campaigns on financial literacy during key time periods (refund check dates, financial aid deadlines, graduation, etc.); and community outreach events for alumni, current students, and community members on financial education topics. These learning experiences and the suggested year-specific timeframes for offering them are listed in the following table.

Financial Literacy Learning Experience	**P**rospective	**F**irst-Year	**S**ophomore	**J**unior	**S**enior	**A**lumni
Text/video/live workshops on college affordability	P					
Customized financial aid award letters	P	1	2	3	4	
One-on-one consultations with financial aid counselors	P	1	2	3	4	A
Entrance loan counseling		1				
Student loan indebtedness acknowledgement		1	2	3	4	
Unit on money management in FYE course		1				
Requirement to complete online money management module			2	3	4	
Requirement to complete counseling for those failing to retain eligibility for financial aid			2	3	4	
Academic advisor referrals to financial aid and/or financial counselors		1	2	3	4	
For credit personal finance course			2	3	4	
On demand financial education presentations		1	2	3	4	A
Social media campaigns	P	1	2	3	4	A
Senior seminar					4	
Alumni financial wellness programming					4	A

Financial Literacy Education Program Content Delivery Methods

The delivery methods of financial literacy education programs should also be considered. While there does not seem to be a consensus on delivery methods of financial literacy education programs, Huston (2010) found that most institutions consider cost effectiveness, access to technology, and student reach/preference as very important when choosing a delivery method. Budgetary concerns are important factors in developing a financial literacy education program. Increased human capital to implement an in-person financial literacy program can be expensive. Some schools turn to partnerships with third-party service providers, but those also can be costly. Those programs offered at little to no charge are often limited by number of users, amount of content, etc. Access to technology is another key factor to consider. Using online content delivery assumes that all students equally have access to technology (Huston, 2010). Student preference is also a factor to consider. Students from racial/ethnic minorities have often reported preference for in-person delivery of education courses (Kumi Yeboah & Smith, 2016). A comprehensive financial education program will evaluate available delivery methods and use a well-planned combination of these methods to reach the most significant number of students in order to meet the program's learning outcomes.

Peer-to-Peer Mentorship

Castleman and Page (2015) found that student peer-to-peer mentorship programs can be both cost-effective and significantly influential on college student behavior. Institutions wishing to develop a financial literacy education program should consider a

peer-to-peer component. Mentors can be volunteer student leaders identified through existing programs on campus or hired through Federal Work Study funding to help mitigate program costs. These students can assist in presenting workshops, conducting counseling sessions, and/or creating program and marketing content for the institution. Most importantly, these students can help address the needs of underrepresented demographic groups by teaching and modeling satisfactory financial behaviors (Castleman & Page, 2015). These students also benefit personally from their training to develop expertise on key financial literacy skills.

Benefits of Financial Literacy Education

Using these recommendations to implement programs that increase knowledge of financial skills could potentially allow students to manage finances successfully, possibly leading to improved academic performance, career advancement, greater lifetime earning potential, and loan repayment success (Cornelius & Frank, 2015; Mitchell & Lusardi, 2015). In turn, the skills developed may help decrease overall student loan debt and encourage students to make beneficial economic decisions (Mitchell & Lusardi, 2015). Higher levels of financial literacy among college students and the general population may also lead to greater economic activity in the United States through more planning, saving, investing in stocks, wealth accumulation, lower debt levels, increased repayment levels, and retirement planning (Mitchell & Lusardi, 2015). Higher education is becoming more important in social mobility and those institutions who embrace their role in this process are often advantaged compared to their peer and aspirant competitors (Cornelius & Frank, 2015). The advantages of financial education programs can prove very beneficial

for college students, the institutions that implement them, and the greater society that accepts them.

Financial Stress and State University: The Study

Students at State University, a public, 4-year institution in the Southeastern United States, are not immune to financial difficulties. Of students attending the institution in 2018-2019, 68% used some type of student loan. Federal student loans were obtained by 65% of students attending the institution. The yearly average student loan debt was $10,152 (National Center for Education Statistics [NCES], 2019). Despite this accrued debt, the institution had low first-year retention and 6-year graduation rates of 68% and 47%, respectively. Students who leave State University were also increasingly failing to repay student loans, with the number of students in default doubling between 2015 and 2016 to be 8.3% (NCES, 2019). Despite the evidence of financial distress by students at State University, financial stress had never been measured prior to this study.

In this study financial stress and the difference in levels of financial stress among various demographic groups within the undergraduate students at the study site were measured. The cross-sectional quantitative survey used in this study included questions from the National Survey of Student Engagement's 2012 and 2015 experimental questions related to financial stress (NSSE, 2012, 2015). Examples of survey items included worrying about paying for college, having enough money for regular expenses, not purchasing required course materials, etc. Unlike NSSE, which only surveys first-year and senior students at 4-year institutions, this study included students from all grade

classifications (first-year, sophomore, junior, and senior). The survey invitation was emailed to a stratified random sample of 2,130 undergraduate students at State University; 134 students responded to the survey. The analysis of data included 127 valid responses with no missing data, resulting in a 6% response rate.

The experimental questions on financial stress from the 2012 and 2015 NSSE administrations asked students to estimate how often they engaged in specific activities and the extent to which they agreed with statements related to financial stress. Response frequencies for these items are shown in the following table. Five demographic items from the same survey were also included in this study. The responses to the 14 items were totaled to calculate a score for each respondent on NSSE's 66-point financial stress index (NSSE, 2015), ranging from 14-66.

The purpose of this study was to determine if a relationship existed between the demographic characteristics of the students and their level of financial stress. Stress levels at State University were predicted to be significantly related to these demographic variables based on similar studies found in literature.

Response Frequencies for Questions 1 and 2

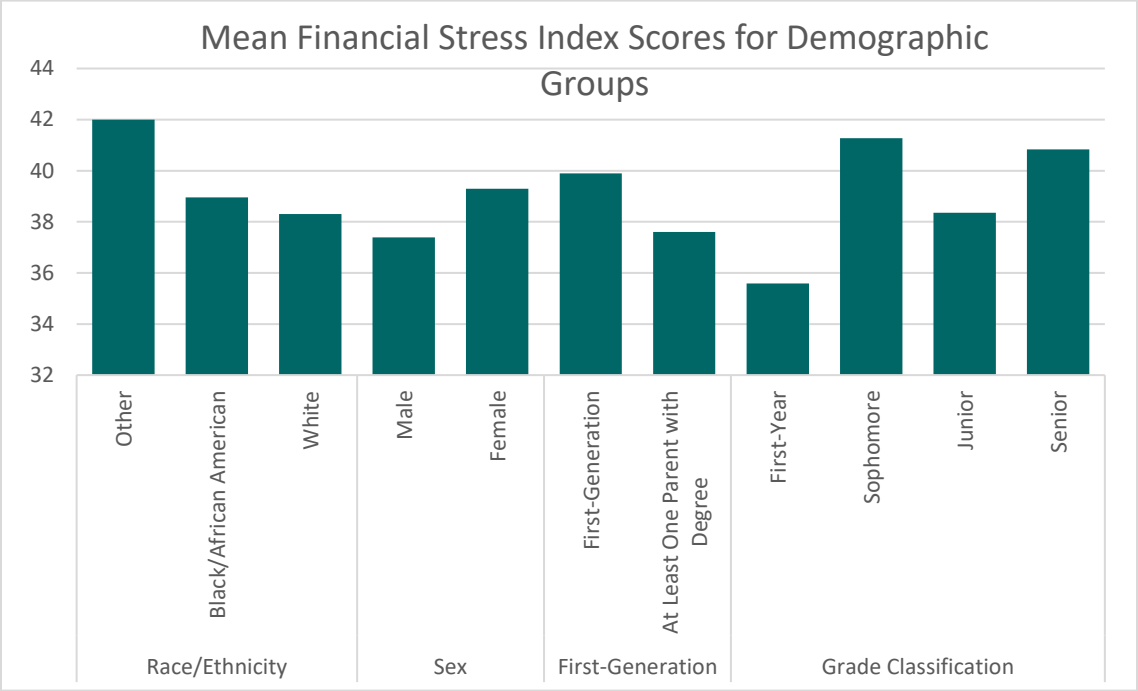
In your experience at your institution, about how often have you done each of the following?	Never (1)		Sometimes (2)		Often (3)		Very Often (4)	
	N	%	N	%	N	%	N	%
j. Worried about having enough money for regular expenses.	7	5.6	26	20.6	34	27.0	59	46.8
k. Worried about paying for college.	18	14.3	17	13.5	30	23.8	61	48.4
l. Carried a balance on a credit card,	53	42.1	19	15.1	22	17.5	32	25.4
m. Chose not to participate in an activity due to lack of money.	6	4.8	39	31.0	31	24.6	50	39.7
n. Chose not to purchase required academic materials (books, course packs, supplies) due to their cost.	25	19.8	37	29.4	29	23.0	35	27.8
o. Investigated transferring to a less expensive college.	48	38.1	39	31.0	16	12.7	23	18.3
p. Investigated withdrawing from college due to costs.	49	38.9	38	30.2	14	11.1	25	19.8
q. Investigate working more hours to pay for costs.	10	7.9	29	23.0	26	20.6	61	48.4
r. Investigated increasing your borrowing to pay for costs.	30	23.8	28	22.2	24	19.0	44	34.9

Please indicate the extent to which you agree with the following statements.	Not at all (1)		(2)		(3)		(4)		(5)		Very much (6)	
	N	%	N	%	N	%	N	%	N	%	N	%
a. Financial concerns have interfered with my academic performance.	17	13.5	19	15.1	13	10.3	21	16.7	22	17.5	34	27.0
b. Work schedule has interfered with my academic performance.	30	23.8	13	10.3	13	10.3	18	14.3	19	15.1	33	26.2
c. I could pay for an unexpected expense of $500.	70	55.6	22	17.5	14	11.1	11	8.7	3	2.4	6	4.8
d. I could pay for an unexpected expense of $1,000.	95	75.4	13	10.3	6	4.8	5	4.0	4	3.2	3	2.4
e. Considering what I pay for my college education, attending my institution is a good investment.	13	10.3	14	11.1	32	25.4	30	23.8	18	14.3	19	15.1

Results

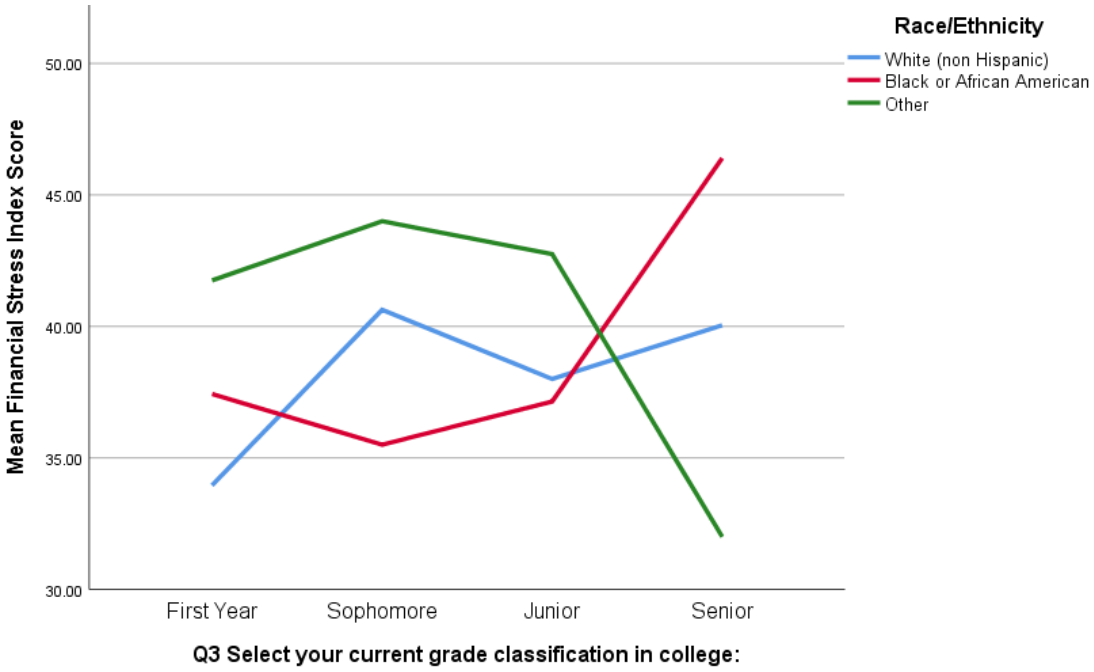
This study was designed to measure the financial stress of undergraduate students at State University. The collected data showed that students at State University are indeed experiencing financial stress, and at disturbing rates. Almost 50% of the respondents worried about having enough money for regular expenses and very often worried about paying for college. In addition, 48% of respondents have investigated working more hours to pay for costs associated with education. There was also a high number of students who indicated that they were not at all prepared for an unexpected expense of $500 or $1,000. These results, with the literature of financial stress of undergraduate students, indicate that financial stress is present in the student population at State University and must be adequately addressed to preclude the negative effects of financial stress.

The next step in the study was to determine if the financial stress was related to the demographic characteristics of the students. The results for sex, race/ethnicity, and parental educational levels were not surprising, as they corresponded with most research. Respondents who were female, not White, or first-generation had higher mean financial stress index scores. What was unique in this study was the finding on grade classifications.



Multiple regression analysis was used to determine if a relationship existed between financial stress and demographic characteristics (grade classification, sex, race/ethnicity, and parental educational levels). When all four predictor variables were included in the regression, the model did not significantly predict financial stress. This failed prediction could be perceived as an indication of wide-spread financial stress across all demographic groups. However, after reviewing the individual variables as predictors, grade classification was determined to be significant in predicting financial stress. The mean financial stress levels were also significantly different among the grade classifications. Sophomores and seniors reported significantly higher mean stress than their first-year and junior counterparts. This finding questions the common practice of implementing financial literacy education programming solely in the first year of college and calls for financial literacy interventions throughout the collegiate experience. Also of

importance was the interaction of the predictor variables. For example, the mean financial stress index score for non-White (non-Hispanic) students surveyed was higher than their White (non-Hispanic) peers. These data call for several considerations regarding financial stress and how it affects students from different demographic groups. These findings create a call to action for leaders at State University to implement a financial literacy education program to address the issues surrounding financial stress.



Implementing a Financial Education Program

To address the widespread issues surrounding financial stress and the inequities that financial stress causes among different demographic groups at State University, a financial literacy education program should be implemented. The consequences of financial stress, as presented in this paper, are potential threats to the sustainability of the institution and its ability to produce successful citizens for the global economy. A

campus-wide financial literacy program can be a solution to the issues presented and create a strategic competitive advantage among peer and aspirant institutions. To implement the financial literacy program, the following recommendations should be followed:

Recommendation 1: Create a Student Financial Services Division

The first recommendation for implementing a financial literacy education program is to develop a centralized division devoted to student financial wellness. This central division of student financial services should encompass the financial aid, student billing services, and student financial wellness outreach departments. Developing a central reporting structure will align resources and facilitate coordinated efforts to offer financial education that meets established compliance requirements and best practices.

Recommendation 2: Form A Campus-Wide Financial Education Task Force

After establishing administrative support and divisional alignment to implement the financial education program, a diverse task force with campus-wide representation should be formed to oversee the implementation and development of the program. This Financial Literacy Education Task Force will be responsible for developing the mission of the program, the learning outcomes of the program, and the learning experiences required to achieve those outcomes. The demographic composition of this group should also be representative of the student population and specifically at-risk demographic groups.

Recommendation 3: Assessing Current Financial Literacy Programming

Because financial literacy research is so limited, the Financial Literacy Education Task Force should assess current programming at the institution, peer institutions, and aspirant institutions. The Task Force should identify current practices that are occurring on campus to assist with financial literacy. Many departments on campus may be engaging students in individual events, programs, and practices that could be considered financial literacy education. Building on existing programming may prove easier than starting anew.

Recommendation 4: Create Authentic Multi-Year Financial Education Experiences

The information and feedback gathered from the Financial Literacy Education Task Force should be used to develop an authentic multi-year financial education experience for all students at the institution. The learning experiences should be customized to the individual student, timed with important teachable moments in a student's enrollment cycle, and designed to improve key financial skills, such as budgeting, saving, and debt and credit management.

Recommendation 5: Financial Literacy Education Peer Mentoring

Students are often more likely to relate to modeled behaviors exhibited by their peers. Peer mentoring is important for students from different demographic groups, as well. Student workers can be hired using Federal Work Study funding to serve as peer mentors in the financial education program. These students can help create programming, present workshops, hold one-on-one counseling sessions, offer referrals, and host on-campus and community events. Using students as a resource for a financial

literacy education program is not only beneficial to the institution, but also creates its own meaningful, learning opportunity for involved students.

Analysis of Implementation

Implementing a new financial literacy program will take approximately one year, allowing time to achieve institutional buy-in, evaluate current resources, make budgetary decisions, set learning outcomes, and develop a well-coordinated program to start in the fall semester. At the end of Year 1 and annually thereafter, the financial literacy education program should be assessed to determine whether the inputs of the program created the desired student outcomes and how this information compared within different groups of students. Pre and posttest surveys, satisfaction surveys, exit interviews, retention rates, graduation rates, personal interviews, and debt and loan default rates can be included in data collection for assessment of the program. Different interventions and comparison groups can also be tested within the framework of the program. Assessment can help guide modifications needed to the program in the future and adjustments for various demographic groups.

Conclusion

Financial stress in undergraduate students is a wide-spread issue presenting barriers to degree completion and social mobility. Students from at-risk demographic groups are especially disadvantaged in overcoming those barriers. This paper discussed the issue of financial stress in undergraduate students at State University, the negative consequences caused by that stress, and the lack of resources available to cope with that stress. This paper also presented a solution to addressing that lack of resources: a

financial literacy education program based on industry-wide best practices, a sound theoretical framework, and findings from a study conducted at State University. Implementing this program will provide students from all demographic backgrounds with access to financial resources to increase their knowledge of how to manage financial stress during their undergraduate collegiate career. This increase in access and equity will also provide State University with an innovative plan to help address the inequitable barriers to degree completion and social mobility presented by financial stress, enhancing the competitive advantage of the university during a time when underrepresented groups are important to both enrollment and strategic goals. Lastly, this program will help promote financial wellness education in the higher education community, adding to a very limited body of research on financial literacy in higher education, a much-needed area of study.

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Appendix B: NSSE Permission

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4) This Agreement expires on December 1, 2018.

The undersigned hereby consent to the terms of this Agreement and confirm that they have all necessary authority to enter into this Agreement.

For The Trustees of Indiana University:

Alex McCormick

Digitally signed by Alexander McCormick
DN: postalCode=47405, o=Indiana University, street=900 E. 7th St., street=900 E. 7th St., st=IN, l=Bloomington, c=US, cn=Alexander McCormick, email=amcc@indiana.edu
Date: 2018.08.07 11:59:09 -04'00'

Alexander C. McCormick
Director
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Date

For Licensee:

Samantha Hicks

Samantha Hicks
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Appendix C: Financial Stress Survey

PLEASE NOTE: Permission was received to use the following experimental items from the 2012 NSSE survey as a research instrument in this study. Question 3 has been modified to include all four grade classifications, not first-year and senior only:

1. In your experience at your institution, about how often have you done each of the following?	**1 = NEVER**	**2 = SOME TIMES**	**3 = OFTEN**	**4 = VERY OFTEN**
a. Worried about having enough money for regular expenses.				
b. Worried about paying for college.				
c. Carried a balance on a credit card.				
d. Chose not to participate in an activity due to lack of money.				
e. Chose not to purchase required academic materials (books, course packs, supplies) due to their cost.				
f. Investigated transferring to a less expensive college.				
g. Investigated withdrawing from college due to costs.				
h. Investigated working more hours to pay for costs.				
i. Investigated increasing your borrowing to pay for costs.				

2. Please indicate the extent to which you agree with the following statement:	**NOT AT ALL 1**	**2**	**3**	**4**	**5**	**VERY MUCH 6**
a. Financial concerns have interfered with my academic performance.						
b. Work schedule has interfered with my academic performance.						
c. I could pay for an unexpected expense of $500.						
d. I could pay for an unexpected expense of $1,000.						
e. Considering what I pay for my college education, attending my institution is a good investment.						

3. Select your current grade classification in college:	**1 = FIRST YEAR**	**2 = SOPHOMORE**	**3 = JUNIOR**	**4 = SENIOR**

4. Select your sex:	**1 = MALE**	**2 = FEMALE**

survey continues

5. What is your racial or ethnic identification? (Select only one.)	1 = American Indian or other Native American
	2 = Asian, Asian American, or Pacific Islander
	3 = Black or African American
	4 = White (non-Hispanic)
	5 = Mexican or Mexican American
	6 = Puerto Rican
	7 = Other Hispanic or Latino
	8 = Multiracial
	9 = Other
	10 = I prefer not to respond

6. What is the highest level of education that your father completed?	1 = Did not finish high school
	2 = Graduated from high school
	3 = Attended college but did not complete degree
	4 = Completed an associate's degree (A.A., A.S., etc.)
	5 = Completed a bachelor's degree (B.A., B.S., etc.)
	6 = Completed a master's degree (M.A., M.S., etc.)
	7 = Completed a doctoral degree (Ph.D., J.D., M.D., etc.)

6. What is the highest level of education that your mother completed?	1 = Did not finish high school
	2 = Graduated from high school
	3 = Attended college but did not complete degree
	4 = Completed an associate's degree (A.A., A.S., etc.)
	5 = Completed a bachelor's degree (B.A., B.S., etc.)
	6 = Completed a master's degree (M.A., M.S., etc.)
	7 = Completed a doctoral degree (Ph.D., J.D., M.D., etc.)