# How Am I Going to Pay for That?!: First-Generation University Students

# and Their Financial Concerns

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Judith J. Andrews Shultz

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# ABSTRACT

This study examines first-generation research-university students in relation to their financial considerations. It is driven by the question, What is the relationship between first-generation college-student status and financial considerations among research-university students? It explores the impact of such variables as first-generation student status, parents' educational levels, student demographics, student's financial status, and academic considerations on students' financial concerns including the level of student financial concerns associated with paying for college, the behaviors students might choose, the manageability of college costs, and the worry associated with those costs. The results indicate that first-generation research- university students have unique financial concerns and responses to these concerns which are tied to their educational and family related backgrounds that influence their financial decision-making.

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# CHAPTER ONE

## Introduction

Sally has been a college student for two years. Each year, paying her tuition, books, fees, and other college expenses gets harder and harder. Many times, she has found that she has to go to her parents' home to get a good meal because her budget will not stretch to cover food to put in her refrigerator. At the end of the month, it is even worse. She has even considered moving home which would be hard since she has been on her own in the college dorms for two years now. Sally has also considered asking her parents to help out more with college expenses, but as the oldest of five siblings, she is well aware that her parents are strapped for cash. Her mom now works a full-time job along with a part-time job. Her father takes in extra work on the weekends, changing oil in neighbor's cars and stepping up to be a handyman for other people willing to pay him for repairing minor problems in their homes. Sally wants to pay as much as she can for college without asking her parents to take on even more than what they have saved for Sally to attend college. She will be the first to graduate from college in their family. Sally reads an article in the campus newspaper about how the board of trustees is again considering raising tuition. The college has bills to pay, too. Sally wonders how she's going to make ends meet if the price of her education goes up much more.

Sally isn't alone. College costs have increased and increased and increased. In today's world, it's not only the low-income families who are struggling to put Martha or Sam through college. Many times, Martha or Sam isn't as lucky as Sally has been thus far. Many times, Martha or Sam has to figure out a way to pay the expenses associated with college or decide to cut back on college or cut back on something they think is essential, like food for the table or gas for the car to make it to college or work. Headlines about skyrocketing educational costs and whether the informal college promise “Go to college, get a degree, and you’ll make more money in your lifetime” has been broken. Many parents and students are beginning to take a long, hard look at how to manage the cost of college because college is required for most good jobs in today’s world.

**Problem and Rationale**

Exploring the relationship between first-generation college students and financial considerations among research-university students is important because making financial decisions and balancing life and college with good choices is critical to almost every college student and to almost every family who has a student in college. Every day, students are faced with decisions about how better to manage their money and are making decisions that impact the future. Many of these students may make the difficult decision to take a term off or even to leave college and never come back again. They are making choices about how to spend their money, whether to work or not, or perhaps whether to add more hours of work and how that will impact their college attendance and grades.

Looking at what students do when faced with a financial challenge is something that hasn’t been explored much, if at all, in the literature. In this dissertation, the term “financial concerns” will be defined as a student’s concerns connected to finances including past, present, and future concerns. Behaviors and activities reflect decisions that students make to handle financial considerations and concerns. These behaviors may include choices like taking a class at a community college, choosing to take public transportation rather than driving their own car to college, allowing a roommate to move in with them, or even moving back home during or after college among others. Other financial considerations may impact the educational futures of these students as they decide to attend graduate school immediately rather than taking some time off to get experience in their field of expertise or choose not to attend graduate school.

This study explores the question: What is the relationship between first-generation college student status and financial concerns among research-university students? It explores the impact of such variables as first-generation student status, parents' educational levels, student demographics, student's financial status, and academic considerations on students' financial concerns including the level of student financial concerns associated with paying for college, the behaviors students might choose, the manageability of college costs, and the worry associated with those costs.

Using a dataset provided by the University of Minnesota, this study examines what variables impact the financial decisions college students make, with a particular focus on first-generation college students.

## Overview of Dissertation

The dissertation encompasses Chapter 1, which introduces the subject of the study; Chapter 2 which provides a review of the published literature on topics associated with the study; Chapter 3 which provides the conceptual framework for the topic and presents the methodology used to carry out the study; Chapter 4 which discusses the findings of the research study, and Chapter 5 which discusses the implications of this study as they apply to theory, policy, and practice while also explaining the limitations of the current study and the way in which the study suggests future research.

# CHAPTER TWO

## Review of the Literature

*Debt problems grow worse for college students* (Hamilton, 2013). *Average student-loan debt rises again - to more than $26,000* (Hamilton, 2012). *Investigation: Federal student loans become constant burden* (Riepenhoff & Wagner, 2012). The headlines almost daily send out warnings to today's college students and their families. The cost of higher education is high, and, worse yet, there does not seem to be an end in sight as prices on almost everything, including the cost of a college education, continue to rise. Even families who saved money to send their children to college one day are concerned, and rightfully so, that they may not have saved enough to see their children through college without mortgaging their house, taking out college loans, or having to get another full-time job on top of the full-time jobs they already hold. Yet, the opposite side of the coin also applies. Though a college education is expensive, and increasing in cost, the pay-off for that college education, even in today's economy, according to the Education Pays 2010, continues to be increased earnings and increased potential for being employed **(**Baum, Ma, & Payea, 2010). Lifetime earnings of college graduates continue to outpace those of other non-college-educated individuals while societal benefits are also significant (Baum, Ma, & Payea, 2010).

As students enter college and as they continue to attend college they must make decisions about how to afford college and to continue to live with a roof over their heads, food on their tables, and gas in their tanks (providing they don't choose to get rid of the car and take public transportation). Students today are forced to make financial decisions that, many times, they are unprepared to make. Many of these students have not had to make financial decisions like the ones they will make during college, ones that will impact their financial futures for years to come as they pay off student loans. Some first-generation college students have no one within their family to turn to for advice about how to handle the expenses college incurs and are many times faced with daunting decisions that make college fraught with not only academic but also financial stress.

This dissertation explores the relationship between first-generation college-student status and financial concerns among research-university students. To do so, it presents the literature that exists on financial concerns that college students and their families have regarding paying for college, how these concerns impact the financial decisions the students make (such as choosing to move home while in college), the way worry over finances affects these college students, and their concerns about the manageability of college cost. It then looks at the published information on variables that may impact students' financial concerns, including variables as first-generation college student status, parental education levels, financial status, academic considerations, and demographics.

College students' decisions vary as much as those of other individuals who are faced with major, life-impacting decisions. Ishitani (2006) examined the persistence behaviors of 4,427 students, 14.7 percent who were first-generation college students attending four-year institutions. He found that students enroll for a variety of reasons (Ishitani, 2006). They may be seeking academic challenge, financial security, social status, or many other benefits of a college education. Many students are raised with the idea that they will attend college when they complete their high school education. Their parents are, themselves, college-educated and already reap the benefits of a college education. College is the expected next step for these students**.** In a report entitled "First-Generation Students: Undergraduates Whose Parents Never Enrolled in Postsecondary Education", the U.S. Department of Education (1998) looked at survey data from the Beginning Postsecondary Longitudinal Study concerning the participation of first-generation students in post-secondary education and found that some college students make a deliberate decision to make their lives different from those of non-college-educated parents, to make a break from the family pattern of toiling in a lower wage job or working their way up from the bottom in a career (1998). These first-generation college students enter a world that offers them both opportunity and risk (U.S. Department of Education, 1998)**.** The opportunity to gain a college education and a foot up in their future careers balances precariously against the risk of failing in college while acquiring a debt load that they will have to deal with for several years after college, whether they complete that college degree or not.

Most, if not all, college students are also entering the world of adulthood when they enter college or are entering the area of higher education with commonalities, no matter what their age. Kasworm (2003) whose writing focused on adult learners, their enrollment patterns, and what motivates them to attend college, indicated that "finding the financial resources for college attendance continue[s] to be a major issue for participation" no matter what the age of the student—young undergraduate or more mature adult student (p. 8). Hayes (2006), looking at a bit younger audience in his research study of 160 Texas Tech and New Mexico Highlands University students, found that many college-level students are challenged because they are "exposed to a significant degree of personal responsibility for their day-to-day finances" for the first time (p. 1).

Though, as high school students, many of these students may have had part-time jobs and had to manage clothing or car expenses, they have rarely been faced with handling major living expenses while also managing course expectations far different from what they faced in high school (Hayes, 2006). These challenges are met by college students in a variety of ways that may advance their goal of completing a college education or doom their financial future. Perhaps not surprisingly, according to Hayes, who studied these students looking at their attitudes toward money and levels of financial strain using an online survey, some succumb to extensive credit card and consumer debt before they leave school (Hayes, 2006).

Student debt levels, according to Marsh (2006), are rapidly growing and potentially creating new group — debt-ridden college students. Marsh who examined first-year and senior students at Texas Baptist universities indicated “this group of students is virtually unknowledgeable about basic personal finance. They cannot do basic math, they don’t know how to make decisions about credit, and they are easily taken in by scams focused on college age students” (Marsh, 2006, p. 30). Palmer et al. (2001) who in their research study questioned students who attended public and private colleges in the Northeastern United States about credit card usage and finances, stated that these students were characterized as having an “alarming” amount of student debt, according to the Nellie Mae Corporation, leaving college with an “average indebtedness of $12,000 in student loans and an average credit card balance of $2,226” (Palmer et al., 2001, p. 105). Robert Manning, an economic sociologist, would agree: “What we have before us today in higher education is a real crisis…That is, unprecedented levels of student loan debt, unprecedented levels of credit card debt, and the worst job market in over a decade" (Marsh, 2006, p. 31).

One answer to this crisis, from this researcher's perspective, is completion of a college degree and job placement. Yet, this answer must be balanced out with the fact that research completed by Taylor and Overbey (1999) whose study of 68 university students and 83 non-student consumers examined whether the high expectations of future income by college students were realistic or not. Taylor and Overbey proved that college students simply do not know enough about their own financial future or realize that the debt they are carrying into that future due to student loans and credit card balances contributes to an uncertain financial future for them. Henry, Weber, and Yarbrough (2001) who studied the money management practices of 126 education college students at the University of Louisana-LaFayette, agreed and through their research concluded that, "many students are living on the edge of financial crisis and many of them do not possess the knowledge needed to manage their money" (Henry, Weber, and Yarbrough, para. 2).

Though a college education might come with a high price tag, it also comes with a substantial payoff for the future of each individual who possesses a college degree. Lifetime earnings are dramatically impacted by education level. According to Cheeseman Day and Newburger (2002), who explored the relationship between education and earnings, even some college education makes a difference:

> People who attend some college (but do not earn a degree) might expect work-life earnings of about $1.5 million, and slightly more for people with associate degrees ($1.6 million). Over a work-life, individuals who have a bachelor's degree would earn on average $2.1 million—about one-third more than workers who did not finish college, and nearly twice as much as workers with only a high school diploma (p. 4).

This enhancement of lifetime earnings has been substantiated for decades. Cheeseman Day and Newburger (2002) state that according to the U.S. Census Bureau, education has always paid off. In 1975, full-time, year-round workers with a bachelor’s degree earned 1.5 times what a worker with only a high school diploma earned. By 1999, this ratio had increased to 1.8 times. This change in lifetime earnings, they said, came about because of a need for skilled workers and the supply of labor:

> In the 1970s, the premiums paid to college graduates dropped because of an increase in their numbers, which kept the relative earnings range about the educational attainment levels rather narrow. Recently, however, technological changes favoring more skilled and educated workers have tended to increase earnings among working adults with higher educational attainment, while, simultaneously, the decline in labor unions and a decline in the minimum wage in constant dollars have contributed to a relative drop in the wages of less educated workers (p. 3).

There are also differences in lifetime earnings based upon gender. Cheeseman Day and Newburger (2002) found that men with only a high school diploma will have, on average, lifetime earnings of $1.4 million, while women will have an average lifetime earnings of $1.0 million. With further education, a man who earns a bachelor’s degree will have on average, lifetime earnings of $2.5 million, while a woman with a similar degree will earn $1.6 million. Cheeseman Day and Newburger (2002) also found differences in educational levels according to age and gender:

> Among people age 25 and older, the percentage of men and women with bachelor’s degree has increased sharply over the past 25 years, with women markedly narrowing the gap. In1975, 18 percent of men and 11 percent of women had attained a bachelor’s degree. By 2000, 28 percent of men and 24 percent of women had a bachelor’s degree. In fact, in each year since 1982, more American women than men have received bachelor’s degrees ( p. 4).

Race also appears to continue to be related to educational attainment. Cheeseman Day and Newburger (2002) found that

> Educational attainment differs significantly by race and Hispanic origin. Among adults 25 years old and over in 2000, 88 percent of White non-Hispanics, 86 percent of Asians and Pacific Islanders, and 79 percent of Blacks had attained at least a high school diploma. Similarly, 28 percent of White non-Hispanics, 44 percent of Asians and Pacific Islanders, and 17 percent of Blacks had received a Bachelor's degree. For Hispanics (who may be of any race), only 57 percent had a high school diploma and 11 percent had a bachelor's degree (2002, p. 6).

## Educational Background

### First-Generation College Students

Though first-generation college students have been studied by researchers, there is surprisingly little on first-generation students, or students in general for that matter, in relation to financial concerns. The term "first-generation student" has been defined in many ways by many researchers; however, a common definition of a first-generation college student as defined by Mehta et al. is "a student that comes from a family where neither parent/guardian graduated from college" (Mehta, Newbold, & O'Rourke, 2011, para. 3).

Research on first-generation college students began largely in the late 1970's when the term was first used and extends to the present day. Pascarella et al. (2004) who studied samples of students from eighteen four-year colleges for over three years using data from the National Study of Student Learning divided first-generation students into three general areas. These areas continue to be applied to first-generation students today. The first comprises information that compares first-generation college students to other students in terms of demographics, high school preparation, college choice, and college expectations. A second includes research on first-generation college students and their transition from high school to college. Finally, the third has been first-generation college students and their college persistence (Pascarella et al., 2004). The Educational Resources Institute (1997) in an analysis of student data gathered from the Census Bureau, the U.S. Department of Education, The National Education Longitudinal Study, the National Postsecondary Student Aid Study, and the Beginning Postsecondary Longitudinal Study, found that the majority of first-generation students are over-represented in two groups: low income and minority (1997).

College enrollment of first-generation students is closely followed by many groups. Strayhorn (2006) who explored the potential difference in academic achievement between over 11,000 first-generation and nonfirst-generation college students using data from the Baccalaureate and Beyond Longitudinal Study (B&B:93/97), stated that, "Nationally 30% of all college enrollments are first-generation students" (Strayhorn, 2006, p. 83). At the university level, enrollment of first-generation students has changed dramatically over the past forty years. According to Saenz et al. (2007), "In 1971, first-generation students presented 38.5 percent of all first-time, full-time college freshman…By 2005, the proportion…declined to 15.9 percent of all entering freshman" (p.6).

The college decision-making process of a potential first-generation college student can be quite different from that of a non-first-generation student. Gardner and Holley (2011) who interviewed twenty first-generation doctoral students from two institutions, found that simply "breaking the chains of their backgrounds constituted a large obstacle for [first-generation] students," (2011, p. 83). Making the decision to pursue higher education creates a world of challenge and uncertainty for these students because they did not grow up around adults who completed college (Mehta et. al., 2011). First-generation college students are furthered challenged by having less support from their families. London (1992), who wrote an article discussing the changes first-generation college students experience as they make the journey from a non-college-educated world into the world of higher education, stated that these students find themselves "on the margin of two cultures" and often struggle with, yet must find, a balance that allows them to manage the tension between home life and their new college life (London, 1992, p.6). When examining the backgrounds of over 24,000 undergraduate students using data from the National Postsecondary Student Aid Survey of 1995-1996, Somers et al. (2004) found that one of the main conflicts a first-generation student may have will be whether or not to attend college, and closely behind comes a concern about how to attend college without ending up with an unmanageable debt load **(**Somers et al., 2004).

First-generation college students also may have different reasons for attending college. When sixty-four students from the program "Leading to Undergraduate Success" at UC-Los Angeles were surveyed in a study by Bui (2002), first-generation college students "gave higher ratings of importance for the reasons of gaining respect/status… and helping their family out financially after they are done with college" (reasons for pursuing higher education). This level of sacrifice, Gardner and Holley (2011) found, creates a constant demand for balance, and students many times see this balance as yet another sacrifice they are making for others and themselves, which creates yet another pressure that non-first-generation students may not have to handle.

Once in college, first-generation students continue to experience challenges. Of first-generation students who entered college in 1990 in a study completed by The Educational Resources Institute (TERI) Institute for Higher Education Policy, 17 percent of black, 18 percent of Hispanic and less than 16 percent of American Indian/Alaskan Native students had earned a bachelor’s degree within five years, while another 29 percent had earned an associate’s degree. In comparison, 20 percent of non-first-generation students earned an associate’s degree in that time period, while 36 percent earned a bachelor’s degree (Educational Resources Institute, 1997). In terms of income, 21 percent of students from the bottom income level had completed a bachelor’s degree by 24 years of age compared to 96 percent of students in the top income level. Ishitani (2006) more recently determined that a first-generation student had a 51 percent lower chance of completing a bachelor’s degree in four years and a 32 percent lower chance to complete it in five years.

Certain student characteristics were found to be highly predictive of bachelor’s degree completion for first-generation students. Harrell and Forney (2003) who examined Hispanic students and what happens to them between the time they begin high school and their first years of college, found these characteristics included having higher ACT or SAT scores, taking more difficult high school course work, having a high grade-point average, being white, having a higher family income, continual college enrollment, completing fewer work hours outside of school, and taking few remedial courses during their first year of college (Harrell & Forney, 2003). Pascarella et al. (2003), who looked at the data regarding 144 randomly selected students who took part in the National Study of Student Learning found that first-generation students experience a very different situation than non-first-generation students while in college. Pascarella et al. (2003) found that first-generation college students usually complete fewer credits; study less; take fewer natural science, math, art, and humanities courses; have lower grades; do not usually join Greek organizations; and work more hours than students whose parents hold bachelor's degrees. Strayhorn (2006) also examined student characteristics and their predictive value. He found that there were "significant linkages between several background variables and cumulative GPA… including gender and race (or being Black)" (p. 98). Specifically, he found that being a minority student had a negative influence on academic achievement, though he also indicated that this was true only for black students and needed to be further explored for students of other minorities (2006). The results of his study also indicate that first-generation status has a positive, though small and not statistically significant, effect on cumulative grade point average (2006). In addition, Strayhorn (2006) found that "precollege factors have a significant…positive effect on cumulative grade point average. For example, ACT score, SAT score, and major were significantly related to GPA" (2006, p. 98). In fact, Strayhorn believes that "good academic preparation for college may have a compensatory effect for those students who enter college with the least amount of sociocultural capital or without strong encouragement from family" (2006, p. 99). Strayhorn also found that academic integration had a positive relationship with academic achievement while social integration was found to have a negative relationship to grades.

First-generation students are also more likely to come from families with various challenges that create further barriers for them and their college futures. These challenges include families who are welfare participants, parents who are divorced, and parents who lack a college education and therefore relevant educational experience (Educational Resources Institute, 1997). The Educational Resources Institute (1997) indicated that 40 percent of first-generation students (compared to seven percent of students whose parents hold a bachelor's degree) also do not complete needed "pipeline" steps that would allow them to enroll at a four-year college (p. 19). These steps include taking preparatory courses in high school, taking appropriate entrance exams (45 percent take ACT or SAT), showing interest in completing a four-year degree (36 percent), and applying for and enrolling at a university (26 percent and 25 percent respectively). In comparison, of students who had at least one parent with a bachelor's degree, 82 percent who took the SAT or ACT, and 71 percent who applied to four-year institutions (Educational Resources Institute, 1997).

Though it is difficult to describe a typical first-generation student, several researchers have found trends. For example, Terenzini et al. (1996) who studied 4,000 new college students using data from the National Study of Student Learning, indicated that first-generation college students "were more likely than their peers to be female, older, and independent" (Terenzini et al., 1996, p.8). They were also more likely to be "nonnative English speakers" (Bui, 2002, measures, para. 2). Student race or ethnicity is also related to first-generation status, as first-generation students were more likely to be black or Hispanic and come from low income families according to Penrose (2002) who studied first-generation and continuing-generation students looking at measures of high school preparation, college performance, and college persistence with the data for 2,766 student orientation surveys and admissions databases at North Carolina State University (2002). "By virtue of their decision to attend college, these students have not only entered alien territory but distanced themselves from the understanding of family and friends", Penrose stated (2002, p. 431). Martin Lohfink and Paulsen (2005), who also looked at over 10,000 college students using data from the Beginning Postsecondary Students Longitudinal Survey 96-01,  added that minority students on a white campus may be "inhabiting intersecting sites of oppression, based on race, class, and gender" (Martin Lohfink & Paulsen, 2005, p. 411).

In addition, first-generation students are more likely, according to the U.S. Department of Education (1998), than non-first-generation students to have dependents and lower incomes, and to be enrolled in two-year institutions. While enrolled in college, they are more likely than their counterparts to be enrolled part-time, receive some form of financial aid, and work full-time (U.S. Department of Education, 1998). Penrose (2002) also found that first-generation students have weaker academic preparation, fewer academic and financial resources, increased time demands, and must get comfortable somehow in an academic world where they can spend little time due to many off-campus responsibilities. In addition, they are challenged to get support from a small, collegiate network with sometimes sporadic interaction (Penrose, 2002). Although first-generation students generally do not lack in ability, often they feel less prepared for college and have a greater fear of failure than students whose parents have earned at least a bachelor's degree according to Penrose's research. Given these challenges, first-generation college students may, "take longer to complete a degree and have less encouragement from families" (Somers et al., 2004, p. 421).

Family expectations and parental education levels may also affect the first-generation student's decision to apply for and attend college. McCarron and Inkelas

(2006), in a 1998-2000 study of 1,879 first-generation and non-first-generation college students using data provided by the National Educational Longitudinal Study 1998-2000, found that parental involvement was the strongest predictor of student goal-determination and completion, followed by student grades. When it comes to making a decision to attend college, The Educational Resources Institute found that only 29 percent of first-generation students enrolled for college immediately following high school graduation, compared to 73 percent of students whose parents held a bachelor's degree, and 25 percent of first-generation students applied to four-year institutions while 68 percent of non-first-generation students did so (Educational Resources Institute, 1997). 41 percent of Hispanics, 40 percent of Blacks, and 29 percent of American Indian/Alaskan Native students, compared to 56 percent of white students, enrolled for college immediately following high school **(**Educational Resources Institute, 1997). In addition, 28 percent of students in the lowest income level enrolled for college while 83 percent of students in the highest income level did so (Educational Resources Institute, 1997).

Inman and Mayes (1999) studied 4,620 University of Kentucky Community College System students who intended to transfer and showed that first-generation students are aware of their academic problems. They usually come from poorer families and may be limited in terms of college choice because they tend to want to attend a college that is close to home. In addition, Inman and Mayes found that first-generation students need night classes because they believe it is more important for them to be employed while in college. They are, on average, more concerned with increasing their self-confidence and with the opportunity to take evening courses (Inman and Mayes, 1999).

Once first-generation students enroll at a four-year college, only 55 percent attended college on a continuous basis, in comparison to 72 percent of non-first-generation students. Furthermore, only 47 percent of first-generation students attended college on full-time basis for at least part of the academic year in comparison to 62 percent of non-first-generation students (Educational Resources Institute, 1997).Continual college enrollment matters as Ishitani (2006) found that students, who were continually enrolled in college, as most non-first-generation students are, were eleven times more likely to complete a bachelor's degree within four years.

First-generation students many times are required to work while attending college, based upon a lower family income, less family financial support, and a variety of other factors. Inman and Mayes (1999) indicate that first-generation students are "more likely to work longer hours, believing perhaps (as previous research suggested) in the myth of working your way through college. Fewer firsts (54.5%) than nonfirsts (57.9%) worked 0 to 20 hours, and more firsts (16.9%) than nonfirsts (12.1%) worked 40 hours or more" (p. 10). Perhaps because they must work while attending college, "first-generation students tend to work more hours off campus than their non-first-generation counterparts, complete fewer total course hours during their first year, and receive less support from family and friends for their enrollment" according to a study completed by the National Center for Education Statistics of first-generation students using data drawn from the Beginning Postsecondary Longitudinal Study of students enrolled in all types of postsecondary institutions (U. S. Department of Education, 1998, p. 2). The number of work hours required of first-generation students may also be impacted by the fact that they come from families with more family members who are dependent upon their income, have somewhat lower incomes that non-first generation student, and work a few more hours than non-first-generation students (Inman & Mayes, 1999). In fact, many first-generation college students indicate they are concerned about “whether or not they had enough time in the day to complete all their tasks” (Mehta et al., 2011, results, para.4). They may also have to live at home due to their family situation and family income. Thus, Terenzini et al. (1996) in a study using data provided by the National Study of Student Learning of 4,000 new college students who entered four-year and two-year colleges and universities national, stated, “…they [first-generation students] worked more hours off-campus, and they were less likely to attend a racial/cultural awareness workshop, to perceive faculty members as concerned with student development and teaching, and to receive encouragement from friends to continue their enrollment” (Terenzini et al., 1996, p.18).

First-generation students also may be at a disadvantage when it comes to setting higher education goals. When surveyed about their goals for future education, 36 percent of first-generation high school sophomores expected to earn a bachelor’s degree in comparison to 78 percent of non-first-generation students (Educational Resources Institute, 1997). Also, 39 percent of first-generation students planned to go to trade school compared to 18 percent of non-first-generation students. When looking at life beyond high school, 25 percent of first-generation students in high school did not expect to go farther (Educational Resources Institute, 1997). Educational goals also had a dramatic effect on college departure. First-generation students who had unclear or non-existent college goals were 1.3 times more likely to leave college, while students who had low high-school rankings are also more likely to depart college (Ishitani, 2006).

In 2006, Ishitani (2006) found that the family incomes of first-generation students averaged $26,645 per year while non-first-generation student family incomes averaged $39,783 (Ishitani, 2006). Students with family incomes of less than $34,999 were 72 percent more likely to leave college than students with family incomes of $50,000 or more **(**Ishitani, 2006). Family socio-economic status also appears to have an unexpected impact on first-generation student goal attainment. It appears, according to McCarron and Inkelas (2006), that even first-generation students with high family SES are quite limited in attaining a bachelor's degree; the authors indicate that this may be due, in part, to having parents who have "succeeded financially/professionally without one" (p. 545).

With a lower family income and less family financial support, on average, first-generation students are also a different type of student while on campus. According to Inman and Mayes (1999), "Financial need may limit first-generation students' involvement in campus experiences, as they invest more time off campus to support themselves and their families" (Inman & Mayes, 1999, p.12). Lyons (2004**)** categorizes these students as financially at risk and says these students are predominantly in the groups of students "from low-to-middle income families, financially independent students, and minorities" (p.76). All of these groups, as you can see, fit into the groups of which first-generation are a strong component. This financial burden is exacerbated by the lack of interest in borrowing to attend college. "F-gen [first-generation] students were more sensitive to financial aid and averse to student loans than their peers" found Somers et al. (2004, p. 431). When it comes to paying for college, Mehta et al. (2011) found that

> forty-two percent of FGS [first generation students] reported that their parents pay for less than 5% of their annual tuition. In contrast, over 70% of CGS [continuing-

> generation students] reported that their parents paid for more than 5% of their annual their [sic] tuition. FGS were also more likely to rely on grants and loans to pay for tuition. Over 60% of CGS reported paying none of their tuition with grants whereas over 60% of FGS reported using grants for tuition expenses (p=0.000). Finally, over 36% of FGS said they have not taken out student loans for tuition. Over 50% of CGS reported zero student loans (p=0.025) (results, para. 2).

The financial problems of first-generation students may be intensified by the student's tendency to lack knowledge and information about the financial aid process thus potentially increasing the individual's personal financial responsibility for college tuition and expenses.

Student persistence can also be different for first-generation students. Ishitani (2006) focused on examining the persistence levels of first-generation college students and determining if specific characteristics affected the probability of student persistence. His study specifically split first-generation students into two groups: "the first including students whose parents had a high school diploma or less, the second including first-generation students with at least one parent who had attended college but never obtained a bachelor's degree" (Ishitani, 2006, p. 868). Data from the National Longitudinal Study:88 and National Longitudinal Study 1998-2000 Postsecondary Education Transcript Study (PETS:2000) were used to learn more about this group of 4,427 students who enrolled in public or private four-year institutions between 1991 and 1994 (Ishitani, 2006). Ishitani (2006) learned that "family income, lower educational expectations, lower high school class rank quartile, lower high school academic intensity, enrollment in a public institution, and nonselectivity of admissions were directly tied to college student early departure" (p. 872). Ishitani's research determined that first-generation students were 8.5 times more likely to depart from college in their second year of college.

Byrd and MacDonald (2005), in a study of eight first-generation students who were 25 years of age or older, learned that several skills are essential for college readiness, including time management, self-management and focus, and self-advocacy skills. Of particular interest were the life experiences of this small group of students, which the researchers believed affected the development of the student's college skills. Through work experience and family relationships, students indicated they learned the skills of time management, "goal focus" and self-advocacy, which assisted them in being successful in transferring to a four-year institutions (p. 32).

Ishitani's (2003) study of 1,747 students found that retention among this group of first-generation students was about nine percent less than that of other students who had one college-educated parent and was 22 percent less than that of students with both college educated parents. Ishitani indicated that one of the lessons gained for universities with large first-generation populations is about timing of student intervention services since first-generation students had a higher risk of departure during their first year. It is important to get first-generation students involved with and connected to advisors early in their college days. These advisors need to assist first-generation students with not only academic concerns but also with how to integrate themselves into the college world (Ishitani, 2003).

Already at a disadvantage, first-generation students also are hampered by other factors. They may not have the grade point average needed to enter a four-year institution. When comparing first-generation students to non-first-generation students, 35 percent of first-generation high school students held a 2.55 grade-point average compared to 66 percent of students whose parents held a bachelor's degree (Educational Resources Institute, 1997).

Parental education levels also impact a first-generation student. Their parents lack knowledge about higher education, which may decrease the student's knowledge of admissions and financial aid processes needed to enter college (Educational Resources Institute, 1997). Parents who had some college courses or had completed a college degree were more likely to be able to assist the student with academic decisions, including how to choose and register for courses, how to select a realistic course work load, and how to identify good instructors (Harrell & Forney, 2003).

As we approach the topic of first-generation college students and the relationships between them and their financial considerations, there are many aspects that must be examined. We examine, here, the literature on students' financial concerns.

## Dependent Variables

### Financial Concern

#### level of financial concerns.

It should be quite obvious that one of the primary concerns for all college students, but particularly for first-generation college students who have more limited financial resources, is how to pay for college. Avard, Manton, English & Walker (2005) in a survey of 407 freshmen English 101 students at Texas A & M University-Commerce, found that "worries about money are a major theme for today's college student. Half of the students worry they may not be able to find a job (52%). There are many people living in poverty (51%) and the economy is weak (49%). Half depend upon a student loan and these students expect to owe over $25,000 upon graduation" (Avard, Manton, English & Walker, 2005, p. 323). Hayes (2006) also found in his research that "about 65% of students were concerned about how to pay for their education, with over 47% of freshmen students expecting to seek employment as a means of offsetting these stressful costs" (p. 4). Yet even worse is the possibility mentioned by authors Eitel and Martin (2009) who examined data from the 2006 Community College Survey of Student Engagement and found that "more than 50% of first-generation college students stated lack of finances was either likely or very likely to force them to withdraw from class or college" (First-generation college students, para. 1).

In fact, when looking at college graduate debt load, Avard et al. found:

> More than half of college graduates (52%) report owing between $10,000 and $40,000 in student loans. More than one in three (34%) college graduates said they were unprepared to make their first monthly student loan payment. Among college graduates surveyed, more than four out of five (83%) report making monthly credit card payments. More than half of recent graduates (53%) were unaware of the Federal Consolidation Loan program (Avard et al., 2005, p. 324).

Of course, the concern about paying for college is increased by the fact that these students have little experience making personal financial decisions. Avard et al. indicates that "Much of the research seems to indicate that Generation Y consumers have a low degree of financial literacy" and that college students "are not knowledgeable about personal finance and that low level of knowledge will limit their ability to make informed decisions" (Avard et al., 2005, p. 323). Though we might not expect young adults to have a firm grasp on all financial matters, we are creating a situation as they enter college where they are expected to act like adults but do not seem to possess the ability or knowledge to do so. Thus when these individuals enter society, according to Avard et al., we are creating a “societal problem” (2005, p. 323).

**activities and behaviors to meet college expenses.**

The literature that discusses student behaviors based upon financial concerns is limited and much of it is focused on what college students do not know versus what they choose to do. Much of what college students, according to the published research, do is based upon adding work hours or limiting class attendance. Within this doctoral study, the variable of activities and behaviors to meet college expenses was divided into three separate categories—financial savings, academic changes, and lifestyle changes.

When it comes to students’ behaviors or activities focused on financial savings, the literature focuses largely on budgeting. Henry, Weber, and Yarbrough (2001) sought to identify money management practices of college students. Though the line of inquiry was mostly geared around budgeting behaviors and demographic items elicited through a brief 13-item survey, the researchers did uncover that students either lacked knowledge of money management practices or were simply not willing to expend the time and effort required to manage their money. The majority of respondents did not maintain a written budget, though the authors did not speculate on how this behavior might be related to students’ personal finance attitudes. Interestingly, Goetz, Mimura, Desai, and Cude (2008) who studied 557 in-state Georgia college students via an on line survey about the differences in financial behaviors between college students who retained the HOPE Scholarship and those who lost access to this monetary support due to poor academic performance, concurred with Henry et al. (2001) stating, “The lack of financial resources alone does not appear to fully explain why students may engage in poor financial management practices, such as failing to budget and spending more money than is available, failing to pay bills on time, or owing high levels of credit card debt" (p. 14).

According to a study of 877 randomly selected undergraduates enrolled in 3 colleges in central New York state completed by Heck (1984), students were more likely to be involved in creating a budget "if they were majors in the natural sciences, enrolled in a larger number of credit hours, employed, married, and seniors" (p. 16). Further, according to Heck, it was found that "Students with higher grade point averages and higher total incomes were also more likely to engage in some of the planning behaviors" (p. 16). Gender also had an effect on what Heck labeled "planning behaviors". Female students and students who perceived their incomes to be inadequate for their needs were less likely to do any planning behaviors such as budgeting, while "Nonwhite students were less likely to estimate income accurately, but more likely to plan a budget" (Heck, 1984, p. 16). Heck found that making changes in financially focused behaviors was "discouraged among students who were financially dependent on their parents and who perceived their incomes as inadequate for their needs" (1984, p. 16).

Behaviors like creating a budget were also impacted by the type of student. Older and married students were more likely to exhibit behaviors like creating and following a budget. Henry, Weber, and Yarbrough (2001) in their study showed that when asked if they had to have a budget, "42% reported having a budget; 38% did not follow it all the time; 4% never followed their budget" (results, para. 1). However, age seemed to have an effect according to their research. Students who were between the ages of 36 and 40 years of age all followed a budget most of the time. In addition, marital status seems to have an impact on budgeting: "married students with a budget were more likely to follow them [budgets] although they followed them only 52% of the time" (Henry, Weber, and Yarbrough, 2001, results, para. 1).

Student behaviors were also impacted by the college department major of the student. Heck (1984) found students were more apt to display personal finance planning behaviors if they were a college senior, majoring in natural sciences, taking a large greater number of credits, employed, and married. Unemployed students, Heck found, were quite good at estimating expenses while planning behaviors were somewhat prevalent among students with higher grade point averages and higher overall incomes. Female students and students who perceived their incomes to be inadequate were less likely to engage in planning behaviors. In addition, nonwhite students tended to plan a budget but were prone to inaccurately estimate income (Heck, 1984, p.16). Marsh (2006) enhanced these findings indicating that "students holding higher grade-point averages and higher overall incomes were more likely to engage in some of the [budget] implementing behaviors while [budget] implementing behaviors were not prevalent among students who depended financially on their parents and perceived their incomes as inadequate for meeting their needs" (Marsh, 2006, p. 49).

When it came to a clear focus on student financial behavior decisions in the literature, Hand and Payne (2008) found in their study of nine Student Support Services students attending a major university in West Virginia, that "all the students but one work in order to pay bills (even if they have scholarships and loans for room and board), affecting their ability to be involved in campus organizations" (p. 8). One student named Josh felt that his biggest challenge to entering college was paying for it. Later, as a college student, his challenge became paying for unexpected or small, unanticipated expenses. He said: “A lot of times when you have to spend a little bit of money here and there, like on books; that’s a little rough sometimes” (Hand and Payne, 2008, p. 8). Marsh (2006) in his research stated that “students’ attitudes do not necessarily line up with their behaviors or knowledge” (p. 118).

Though little research appears to have focused on financial savings behaviors students choose to do to decrease financial concerns and pressure, there has been some research completed on academic changes students make based upon financial concerns. The one key behavior students seem to make when faced with financial concerns is a change in enrollment. According to Gross and Keeling (2005), who wrote an article about college student indebtedness, “debt leads some students to accelerate the college experience and to use course overloads and summers to generate more credits. In doing so, they forfeit needed developmental time to reflect, apply knowledge, and ‘breathe’.” (p. 6). Hayes (2006) found, though, that because students increase their class loads, they are forced to reduce their hours of work, and Hayes found that the students then “face a wide range of financial problems such as credit card abuse, lack of spending plans and budgeting practices, limited understanding of investment basics and limited knowledge of consumer rights and responsibilities” (p.3).

Students may also choose to reduce their college course loads to make their hours more open to getting a job. Pascarella et al. (2004) found that working more hours coupled with work responsibilities had negative consequences for first-generation college students, which included completing fewer credit hours over a three-year period than their non-first-generation college student cohort. Christie and Munro (2001) in their study of 49 students who attended two universities in Edinburgh, Scotland, found that “The danger…is increasing the financial burden on students and their families, [and] is that more students will be pushed into the position of having few choices about working and borrowing, increasing the financial fragility of a greater proportion of the student body" (p. 381). Hayes (2006) found nearly "19% [of university students in his study] reported they have had to reduce their class load in at least one regular semester in order to work more due to financial constraints. The analysis suggests this generally happens during the junior and senior class years. Many schools require the student to live on campus during the first and second years of school; perhaps contributing to lower overall costs and the lack of additional income need. This analysis suggests junior and senior student[s] have significantly higher monthly expenses that are more than triple the expenses of their lower classmen, and not surprisingly, work more than twice as many hours each week" (Hayes, 2006, p. 76). Hayes goes on to state that "senior students showed a significantly higher frequency of both reducing class load levels and dropping out for a semester during spring or fall semesters in order to work more due to financial requirements" (2006, p. 71).

In a worst-case scenario, if students cannot identify changes that can be made, "debt leaves some students no choice but to leave the academy altogether" (Gross & Keeling, 2005, p. 6). Of course, the decision to leave college is made, many times, after students have experienced not only a financially difficult period but also have experienced other drawbacks based upon their increasing stress level:

> Debt can also promote actual physical illness (there is a documented relationship between fiscal and physical health). Researchers have found that people with high debt levels have a greater risk of illness including, among other things, heart problems and sleeplessness. Maintaining student health is critical in terms of students and

> institutional well-being, and student attrition is costly in many ways. Departure prevents the accomplishment of institutions' desired student learning outcomes and disrupts the educational process (Gross & Keeling, 2005, p. 6).

Beyond financial savings and academic changes, students may also choose to make lifestyle changes. One of the most obvious lifestyle changes a student may do in order to deal with financial need is to seek employment. Lifestyle changes like this can impact a college student in many ways. Yet, King (1999) who examined what is known about college student work, borrowing, enrollment patterns, academic achievement and student persistence, tells us that "eight out of ten students work while pursuing an undergraduate degree, and almost four out of ten are employed full-time" (p. 18).

Students may choose to work for a variety of reasons. Some college students choose to work "because they like their job or because they want to earn money for nonessentials such as a car, a spring break trip, or new clothes. Some are strapped financially and must work and borrow in order to make ends meet. And many work for a third reason—to lessen or eliminate the need to take out student loans" (King, 1999, p. 19). Other students are forced to work to make up the disparity between expected family contribution and the costs associated with attending college because "their parents cannot or will not contribute as much as the formula suggests they can afford" indicated King who in 2003 examined the most recent evidence on student financing choices and how their choices impact their persistence (King, 2003, p.81).

Working, while attending college, has both advantages and drawbacks. For non-traditional students, Aronson (2008), who wrote an article about class differences and how they impact student experiences in college, indicated that "working can lead to difficulty balancing competing demands, interruption in school attendance, low grades, and delayed receipt of degree" (p. 47). King (1999) also found that "employment during college can be beneficial academically, but too much work has a negative impact on academic performance. A number of studies [found that] work has a negative impact on year-to-year persistence and degree completion" (p. 19). When Pascarella and Terenzini (2005) in their book *How College Affects Students: A Third Decade of Research*, looked at the effects of work, they found that "the more hours students work, the more likely they are to shift from full-time to part-time enrollment and the less likely they are to persist from one year to the next or to complete a bachelor's degree program" (2005, p.414).

As indicated, working while attending college also has an impact on the time it takes to get a degree. Though employees who study are typically "older, part-time, commuter students… less than 20 percent of them attend college full-time, and less than 30 percent of them attend four-year colleges or universities" (King, 1999, p. 18). Goetz et al. (2008) also found that "there does…appear to be a break point in which working while in school begins to hinder academic performance" (p.13). For example, for non-traditional students, Eppler and Harju (1997) who completed a study of 262 undergraduate students at a large Southeastern University found the number of hours worked per week to be negatively correlated with grade point average. Conversely, part-time work increases retention, whereas working full-time off campus work results in the opposite, according to Astin who in 1984 created a student development theory.

Since first-generation students are usually working with limited funds primarily due to coming from lower income families, their characteristics are also shaped by their decision to work. According to the U.S. Department of Education's Report on first-generation students whose parents never enrolled in college, "First-generation college students were also more likely to be working full-time while enrolled in school. Compared with their counterparts, more first-generation students reported working full-time while enrolled during their first year in postsecondary education (33 percent versus 24 percent)" (U. S. Department of Education, 1998, p. 18). According to Pascarella et al. (2004), this need to work and the "added work responsibilities of first-generation students may in part explain the fact that, despite a lighter academic load, first-generation students had significantly lower cumulative grades than similar students whose parents were both college graduates" (p. 277). Though money is needed by these students to allow them to attend college, Terenzini (1996) states, "in their out-of-class experiences, first-generation students (vs. traditional students) worked more hours per week off-campus and were less likely to perceive faculty members as concerned for student development and teaching" (p. 10).

**manageability of college cost.**

One way students may manage college costs is through worrying. Worries about college and about financial concerns, in fact, are expected for today's college student. These worries, though, encompass many things. For instance, Johnson (2012) who drew information from a national research project completed in 2011 by Public Agenda who surveyed more than 600 young Americans asking them for their view on jobs, college, and their own financial prospects, found that many students are worried about borrowing money to pay for college. Johnson states, "For them, the risk of being in debt often outweighs the potential reward of having a college diploma" (2012, p. 18). Johnson goes on later to indicate that "many [students] are concerned about the prospect of borrowing for college and then not earning enough to be able to pay it back. Only 37 percent of students who attended college but did not complete a college degree (compared with 54 percent of college graduates) strongly agree that even if someone has to take out a loan to go to college, it's worth it" (2012, p.20). Worries about money or lack thereof can also impact students in other aspects of their education. Bean and Metzner (1985) who in their article regarding nontraditional students developed a model for student attrition, have argued that students' concerns with finances, along with other external factors, increase anxiety because of the student's need for resources to finance their college education and because of the lack of encouragement the student receives to stay in college while handling family responsibilities. Students can also begin to experience stress that impacts other parts of their personal lives. Gross and Keeling (2005) indicate that "…students who are struggling with money also experience stress and anxiety that can affect their academic performance, relationships, and physical (and psychological) presence on campus. At the very least, financial problems become a serious distraction" (Gross & Keeling, 2005, p. 6). In addition, a lack of financial resources and worrying about those a student possesses or does not possess can change the way in which a student makes decisions about his or her future. Eitel and Martin (2009) indicated that "money was a constant worry for many participants…Money constrained living as well as occupational goals" (discussion, para. 6). With poor academic skills, greater time demands, and greater financial commitments, Mehta et al. (2011) indicates, these students are in a precarious position. In one study, completed by Hand and Payne (2008), a student said his financial troubles might have been averted had he been provided good information on the financial aid process. The troubled student stated, "There are people out there now who have never heard of financial aid…If they don't know that financial aid exists and people in high school aren't doing anything to help, how are they going to figure it out?" (Hand & Payne, 2008, p. 12). This particular student struggled repeatedly while attending college and dealing with the Veteran's Administration regarding financial issues; "one time in particular, he found out too late that he would have been able to keep his financial aid by submitting a letter of appeal. Coming from his own experience, he made the emphatic statement 'Information is power!'" (Hand & Payne, 2008, p. 12).

When specifically focusing on the financial worries and concerns of first-generation college students, Rodriguez (2003) in her interviews with seventeen first-generation college students who attended colleges across the United States, found that "many students worried about their capacity to support themselves while in college" (Rodriguez, 2003, p. 19). Worries about financial resources were also clearly documented as well in Bui's study (2002), of sixty-four first-generation students at a four-year university which focused on first-generation students and financial worries were also clearly documented in Kasworm's (2003) article focused on serving adult student needs. Among the 2006 cohort from the Community College Survey of Student Engagement, Eitel and Martin (2009) found that "more than 50% of the first-generation students surveyed reported that lack of finances was either likely or very likely to compel them to withdraw from college" (first-generation college students, para. 1).

College students also worry about the future and how their finances might impact it. Avard et al. (2005) stated that "…students worry they may not be able to find a job (52%). There are many people living in poverty (51%) and the economy is weak (49%). Half depend upon a student loan and these students expect to owe over $25,000 upon graduation" (Avard et. al., 2005, p. 323). According to Johnson (2012), the financial crisis in higher education and the worries that students experience are just a symptom of a larger problem: "In the past few decades, the United States has benefited from an implicit societal compact. Young people who invest time and money to get a college degree reap long-term rewards, even if they have to borrow money to do so. But results from the 2011 survey carry warning signs that this compact, which has benefited individuals and the economy alike, may be fraying; 9 in 10 young adults (both those with college degrees and those without) say that young people today have to borrow too much money to go to college" (Johnson, 2012, p.18).

A second way college students may choose to deal with this type of financial concern is to manage those costs. This concern is addressed primarily through financial aid, yet managing the costs of college also has to do with things such socioeconomic status and student persistence, according to Pascarella et al. (2004). Cabrera, Nora, and Castaneda (1992), in their study of 466 entering freshmen at a large commuter urban institution in the U.S. who completed a questionnaire about the role of finances and how it affected their college persistence, found that "[the indirect nature of finances] affects the student's academic integration, socialization processes, as well as his or her resolve to persist in college" (p. 589).

A good financial aid package, according to King (1999), allows students to "make rapid progress toward their degree, free them to devote more time to their studies, and provide them with time to relax and enjoy their collegiate experience" (p. 20). Cabrera et al. (1992) concur stating, "The findings indicate that having received some form of financial aid was found to facilitate the student's social interactions with other undergraduates at his or her institution… Moreover, removing anxieties, time, and effort associated with securing additional funds to finance their education, student aid recipients may have not only found it easier to interact with peers and participate in campus activities but may have also found it easier to engage in academic activities that enhanced their academic performance (GPA)" (p. 589). Good financial aid also aids academic and social participation in college encouraging students to remain in college or to drop out of college when not available, Cabrera et al. found. By providing students with financial support, Cabrera et al. (1992) states, students can put more of their energy towards academics, which allows them to maintain great grades and interact with faculty.

When examining college student financial aid, Ishitani (2006) found that "three types of financial aid presented positive effects on first-year retention. Students who received grants or work-study jobs were 37% less likely to depart in the first year than were students who received no aid. Work-study also showed its positive effect on retention in the second year. Work-study recipients were 43% less likely to depart in the second year. Statistical significance for financial aid was mainly prominent in the first year" (Ishitani, 2006, p. 877). Wohlegemuth et al. (2007) in their study of freshmen who entered a research extensive university located in the Midwest in the fall of 1996, found similar results indicating, "a meta-analysis of 31 studies found financial aid to have a small, but significant, positive effect on student persistence, enabling lower-income students to persist at a rate roughly equal to that of middle- and upper-income students. As students progressed toward graduation, the amount of financial aid and unmet need became more important discriminators than types of financial aid" (p. 461).

Financial aid or lack thereof can have a significant impact on student retention. According to Eitel and Martin (2009),

> monetary constraints and lack of financial support led to forced compromise of career goals and increased the time to complete the undergraduate degree. Work complicated the lives of many participants, particularly those who perceived that work was essential to their own survival. Two students reported that family members had either used the student's credit to make purchases or had spent their financial aid proceeds to pay off personal debt (Eitel & Martin, 2009, phase 2 qualitative study, para. 4).

In fact, Martin Lohfink and Paulsen (2005) in a study of 1,167 first-generation students and 3,017 continuing-generation students whose data was gathered from the Beginning Postsecondary Students Longitudinal Survey 96-01, found that "each $1,000 increase in grant aid was associated with a 2.7% increase in the probability of persistence from the first to the second year. For each $1,000 increase in work-study aid, FGS [first generation students] were 6.4% more likely to persist" (Martin Lohfink & Paulsen, 2005, p. 417).

**Financial Knowledge**

Although the preceding financial concerns are a focus of this study, it is important to note published information that clearly shows that students' financial knowledge or lack thereof impacts their decisions and actions. The financial issues students face in college, Hayes (2006) states, require knowledge of how to manage money well (Hayes, 2006, p. 6). Heck (1984) also echoes this concern saying, "The high costs of education present financial management difficulties for students which will affect their choices of whether or not to attend college and their ability to finish degree programs" (1984, p.13). Eitel and Martin (2009) further stress that, "training in financial knowledge and the skills necessary to manage financial resources has not been a traditional support for first-generation college students. Rather, support for first-generation college students has focused primarily on academic readiness and environmental support" (Eitel & Martin, 2009, para. 4). Marsh (2006) found that by having knowledge of personal finance "[college students] will be equipped to make good decisions regarding the use of their resources—time, money, and talents—in order to positively impact their quality of life both during college and beyond" (2006, p. 9). Yet when Eitel and Martin (2009) found that student participants in their study lacked financial literacy and were aware of this lack of knowledge, they found that students were

> unwilling to take on any additional learning endeavors…[and were] content with learning the hard way and by making mistakes. Participants reported that their focus was on 'getting by'; and, if they were 'getting by,' it was not necessary to learn anything else. Other participants did not see financial literacy as relevant to management of financial resources while they were students and would "blow off" any attempts to enhance their knowledge. Many students felt that financial woes and a miraculous onset of financial knowledge would occur when they received their graduation cure (Eitel & Martin, discussion, para. 2).

Eitel and Martin (2009) also found that

> participants reported that their current method for budgeting and management of their financial resources was 'trial and error,' 'messing up really bad,' and 'learning the hard way' (Eitel & Martin, 2009, phase 2: qualitative study, para. 2). Though some students suggested the university offer a financial literacy course, many indicated they would not be interested in learning about finances because of tight time or viewing the topic as "boring" or "not relevant to their current lives (Eitel & Martin, phase 2: qualitative study, para. 2).

Though financial knowledge is important, we now turn to examine the variables that may affect a student's financial concerns. These variables include such things as parents' educational levels, dependency status, cumulative grade point average, college major, number of credits completed, and a variety of demographic variables.

## Independent Variables

### Educational Background

#### mother's and father's educational levels.

One variable that can affect a student's financial considerations and decision-making is the parents' educational levels. This variable is closely tied to the student's first-generation status or lack of first-generation status. The logical place to start to examine the impact of a parent's educational background is at the high school level when the student is facing the decision of whether or not to attend college. When checking on students' college aspirations, the U.S. Department of Education (2001) in a report on post-secondary access, persistence, and attainment for students whose parents did not attend college found that tenth grade students whose parents did not attend college were only about half as likely to consider pursuing a bachelor's degree after their high school graduation and only about a third as likely to consider enrolling at a four-year institution (National Center for Education Statistics, 2001). Furthermore, in the same study, researchers found that students whose parents had completed only high school enrolled in college immediately following high school at a rate of 54 percent, while students whose parents did not possess even a high school diploma enrolled in college immediately following high school at a rate of only 36 percent. This is a dramatic difference in enrollment when compared to non-first generation students with parents who held a bachelor's degree or higher that had an immediate college enrollment level of 82 percent (National Center for Education Statistics, 2001). In addition, the report also indicated that high school graduates whose parents had not attended college were also twice as likely to attend a public two-year institution rather than a four-year college, lowering their likelihood of ever completing a four-year degree (National Center for Education Statistics, 2001).

Once enrolled in college, first-generation students continue to be challenged based upon their parents' lack of college education. The U.S. Department of Education in a 1998 study on first-generation students found that even when controlling for some demographic, academic, and institutional variables, "first-generation students were less likely to persist in postsecondary education than their counterparts whose parents had obtained more education" (p. 56). Ishitani (2003) substantiated that finding when examining a sample cohort of college students who entered a four-year comprehensive public university in the Midwest, indicating that student departure from college differs greatly based upon the parent education backgrounds:

> A precipitous decline was already found between first-generation students and their peers in the first semester. This relationship, a lower survival rate for first-generation students and a higher rate for their peers, continued… A group of students whose both parents had college degrees sustained the highest survival rates till the end of the observation period. The group of students who had one college-educated parent had slightly lower survival rates than the group of students with two college-educated parents in the first and second semesters. However, the gap between these two groups widened through the third to sixth semesters (Ishitani, 2003, p. 441).

Ishitani (2006) again supported that idea in a more general manner when his 2006 study of college students found that "parent's educational attainment has been shown to affect college student attrition. Particularly, lower persistence rates among first-generation students were highlighted" (p. 863).

## Financial Status

### dependency status.

Another variable that can affect a student's financial concerns and decision-making is the student's financial status. One type of dependency status is independent. The literature that has been published on first-generation students by Inman and Mayes (1999) indicates that, when it comes to being financially independent, first-generation students were more likely to earn more personal income. Inman and Mayes also found that first-generation students who are independent "live in families with slightly fewer people, their families' incomes are substantially lower, and they have more financial dependents than nonfirsts" (Inman & Mayes, 1999, p. 16).

These students may be financially independent because, according to Aronson (2008), "low income parents are less likely than affluent parents to financially support their children during young adulthood and offer less assistance when they do provide it. Parental wealth, independent of income, education, or occupation, predicts both college enrollment and attainment" (p. 45). Aronson noted that the world of a low-income family is far different from that of other, more financially, secure families. "For low-income families, daily survival often takes priority over higher education, which may be seen as 'optional' or a 'luxury' compared to contributing economically to the household " (Aronson, 2008, p. 49).

A second type of dependency status is dependent. Much more has been published regarding college students who are of a "dependent" financial status. First-generation students come from families who "had lower family incomes than those of non-first generation students...nearly one quarter (23 percent) of first-generation students had family incomes in the lowest quartile, compared with 5 percent of students whose parents had attained higher educational levels. Meanwhile, 59 percent of non-first generation students had family incomes in the highest quartile compared with 18 percent of their [first-generation] counterparts" (U. S. Department of Education, 1998, p. 8). First-generation students also "tend to come from working-class backgrounds and to have families with far fewer financial resources than continuing-generation students…working-class contexts are characterized by limited economic capital, environmental constraints an uncertainty, and few opportunities for choice, control, and influence" according to the 261 university administrators who responded to a short survey about the culture of high education in America today completed by Stephens et al. (2012, p. 1180).

Income especially that of parents and families of college students, does appear to dramatically affect a student's college future. Ishitani (2006) found that "…the effect of lower income was the most prominent in the first-year retention. Students from the lowest income group were about 2.3 times more likely to depart in the first year than were students from the highest income group" (Ishitani, 2006, p. 876). Various levels of family income had different effects on the student and his or her retention, Ishitani observed,

> As for family income, students from families with annual incomes of $50,000 or higher were more likely to graduate in any period than were students from lower income families. Students with family incomes of less than $19,999 were 41% and 69% less likely to graduate in the fourth and sixth years, while students whose family income ranged between $20,000 and $34,999 were 41% and 43% less likely to graduate in the fifth and sixth years than students in the reference group were (Ishitani, 2006, p. 879).

Students with family incomes “ranging between $20,000 and $34,999 were 72% more likely to depart than were students with family incomes of $50,000 or higher” (Ishitani, 2006, 873). In an earlier study, Ishitani (2003) found that

> Compared with the reference group (students with annual family incomes of $45,000 or more), a group of students whose families had annual family incomes of $25,000 or less had 49% higher risk of leaving in the first year. In the second year, the relative risk of departure among students from lower income families decreased, but was still approximately 26% higher than the reference group (p. 446).

Martin Lohfink and Paulsen (2005) found that “each $10,000 increase in family income was associated with a 2.0% increase in the probability of persistence for FGS [first-generation students]” (Martin Lohfink & Paulsen, 2005, p. 415). They contended that “…FGS [first-generation students] with higher incomes were significantly more likely to persist than those with lower incomes, suggesting that lower-income first-generation students are not only disadvantaged by their parents’ lack of experience with and information about college, but also by other social and economic characteristics that constrain their educational opportunities” (Martin Lohfink & Paulsen, 2005, p. 418). Grimard and Maddaus (2004) looked further into the future of these low-income students by surveying fifty-three students in an Upward Bound program at the University of Maine and found that “only 7.3% of participants in the lower socioeconomic quartile had completed a four-year college degree compared to 24.0% in the two middle quartiles and 59.6% in the top quartile” (para. 6).

## Academic Considerations

### cumulative grade point average.

Another variable that could affect a student's financial considerations and financial decision-making is that of cumulative grade point average (GPA). When looking at GPA and first-generation status, Strayhorn (2006) found that "…first-generation status was significantly related to GPA in college…first-generation status accounted for a statistically significant proportion of the GPA variance after controlling for the effects of background, precollege, and college experiences" (Strayhorn, 2006, p. 95). In addition, Strayhorn later indicated that,

> …educational aspirations were positively related to achievement in college [as well]. That is, higher educational aspirations were associated with increases in cumulative GPA. Said differently, those who had higher aspirations reported higher GPAs …this study provides compelling evidence that race, gender, and first-generation status matter in education (Strayhorn, 2006, p. 104).

Other researchers have looked at GPA as well. Martin Lohfink and Paulsen (2005) found that "for every one-unit increase in GPA, FGS [first-generation students] were 12.8% more likely to persist from the first to the second year" (Martin Lohfink and Paulsen, 2005, p. 417).

Studies that tied financial decision-making, in some form, to grade point average (GPA) included one by Hayes (2006). Hayes, writing about GPA and budgeting, indicated that, "The data do not indicate any differences in the GPA or current semester hours enrolled between the four class levels, however significant differences were noted in the monthly expenditures and hours worked each week between freshman and juniors, and freshman and seniors…additionally, chi square analysis suggests a significantly higher frequency for senior students to reduce class load to work more…and a higher frequency for senior students to drop out a semesters due to the need to work more" (Hayes, 2006, p. 68).

**college major.**

When it comes to the type of college major the student selects and how that major influences financial concerns, one study has approached this topic. Fenske, Porter, and DuBrock (2000) did a study of over 7,000 science, technology, engineering, and math (SEM) students at a large, public university in a metropolitan area and found that "the longer time-to-degree pattern for SEM majors needs to be considered when packaging financial aid at the institutional level, and at the national level when establishing financial aid program. Each additional year in school represents foregone income and a delay in entering the labor force, both of which increases the true economic cost of the SEM degree to the student" (Fenske, Porter, & DuBrock, 2000, p. 92).

**credits completed.**

The amount of credits completed by a student may also affect the financial decisions made by the student. Again, however, most literature available on this aspect of the topic focuses upon student persistence based upon credits completed rather than on how the number of credits completed by a student affects his/her financial considerations. When examining course completion, King (1999) found that "How many courses a student takes in a given term—and often how well the student does in those courses—will be influenced profoundly by how the student pays for these courses" (p. 21). The level of enrollment of a student also determines academic success and persistence. The U.S. Department of Education found in their 1998 study that "…part-time enrollment (unadjusted) was associated with lower rates of persistence and attainment than was full-time enrollment (48 percent versus 71 percent)" (U. S. Department of Education, 1998, p. 51).

At least two researchers also looked specifically at first-generation students and the impact part-time or full-time status had. Aronson (2008) discovered that "First-generation and low-socioeconomic status (SES) college students are less likely than their counterparts to attend college full time for the entire year and are more likely to attend part time and discontinuously" (p. 46) while Pascarella et al. (2004) indicated, "first-generation students completed significantly fewer credit hours across the three years of the study and worked significantly more hours per week than did the high education group" (p. 276).

## Demographics

Demographics may also impact the financial considerations of college students. In this area, the literature examines the variables of minority status or ethnicity, age, and gender.

### ethnicity.

When looking at financial aid and ethnicity or minority status, Fenske, Porter, and DuBrock (2000) found that "all types of aid had a positive influence on enrollment regardless of race or ethnicity" (p. 69) However, Fenske et al. (2000) also found that "minorities often avoid loans and when loans are used, persistence can be negatively impacted" (p. 69). Hayes (2006) also learned that "Latino students displayed higher levels of financial stress than did Anglo students during their college years. Financial issues included student loan repayment, ability of their parents to provide financial support, and availability and qualification for financial aid" (p. 40).

When it comes to financial concerns and stress, the focus appears to turn from financial aid in general to credit card debt. Grable and Joo (2006), who studied 110 workshop participants about racial differences in credit card debt, believe that universities and colleges are unaware of the effect credit card debt has on students; they found that minority students tended to fail when one of their big concerns was financial.

> If credit card debt and financial stress differences are as widespread as this research suggests, African-American students may find that their ability to fund college expenses while maintaining a balance between academic requirements and social activities, is in jeopardy. If retention and ultimate graduation of African-American students is a priority on college campuses, now may be the time to include mentoring, counseling, and training in the area of personal finance topics in both orientation and ongoing help sessions (Grable and Joo, 2006, discussion, para. 3).

Grable and Joo (2006) go on to state that "…a student's credit card debt level was directly related to his or her self-assessed financial stress level…African-American students held more credit card debt than others, exhibited worse financial behaviors, and had higher levels of self-reported financial stress than non-Hispanic White students. The findings related to behavioral and stress differences held true even after accounting for the level of debt held by students " (discussion, para. 4). In addition, they found that

> credit card debt was positively related to both negative financial behaviors and financial stress. This was true for all students. However, it was also found that, holding all other factors constant, including credit card debt, African-American students reported higher levels of financial stress than other students. The relationships between credit card debt, racial background, financial behaviors, and financial stress suggests that African-American students are affected more dramatically by debt than others (Grable and Joo, 2006, discussion, para. 1).

When it comes to ethnicity and persistence, Ishitani (2003) found that minority students had lower rates of attrition in their first two years of college but were still 43 percent more likely to leave college than Caucasian students. By the second year of college attendance, however, minority students' attrition rate had dropped to 34 percent; still quite high, but lower than during their first year of college attendance. Strayhorn (2006) also found that minority status has a negative influence on college achievement stating

> …the variable indicating "Black" is a significant predictor of achievement in college and has a negative relationship with cumulative GPA. Findings may point to unique challenges faced by Black first-generation college students that negatively impact their achievement level. Educators should work to understand these challenges and consider such issues in their work with Black FG students. Such challenges may also affect other outcomes such as adjustment and persistence for African American or other minority students (p.102).

**age.**

When examining age, particularly of non-traditional-age students, there was a good deal of discussion and publication about non-traditional-aged students and their financial knowledge. King (1999) began by defining the term "non-traditional" as it applies to employee students stating:

> the typical employee who studies is over age twenty-five, financially independent, and married. Almost half of them have children. They work all day and attend classes at community colleges at night or on the weekends…In contrast, most students who work are under the age of twenty-four, are financially dependent on their parents, and attend four-year institutions…The average amount of time these students spent on the job is twenty-five hours per week. More than half of them attend college full-

> time, although, given that their primary role is being a student, one would expect the proportion of full-time students to be higher than this (p.19).

Bean and Metzner (1985) state that non-traditional-aged students would be expected to have more financial knowledge to apply to financial decision making because many times they students are part-time, commuter, older than 24, or any combination of these characteristics. Bean and Metzner assert that “whereas residential [traditional] students are primarily concerned with the internal environment of the institution, nontraditional students are much more closely connected with the external environment” (p. 492). This external environment could include finances, employment, family, and outside encouragement.

Other researchers also noted age making a difference in their studies. Marsh (2006) indicated “nontraditional students posted significantly higher attitude, behavior, and knowledge scores than traditionally-aged students, findings which are generally supported by previous research projects” (p.224).

Moser (1984), who attempted to create reliable consumer education tests with his research study, also found age differentiation in his study to be a significant variable. Moser established four age categories for his study: 17-20, 21-25, 26-35, and over 36. “Significant differences were found between post-test achievement scores according to age. Those students that were 36 and over scored significantly higher than the other three younger age groups” (p.71). In addition, Moser found that “significant differences were found between post-test achievement scores according to work experience. Those students that worked full-time for over three years scores significantly higher than those students with little or no work experience” (p.72).

Eitel and Martin (2009) also found in their study using the Jump$tart survey to determine financial knowledge “as student age increased, Jump$tart scores increased. Student age accounted for 20% of the variation in Jump$tart scores” (phase 1, quantitative study, para. 4).

**gender.**

Gender may also have an effect on the financial considerations made by students. Researchers have found that gender has a strong impact on finances and financial decision making. Hayes (2006) found that while “females tend to have slightly lower scores on financial education and awareness of issues such as debt interest, feel that money has a lower negative influence on their relationships resulting from arguments or disagreements over money, and have less difficulty meeting their financial obligations” (p. 64). Females also “tend to be more concerned and anxious about current financial circumstances, resulting in increased concern with current issues at the expense of planning for future money concerns” (p.75). When assessed using the financial strain scale, “female students tended to feel less disruptive interference caused by money in their relationships compared to male students. Results also show that female students exhibited lower scores on financial education and awareness but had significantly less difficulty in meeting their financial obligations compared to male students” (p.70). Females also “perceive levels of influence over their money matters from all dimensions. Compared to male students, female students tend to feel less personal control over positive outcomes, perceive uncontrollable chance as less influential on their financial circumstances, and consider poverty more real and controllable” (Hayes, p. 60). While females tend to use money to impress others or as a success symbol significantly less than male students “females place a lower value on the activities of planning for their financial future… [and] tend to display higher levels of anxiety with regard to their money, perhaps feeling higher levels of worry or concern over their money matters” (Hayes, p. 67).

There are other advantages and disadvantages based upon gender as well. Hayhoe et al. (2000) found that women showed less credit card use and better financial decision-making though a clear trend for these practices is difficult to determine. Chen and Volpe (2002) in their examination of the survey responses of 924 college and university students across the United States, found that “males scored significantly higher on a measure of financial literacy, and further that males placed a higher value on the financial literacy than did female participants” (p.30). Female students are “more likely to drop out because of financial difficulties, describe their peers as supportive of their academic goals, and report increased stress levels caused by college” (Giancola, Munz, & Trares, 2008, p. 225). Males, however, Wohlgemuth et al. (2007) found, “are more likely than female students to be retained, but less likely to graduate…Men may be more likely than women to stop-out and thus take longer to complete their degree requirements” (p.471).

As you can see, there has been a good deal written about first-generation college students, but the areas that are lacking involve behaviors or activities that college students choose to do when faced with financial insecurity. Thus, one of the purposes of my study will be to add to that component of the missing literature on first-generation students.

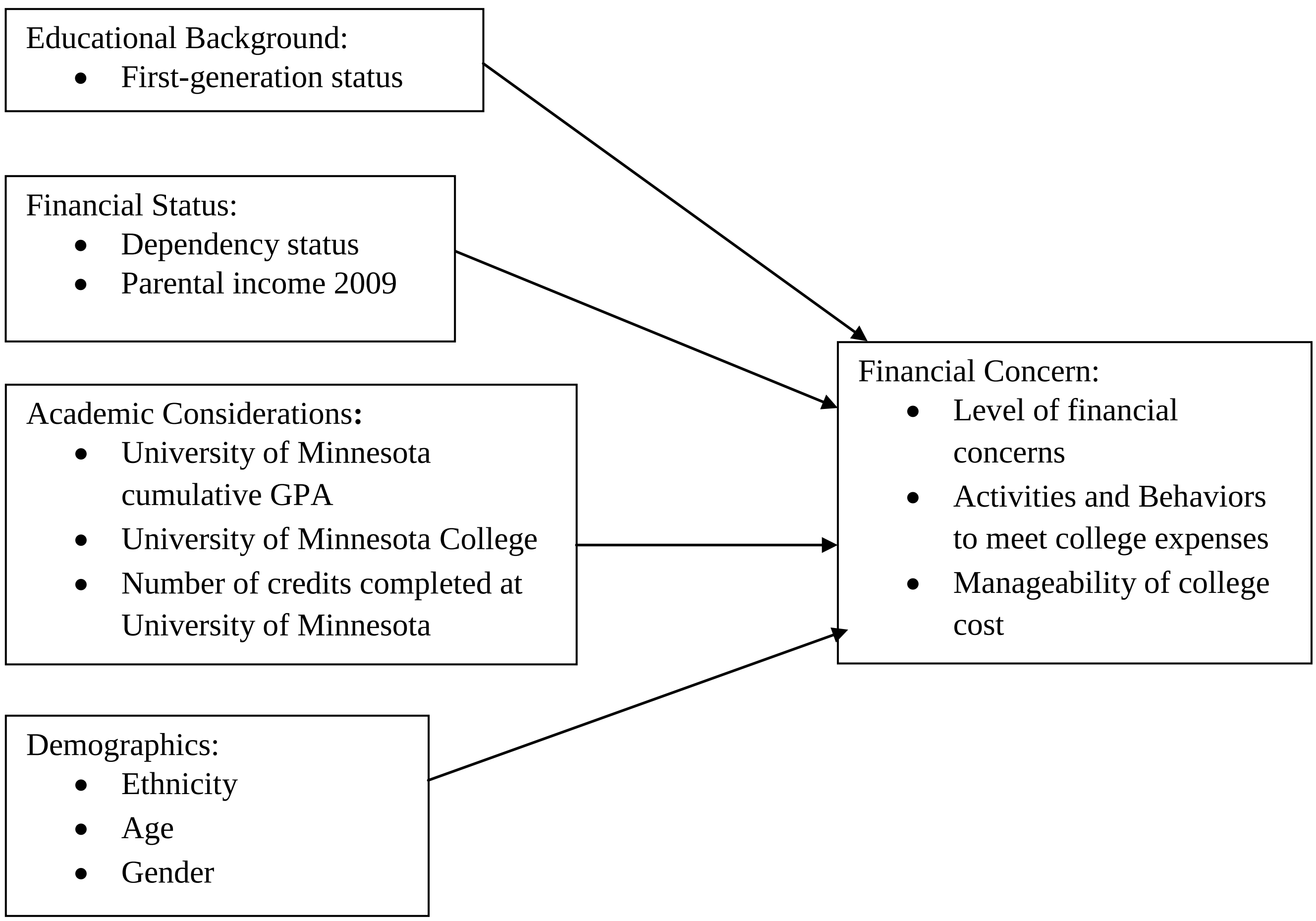
# CHAPTER THREE

## Methodology

This study will explore the question "What is the relationship between first-generation college student status and financial concerns among research-university students?" It explores the relationship between students' financial concerns and variables such as first-generation student status, parents' educational levels, student's financial status, academic considerations, and student demographics.

Initially, the purpose of this study was to explore the relationship between first-generation status and financial concerns among research-university students. As the review of literature took shape, however, the purpose for this study expanded. Its current purpose is to explore the topic of the relationship between first-generation college students and financial concerns among research-university students but, equally important, it is to expand on the research base that is available and begin to extend that base by looking at the financial considerations that students make and how those considerations are impacted by first-generation status, financial status, academic considerations, and demographics.

Figure 1: Conceptual Framework



## Conceptual Framework Justification

The conceptual framework includes three dependent variables: (1) student's level of financial concerns about paying for college, (2) activities and behaviors that students engage in to meet college expenses, and (3) students' views of the manageability of college costs. The independent variables in the study were placed into four groups (1) first-generation status, (2) financial status, (3) academic considerations, and (4) demographics.

The goal of the preceding conceptual framework and of this research study in general was based on the desire to explore concepts which had, according to the review of literature, been somewhat unexplored regarding college students and their financial concerns. The literature that discusses student behaviors based upon financial concerns is limited and much of it is focused on what college students do not know, e.g. budgeting skills or lack thereof (Eitel & Martin, 2009; Goetz et al., 2008; Hayes, 2006; Heck, 1984; Henry et al., 2001; Marsh, 2006) rather than the behaviors or activities they do that are linked to their financial concerns.

Therefore, this research study and the preceding conceptual framework reflect a unique focus on college students and their financial concerns, the activities and behaviors this group of college students indicate they perform or have performed to meet their college expenses, and students' views of the manageability of college costs. This research study and its focus on this unique group of variables appear to not have been examined before in this manner.

## Dependent Variables

The preceding conceptual framework contains three dependent variables: (a) student's level of financial concerns about paying for college, (b) activities and behaviors that students engage in to meet college expenses, and (c) students' views of the manageability of college costs.

In reviewing the literature on financial concerns and college students, research studies have been completed on college students and their finances, but these studies appear to shed light on the topics of college student finances and budgeting (Eitel & Martin, 2009; Goetz et al., 2008; Hayes, 2006; Heck, 1984; Henry et al., 2001; Marsh, 2006), college student credit card use (Avard et al., 2005; Goetz, 2008; Eitel & Martin, 2009; Grable & Joo, 2006; Hayes, 2006; Joo et al., 2003, Marsh, 2006; Palmer et al., 2001), or college students and how their finances impact their persistence in college (Fenske et al., 2001; Cabrera et al., 1992; Eitel & Martin, 2009; Hand & Payne, 2008; Ishitani, 2006; King, 1999). The proceeding research study, though concerned with college students and their finances, focuses on the level of financial concern expressed by college students via the 2010 Student Experience in the Research University (SERU) Survey
which is quite different from other published research.

According to the review of literature, the first component of the dependent variables, level of financial concerns, has not been examined in the way this study does by other researchers. This apparent hole in the literature encouraged me to pursue my research study's exploration. Upon closer review, I was further encouraged to use level of financial concerns as a variable within this study because this variable examines the current and future financial concerns of the subjects of this study. In addition, level of financial concerns examines financial concerns based upon the academic level of the student, i.e. continuing, non-senior versus senior, and also examines the senior students' level of concern regarding their accumulated debt.

The next dependent variable is activities and behaviors to meet college expenses. This variable offered many options for subjects to choose via survey response list regarding the behaviors and activities that they did over the past year to meet college expenses. This variable within the conceptual framework is further divided into three researcher-created activity and behavior categories—financial savings, academic changes, and lifestyle changes. According to the literature, exploration of financial activities and behaviors of this type has not been completed within a single study. When looking at the behaviors that college students report performing to handle college expenses, the literature primarily focused on budgeting and credit card usage. For example, Henry, Weber, and Yarbrough's (2001) inquiry focused on budgeting behaviors and demographic information. Their conclusions indicated that college students either lacked knowledge of money management practices or were simply not willing to expend the time and effort required to manage their money. Hayes (2006) also studied students' budgeting and found that many college-level students are "exposed to a significant degree of personal responsibility for their day-to-day finances" for the first time in college" (p. 1). Prior to college, Hayes states, they have rarely been faced with handling major living expenses while also managing course expectations far different from those of high school. Hayes found that some of these students succumb to extensive credit card and consumer debt before they leave school. Other researchers have looked at college students and their credit card usage. Goetz et al. (2008) found that “The lack of financial resources alone does not appear to fully explain why students may engage in poor financial management practices, such as failing to budget and spending more money than is available, failing to pay bills on time, or owing high levels of credit card debt” (p. 14). The results of research done by Grable and Joo (2006), who also examined students credit card behavior, found that “racial background, subjective financial knowledge, and credit card debt were significant factors affecting financial behaviors…African, American students exhibited worse financial behaviors than non-Hispanic White students” (discussion, para. 4). Though past research studies have explored college students and some aspects of their finances, these studies have not approached the myriad of student behaviors and activities, the level of student financial concern, or the student’s view of the manageability of college costs as this research study does.

A second type of behavior and activity examined is that of academic changes. This topic has been explored a bit more, or at least some facets of it have been examined by past research studies. One facet of academic changes that has been examined in previous studies is college student enrollment changes; this research has focused, though, on how students change their enrollment from full-time to part-time; it has not focused on the number of credits completed as the proceeding research study does. The U. S. Department of Education (1998) explored enrollment levels as they affected student persistence as did King (1999) who related number of credits completed to academic success and persistence. The sooner a student completes a degree, the more likely they are to persist in college. The U. S. Department of Education (1998) indicated that

"…part-time enrollment (unadjusted) was associated with lower rates of persistence and attainment than was full-time enrollment (48 percent versus 71 percent)" (p. 51).

A third type of behavior and activity examined within this dependent variable is lifestyle changes. Again, some aspects of this concept have been explored in previous research. These behaviors focus on seeking employment and either increasing credit card usage and debt level or increasing student loan amounts. When it comes to college student employment, several studies have focused on working and its impact on student grades or on student persistence. King (1999) who examined what is known about college student work, borrowing, enrollment patterns, academic achievement, and student persistence tells us that "eight out of ten students work while pursuing an undergraduate degree, and almost four out of ten are employed full-time" (p. 18). When Pascarella and Terenzini (2005) in their book entitled *How College Affects Students: A Third Decade of Research*, looked at the effects of work, they found that "the more hours students work, the more likely they are to shift from full-time to part-time enrollment and the less likely they are to persist from one year to the next or to complete a bachelor's degree program" (p.414). Because my study focuses on first-generation college students, the research completed by Inman and Mayes (1999) has shown that the number of work hours required of first-generation students may be impacted by the fact that they come from families with more family members who are dependent upon their income, have somewhat lower incomes than non-first generation students, and work a few more hours than non-first-generation students (p.9). Frighteningly, many first-generation college students indicate they are concerned about "whether or not they had enough time in the day to complete all their tasks" (Mehta et. al., 2011, results, para. 4). Inman and Mayes (1999) indicate that first-generation students are

> more likely to work longer hours, believing perhaps (as previous research suggested) in the myth of working your way through college. Fewer firsts (54.5%) than nonfirsts (57.9%) worked 0 to 20 hours, and more firsts (16.9%) than nonfirsts (12.1%) worked 40 hours or more (p. 10).

The dependent variable students' views of the manageability of college costs examines students' concerns about personal debt and about family debt while also asking students to rate their ability to manage the total costs associated with college. Bean and Metzner (1985) looked at students' concerns with finances and how those concerns impact student retention and found that students' concerns, along with other external factors, increase their anxiety because of the student's need for resources to finance their college education and because of the lack of encouragement the student receives to stay in college while handling family responsibilities (Bean and Metzner, 1985, p. 502). Gross and Keeling (2005) indicate that "…students who are struggling with money also experience stress and anxiety that can affect their academic performance, relationships, and physical (and psychological) presence on campus. At the very least, financial problems become a serious distraction" (p. 6). Eitel and Martin (2009) found that "more than 50% of the first-generation students surveyed reported that lack of finances was either likely or very likely to compel them to withdraw from college" **(**first-generation college students, para. 1) while Somers et al. (2004) indicated that many first-generation students, a focus of their study, are concerned about how to attend college without ending up with an unmanageable debt load (p. 429).

Therefore, the dependent variables included in the proceeding research study were chosen because of a desire to focus on student financial concerns and because apparently never before has a study focused on the combination of these three variables.

## Independent Variables

The independent variables in the conceptual framework are broken into four categories—educational background, financial status, academic considerations, and demographics.

Educational background consists of first-generation status. There has been a good deal of research completed on first-generation college students, yet little has been written about their financial concerns and what impact first-generation status has on students' financial concerns. In the past, research has focused on several topics including the first-generation college student's decision-making process regarding college enrollment (Mehta et al., 2011; London, 1992; Somers et al., 2004), first-generation student enrollment patterns (Educational Resources, 1998; Strayhorn, 2006), first-generation students and why they attend college (Bui, 2002; Gardner and Holley, 2011), first-generation students and the challenges they face in college (Educational Resources Institute, 1997; Ishitani, 2006), and first-generation student characteristics (Terenzini et al, 1996; Bui, 2002; Penrose, 2002; Martin Lohfink, & Paulsen, 2005).

Mother's educational level and father's educational level are primarily the variables that identify whether a student is first-generation or not. The educational levels held by parents dramatically impact a high school student and whether he or she will even apply for college or not. National Center for Education Statistics (2001) found that students whose parents had completed only high school enrolled in college immediately following high school at a rate of only 54 percent compared to an 82 percent enrollment level for students whose parents held a bachelor's degree or higher (p. 3). A parent's educational level also impacts the persistence level of a first-generation student as Ishitani (2003) found that "a precipitous decline was...found between first-generation students and their peers in the first semester [of college]" (p. 441).

The three components which comprise the educational background variable were chosen to see if there were a difference in financial concerns based upon first-generation status. Since first-generation students come from homes which predominantly have lower incomes and are predominantly of minority status, the financial concerns they have, with a lack of financial support from their families, should be greater and one would assume theses students would make more activity and behavior changes based upon these concerns.

A second independent variable that could have an impact on students' financial concerns is that of financial status. This variable on the conceptual framework is divided into two sub-components—dependency status and parental income for 2009, the year before the survey was completed by the student. When examining the financial status of a student, the students within this study could self-report their dependency status indicating if they were independent or dependent. Aronson (2008) found that first-generation students are more likely to be financially independent because "low income parents are less likely than affluent parents to financially support their children during young adulthood and offer less assistance when they do provide it" (p. 45). Aronson noted that the world of a low-income family is far different from that of other, more financially secure families. "For low-income families, daily survival often takes priority over higher education, which may be seen as 'optional' or a 'luxury' compared to contributing economically to the household " (p. 49).

As with other variables previously discussed, the majority of the published research on financial status focuses on student persistence. Ishitani (2006) observed that the higher the family income, the more likely the student was to graduate from college. Of concern when considering first-generation students is that data shows "students with family incomes ranging between $20,000 and $34,999 were 72% more likely to depart than were students with family incomes of $50,000 or higher" (p. 873). Martin Lohfink and Paulsen (2005) further found that "each $10,000 increase in family income was associated with a 2.0% increase in the probability of persistence for FGS [first-generation students]" (p. 415). Again, financial status variables were chosen for this study because they appear to impact students and have not been used before in research regarding their impact on students' financial concerns.

A third category of independent variables that may impact students' financial concerns are academic considerations. Identified for this research were aspects of student academic data that could have an impact on student financial concerns. These items included the University of Minnesota cumulative grade point average (GPA), the college in which the student is enrolled, and the number of credits the student has completed at the University of Minnesota. Strayhorn (2006) examined student GPA in his research and found that there were "significant linkages between several background variables and cumulative GPA… including gender and race (or being Black)" (p. 98). Specifically, Strayhorn found that being a minority student had a negative influence on academic achievement, though he also indicated that this was true only for Black students and needed to be further explored for students of other minorities. Martin Lohfink and Paulsen (2005) found that “for every one-unit increase in GPA, FGS [first-generation students] were 12.8% more likely to persist from the first to the second year” (p. 417). Again, though academic considerations have been used in research, no linkage between student financial concerns and academic considerations was found in the literature. Regarding the type of college major, the second variable within this category, and how student major influences financial concerns, one study discussed finances and major within the literature reviewed. Fenske, Porter, and DuBrock (2000) did a study of over 7,000 science, technology, engineering, and math (SEM) students at a large, public university in a metropolitan area and found that

> the longer time-to-degree pattern for SEM majors needs to be considered when packaging financial aid at the institutional level, and at the national level when establishing financial aid program. Each additional year in school represents foregone income and a delay in entering the labor force, both of which increases the true economic cost of the SEM degree to the student (p. 92).

As for the final variable in the category of academic considerations, number of credits completed at the University of Minnesota, though little research appears to have focused on financial concerns and number of credits completed, one aspect has been explored in the research—that of students changing their enrollment in college. Gross and Keeling (2005) wrote that “debt leads some students to accelerate the college experience and to use course overloads and summers to generate more credits” (p. 6). Hayes (2006) also found that when students increase their class loads, they are forced to reduce their hours of work, and that the students then “face a wide range of financial problems such as credit card abuse, lack of spending plans and budgeting practices, limited understanding of investment basics and limited knowledge of consumer rights and responsibilities” (p.3). Interestingly, Hayes (2006) also found that “senior students showed a significantly higher frequency of both reducing class load levels and dropping out for a semester during spring or fall semesters in order to work more due to financial requirements” (p. 71). King (1999) also states when examining course completion, “how many courses a student takes in a given term—and often how well the student does in those courses—will be influenced profoundly by how the student pays for these courses” (p. 21). The U. S. Department of Education (1998) found in their study completed for the U.S. Department of Education that “…part-time enrollment (unadjusted) was associated with lower rates of persistence and attainment than was full-time enrollment (48 percent versus 71 percent)” (p. 51).

Two other researchers also looked specifically at first-generation students and the impact of part-time or full-time status. Aronson (2008) discovered that “first-generation and low-socioeconomic status (SES) college students are less likely than their counterparts to attend college full time for the entire year and are more likely to attend part time and discontinuously” (p. 46) while Pascarella et al. (2004) indicated that, “first-generation students completed significantly fewer credit hours across the three years of the study and worked significantly more hours per week than did the high education group” (p. 276). Again, the academic considerations, though used in other research studies, have not been connected to college student financial concerns and, therefore, were of great value to include in this research study.

The fourth category of independent variables is that of demographics. Demographic variables are typically used in most research allowing researchers to look at the impact of these variables on the dependent variables which, in this case, are students’ financial concerns. For the purposes of this research study, demographics were divided into three sub-components—ethnicity, age, and gender.

Ethnicity was chosen since the literature indicates that first-generation students are, many times, minority students. In fact, research has been completed that looked at financial stress by Fenske et al. (2000) who found that "Latino students displayed higher levels of financial stress than did Anglo students during their college years. Financial issues included student loan repayment, ability of their parents to provide financial support, and availability and qualification for financial aid" (p. 40). Grable and Joo (2006) also explored information on minority students but their research was focused on credit card debt; however, one aspect did catch my attention as their research indicated that "African-American students …exhibited worse financial behaviors, and had higher levels of self-reported financial stress than non-Hispanic White students" (results).

Regarding student age, there was a good deal of discussion about non-traditional-aged students and their financial knowledge. Bean and Metzner (1985) state that non-traditional-aged students would be expected to have more financial knowledge to apply to financial decision making because many times these students are part-time, commuter, older than 24, or any combination of these characteristics (p. 489). Bean and Metzner assert that "whereas residential [traditional] students are primarily concerned with the internal environment of the institution, nontraditional students are much more closely connected with the external environment" (p. 492). This external environment could include finances, employment, family, and outside encouragement. Other researchers also note that age made a difference in their studies as well. Marsh (2006) indicated "nontraditional students posted significantly higher attitude, behavior, and knowledge scores than traditionally-aged students” (p.224). Eitel and Martin (2009) also found in their study using the Jump$tart survey to determine financial knowledge “as student age increased, Jump$tart scores increased. Student age accounted for 20% of the variation in Jump$tart scores” (phase 1, quantitative study).

Finally, gender also may have an effect on the financial considerations made by students. Researchers have found that gender has a strong impact on finances and financial decision making. Hayes (2006) found that females “tend to be more concerned and anxious about current financial circumstances” (p.75) and that “female students exhibited lower scores on financial education and awareness but had significantly less difficulty in meeting their financial obligations compared to male students” (p.70). Therefore, the three demographic variables—ethnicity, age, and gender--were chosen primarily to determine if and how they impact students’ financial concerns.

## Methodology

### Context of Study

The data set used for this study was provided by the University of Minnesota-Twin Cities through the University’s Office of Institutional Research. The University of Minnesota-Twin Cities campus, according to its web site, is “among the largest public research universities in the country, offering undergraduate, graduate, and professional students a multitude of opportunities for study and research”. Its two Twin Cities locations are situated in the metropolitan cities of Minneapolis and St. Paul Minnesota. The campus, itself, is the flagship of five campuses in the University of Minnesota system which enrolls over 65,000 students in a variety of undergraduate and graduate programs

( http://www1.umn.edu/twincities/campus-facts/index.html accessed on 12/3/12).

**Data Collection and Dataset**

The data are derived from an on campus survey, the 2010 Student Experience in the Research University (SERU) Survey. According to the University of Minnesota Office of Institutional Research, "The Student Experience in the Research University (SERU) Project is a collaboration between academic scholars and institutional researchers devoted to creating new data sources and policy relevant analysis to help broaden our understanding of the undergraduate experience and to promote a culture of institutional self-improvement" (accessed on December 8, 2012, from http://www.oir.umn.edu/surveys/seru). The 2010 SERU survey which provides the majority of this data set information for this study was administered from March 23, 2010, through June 12, 2010.

The subjects for the study were identified by the University of Minnesota Office of Institutional Research using a sampling plan agreed upon by members of the research consortium. According to Dr. Ronald Huesman, Director of Institutional Assessment at the University of Minnesota Office Of Institutional Research, "The SERU sampling plan is a census of all degree-seeking undergraduate students. In spring 2010, the SERU was distributed to 28,237 undergraduate students at the University of Minnesota-Twin Cities, with 34% responding" (Huesman, email communication; November 13, 2012). Huesman went on to indicate that, "The SERU survey was administered online in spring 2010, with the majority of communications occurring via electronic mail. Students followed a link to take the survey and if consented to participate continued on to the survey. Students then completed core survey questions and were randomly assigned to one of the four modules. Thirty percent of students were randomly assigned to the academic engagement module, 20% to the community and civic engagement module, 20% to the student life and development module, and 30% to the University of Minnesota wildcard module" (Huesman, email communication, November 13, 2012).

The University of Minnesota Office of Institutional Research web site states that in the 2010 Student Experience in the Research University (SERU) Survey, "there are several items designed to gather information on academic and civic engagement, student learning and development, student services, and globalization. Additionally students respond to items that provide insight into students' academic and personal development, perceived campus climate for diversity, overall satisfaction and evaluation of the major (if applicable). Since the survey asks students about their background, beliefs, motivations, and perspectives, it provides additional insight into academic and co-curricular engagement (or disengagement)...There is also [a] customizable module [the wildcard module] available where college and universities can create items that reflect topics and issues of particular interest to them…based on the unique context of research universities, a deliberate effort was made to capture the complexity of these institutions" (www.seru.umn.edu/about-seru/survey). Dr. Huesman explains the important of the wildcard module as follows, "We have utilized the Wildcard in the past to continue historical survey items so we maintain a trend line, or if a unit on campus has a specific need, such as Equity and Diversity needing an assessment of the campus climate…we usually assign 30% of the undergraduates to take the Wildcard. The Wildcard module is not exchanged among the consortium members" (Huesman, email communication, May 3, 2013).

The study was approved by the University of Minnesota Institutional Review Board (See Appendix B). The data set was provided by University of Minnesota with no student identifiers, allowing student data to be reviewed and summary data to be published in dissertation form.

The variables chosen for use in the study were provided through the 2010 Student Experience in the Research University (SERU) Survey and were enhanced by information on demographic, academic, and financial status from the University of Minnesota student data base. Again, the additional data were accessed as part of the data set provided by the University of Minnesota Office of Institutional Research department and are as follows:

Table 1: Variables, Survey Items and Response Categories Assessed in Study

| Variables | Survey Item | Response Categories |
|---|---|---|
| **Dependent Variable: Financial Concern** | | |
| **Level of Financial Concerns:** | | |
| Current Financial Concern | How concerned HAVE YOU BEEN about paying for your undergraduate education up to now? | 1. Not at all concerned<br>2. Unconcerned<br>3. Somewhat unconcerned<br>4. Somewhat concerned<br>5. Concerned<br>6. Very concerned |
| Concern about next year | How concerned are you about paying for your undergraduate education NEXT YEAR? | 1. Not at all concerned<br>2. Unconcerned<br>3. Somewhat unconcerned<br>4. Somewhat concerned<br>5. Concerned<br>6. Very concerned |
| Seniors current financial concern | How concerned HAVE YOU BEEN about paying for your undergraduate education up to now? | 1. Not at all concerned<br>2. Unconcerned<br>3. Somewhat unconcerned<br>4. Somewhat concerned<br>5. Concerned<br>6. Very concerned |
| Accumulated debt concern | How concerned are you about your accumulated educational debt? | 1. Not at all concerned<br>2. Unconcerned<br>3. Somewhat unconcerned<br>4. Somewhat concerned<br>5. Concerned<br>6. Very concerned |

**Activities/Behaviors to meet college expenses: 3 categories**

**Financial Savings**

| | | |
|---|---|---|
| Applied for financial aid for the first time | Which of the following have you done in the past year to meet college expenses?* | 1. Applied for financial aid for the first time |
| Asked financial aid office to reevaluate my application | Which of the following have you done in the past year to meet college expenses? * | 1. Asked financial aid office to reevaluate my application |
| Changed my commute to campus | Which of the following have you done in the past year to meet college expenses? * | 1. Changed my commute to campus |
| Added a roommate | Which of the following have you done in the past year to meet college expenses? * | 1. Added a roommate |
| Moved home to reduce expenses | Which of the following have you done in the past year to meet college expenses? * | 1. Moved home to reduce expenses |
| Moved elsewhere to reduce expenses | Which of the following have you done in the past year to meet college expenses? * | 1. Moved elsewhere to reduce expenses |
| Decided to move home after college | Which of the following have you done in the past year to meet college expenses? * | 1. Decided to move home after college |
| Have cut expenses overall/have been more frugal | Which of the following have you done in the past year to meet college expenses? * | 1. Have cut expenses overall/have been more frugal |

**Academic Changes**

| | | |
|---|---|---|
| Bought fewer books, bought cheaper books, read books on reserve | Which of the following have you done in the past year to meet college expenses? * | 1. Bought fewer books, bought cheaper books, read books on reserve |
| Took a leave of absence or a quarter/semester off | Which of the following have you done in the past year to meet college expenses? * | 1. Took a leave of absence or a quarter/semester off |

| | | |
|---|---|---|
| Took more courses per term | Which of the following have you done in the past year to meet college expenses? * | 1. Took more courses per term |
| Took fewer courses per term | Which of the following have you done in the past year to meet college expenses? * | 1. Took fewer courses per term |
| Changed my major or minor | Which of the following have you done in the past year to meet college expenses? * | 1. Changed my major or minor |
| Took action to graduate more quickly | Which of the following have you done in the past year to meet college expenses? * | 1. Took action to graduate more quickly |
| Dropped double major or changed plan to double major | Which of the following have you done in the past year to meet college expenses? * | 1. Dropped double major or changed plan to double major |
| Did not retake a class to improve grade | Which of the following have you done in the past year to meet college expenses? * | 1. Did not retake a class to improve grade |
| Accepted AP credit or similar credit instead of taking course | Which of the following have you done in the past year to meet college expenses? * | 1. Accepted AP credit or similar credit instead of taking course |
| Decided to postpone graduate or professional school to earn money | Which of the following have you done in the past year to meet college expenses? * | 1. Decided to postpone graduate or professional school to earn money |
| Decided to quickly enroll in graduate or professional school because jobs are so scarce | Which of the following have you done in the past year to meet college expenses? * | 1. Decided to quickly enroll in graduate or professional school because jobs are so scarce |
| Decided against planned internship | Which of the following have you done in the past year to meet college expenses? * | 1.Decided against planned internship |
| Decided against study abroad | Which of the following have you done in the past year to meet college expenses? * | 1.Decided against study abroad |

| | | |
|---|---|---|
| Took a community college course because it was cheaper | Which of the following have you done in the past year to meet college expenses? * | 1.Took a community college course because it was cheaper |
| Took an online course because it was cheaper | Which of the following have you done in the past year to meet college expenses? * | 1. Took an online course because it was cheaper |

**Lifestyle Changes**

| | | |
|---|---|---|
| Took a job for the first time at college | Which of the following have you done in the past year to meet college expenses? * | 1.Took a job for the first time in college |
| Worked before but increased the number of hours worked | Which of the following have you done in the past year to meet college expenses? * | 1. Worked before but increased the number of hours worked |
| Increased the debt I carry on my credit card | Which of the following have you done in the past year to meet college expenses? * | 1.Increased the debt I carry on my credit card |
| Increased my annual student loan amount | Which of the following have you done in the past year to meet college expenses? * | 1.Increased my annual student loan amount |

**Manageability of College Cost**

**Worry—**

| | | |
|---|---|---|
| Worried about my personal debt | How frequently have you engaged in the following behaviors in the past? Worried about my personal debt | 1.Never<br>2.Rarely<br>3.Occassionally<br>4. Somewhat often<br>5. Often<br>6. Very often |

| | | |
|---|---|---|
| Worried about my family's debt and financial circumstances | How frequently have you engaged in the following behaviors in the past? Worried about my family's debt and financial circumstances | 1.Never<br>2.Rarely<br>3.Occassionally<br>4. Somewhat often<br>5. Often<br>6. Very often |
| Variable 2 for Manageability of college cost: | 3a. To what extend do you agree or disagree with this statement: Given the grants and scholarships, if any, that you receive, the total cost of attending [home campus] is manageable. | 1.Strongly disagree<br>2.Disagree<br>3. Somewhat disagree<br>4.Somewhat agree<br>5.Agree<br>6. Strongly agree |

**Independent Variables**

**Educational background:**

| | | |
|---|---|---|
| First-generation student | Created this variable using mothers educational level and father's educational level | 0.Not first gen<br>1.First gen |
| Mother's educational level | What is the highest level of education reached by your mother? | 1) none (did not receive formal education)<br>2) less than high school diploma<br>3) High school diploma<br>4) Associate's or postsecondary certificate<br>5) Bachelor's degree<br>6) Post-baccalaureate certificate<br>7) Master's degree<br>8) A professional degree<br>9) Doctoral degree |
| Father's educational level | What is the highest level of education reached by your father? | 1) none (did not receive formal education)<br>2) less than high school diploma<br>3) High school diploma<br>4) Associate's or postsecondary certificate |

| | | |
|---|---|---|
| | | 5) Bachelor’s degree<br>6) Post-baccalaureate certificate<br>7) Master’s degree<br>8) A professional degree<br>9) Doctoral degree |
| Advanced Parent Education | Created this variable to look at parents with certain levels of education using mother’s education and father’s education levels | 0.Not advanced parent education<br>1.Advanced parent education |
| **Financial Status:** | | |
| Independent: | Are you a financially independent student? | 1.yes<br>2. no |
| Dependent: | | |
| Parent’s income financially dependent | To the best of your knowledge, which category includes the total annual combined income of your parent(s) before taxes in 2009? | (1) Less than $10,000<br>(2) $10,000 to $19,999<br>(3) $20,000 to $34,999<br>(4)$35,000 to $49,999<br>(5) $50,000 to $64,999<br>(6)$65,000 to $79,999<br>(7) $80,000 to $99,999<br>(8) $100,000 to $124,999<br>(9) $125,000 to $149,999<br>(10) $150,000 to $199,999 (11) $200,000 or more |
| Household’s income | To the best of your knowledge, which category includes your household’s total annual combined income before taxes in 2009? | (1) Less than $10,000<br>(2) $10,000 to $19,999<br>(3) $20,000 to $34,999<br>(4)$35,000 to $49,999<br>(5) $50,000 to $64,999<br>(6)$65,000 to $79,999<br>(7) $80,000 to $99,999<br>(8) $100,000 to $124,999<br>(9) $125,000 to $149,999<br>(10) $150,000 to $199,999 (11) $200,000 or more |

**Academic Considerations:**

| | | |
|---|---|---|
| University of Minnesota Cumulative Grade Point Average | Cumulative GPA at start of data collection term | Continuous variable |
| University of Minnesota College | Created this variable to examine whether college student attended at University of Minnesota had an impact on financial considerations. | (1)College of Liberal Arts, (2) Carlson School of Management, (3) College of Science and Engineering, (4) College of Food, Agriculture, and Natural Resource Science, (5) College of Design, (6) College of Biological Sciences, (7) College of Education and Human Development, (8)Academic Health Center Shared, (9) College of Continuing Education, (10) School of Dentistry, (11) Medical School, (12) School of Nursing, (13)Undeclared/Undecided, (14) Lower Division (7777) Missing |

**Demographics:**

| | | |
|---|---|---|
| Ethnicity | Created MINORITY variable to examine whether majority or minority status impacted financial considerations. | (1)American-Alaskan Native, (2) African American, (3) Chicano-Latino, (4) Asian-Phillipino-Pacific Islander (5) White |
| Nontraditional | Created this variable to examine impact of nontraditional or traditional student status on financial considerations | Age 22 or younger = 0<br>Age 23 or older = 1 |

| | | |
|---|---|---|
| Age | Age—used this variable only to create Nontrad variable | Age greater than 22 but younger than 30 years of age=0<br>Age greater than 30=1 |
| Gender | Gender | F=Female=1<br>M=Male=0 |

http://cshe.berkeley.edu/research/seru/

## Dependent Variables

### Financial Concerns

The conceptual framework includes three dependent variables (1) student's level of financial concerns about paying for college, (2) activities and behaviors that students engage in to meet college expenses, and 3) students' views of the manageability of college costs.

The first of the three dependent variables, students' level of financial concern about paying college, is a scale based on 4 survey items. The first two survey items were asked of non-senior, continuing, students while the other two survey items were asked of students who were at the senior level at the University of Minnesota. The survey items asked of continuing, non-seniors were: (a) "How concerned HAVE YOU BEEN about paying for your undergraduate education up to now?" (b) "How concerned are you about paying for your undergraduate education NEXT YEAR?" **(**http://cshe.berkeley.edu/research/seru/). The survey items asked of University of Minnesota seniors were: (c) "How concerned HAVE YOU BEEN about paying for your undergraduate education up to now?" (This question was offered only to students who were categorized as seniors at the University of Minnesota), and (d) "How concerned are you about your accumulated educational debt?" (http://cshe.berkeley.edu/research/seru/)**.** The response categories for all four survey items were: "(1) not at all concerned, (2) unconcerned, (3) somewhat unconcerned, (4) somewhat concerned, (5) concerned, and (6) very concerned" (http://cshe.berkeley.edu/research/seru/).

The second of the three dependent variables is activities and behaviors that students engage in to meet college expenses. There are three measures of this variable.

The measures are based on a question from the 2010 Student Experience in the Research University (SERU) Survey which asks students, "What of the following have you done in the past year to meet college expenses?" **(**http://cshe.berkeley.edu/research/seru/**)**. The students marked as many items as they wished from a list of 29 activities or behaviors. I took the 29 items and grouped them into three categories—Financial savings, Academic Changes, and Lifestyle Changes. Items included in each of the categories are:

**Financial Savings: "**applied for financial aid for the first time, asked the financial aid office to reevaluate my application, changed my commute to campus, added a roommate, moved home to reduce expenses, moved elsewhere to reduce expenses, decided to move home after college, and have cut expenses overall or have been more frugal" (http://cshe.berkeley.edu/research/seru/).

**Academic Changes: "**bought fewer books, bought cheaper books, read books on reserve, took a leave of absence or a quarter/semester off, too more courses per term, took fewer courses per term, changed my major or minor, took action to graduate more quickly, Dropped double major or changed plan to double major, took a class to improve grade, accepted AP credit or similar credit instead of taking course, decided to postpone graduate or professional school to earn money, decided to quickly enroll in graduate or professional school because jobs are so scarce, decided against planned internship, decided against study abroad, took a community college course because it was cheaper, and took an online course because it was cheaper" (http://cshe.berkeley.edu/research/seru/).

**Lifestyle Changes:** **"**Took a job for the first time at college, worked before but increased the number of hours worked, increased the debt I carry on my credit card, and increased my annual student loan amount" (http://cshe.berkeley.edu/research/seru/).

Once the three categories of behaviors and activities were created, then, the student responses to the items in each of these categories were summed to create the score for that particular variable for statistical purposes.

The last of the three dependent variables is manageability of college costs. This variable has two measures. The first is *worry*. It was created by using two questions from the SERU Survey. The prompt asks the student, "How frequently have you engaged in the following behaviors in the past year?" (http://cshe.berkeley.edu/research/seru/). As two of the behaviors, it lists "worried about my personal debt" and "worried about my family's debt and financial circumstances" (http://cshe.berkeley.edu/research/seru/). Each of these two questions asks the student to rate their level of worry on a six point scale from never to very often. In addition, manageability of college costs also has another measure which is drawn from another question on the 2010 Student Experience in the Research University (SERU) Survey, "To what extent do you agree or disagree with this statement: Given the grants and scholarships, if any, that you receive, the total cost of attending (Home Campus) is manageable" (http://cshe.berkeley.edu/research/seru/). Again, students mark a level of agreement or disagreement on a six point scale ranging from strongly disagrees to strongly agree.

## Independent Variables

This study will examine associations between the independent variables and the dependent variables. The independent variables in the study appear in four groups (a) first-generation status, (b) financial status, (c) academic considerations, and (d) demographics.

In the first, first-generation status, there is one independent variable. First-generation status was created using mother's education level and father's education level. Students responded the following question in the SERU Survey: "What is the highest level of education reached by your mother?" **(**http://cshe.berkeley.edu/research/seru/**)**. Students were given the choices of "(1) none (did not receive formal education), (2) less than high school diploma, (3) High school diploma, (4) Associate's or postsecondary certificate, (5) Bachelor's degree, (6) Post-baccalaureate certificate, (7) Master's degree, (8) A professional degree, or (9) Doctoral degree" **(**http://cshe.berkeley.edu/research/seru/**)**. The same question stem and response categories were provided for father's education level.

To create the variable firstgenstdt, I identified students who were not first-generation and those who were first-generation students. If the mother's education level and the father's education level was high school diploma or less, then the student was listed as a "1" which was an indication that the student was a first-generation student.

The second variable within the first-generation student category was Advanced Parent Education. I created an indicator of (post baccalaureate certificate, Master's degree, a professional degree, or a doctoral degree). If the student indicated that both parents had a bachelor's degree or less, then the advparented indicated a 0 for a parent not having an advanced college education.

The second group of independent variables was financial status. In this category, I placed both the student's financial dependency status—dependent or independent-- and parents' income. Dependency status was determined by a question within the SERU Survey: "Are you a financially independent student?" **(**http://cshe.berkeley.edu/research/seru/**)**. Students answered the question "yes" or "no". For parental income, students responded to the SERU Survey question: "To the best of your knowledge, which category includes the total annual combined income of your parent(s) before taxes in 2009?" **(**http://cshe.berkeley.edu/research/seru/). Students were given the following income categories: "(1) Less than $10,000, (2) $10,000 to $19,999, (3) $20,000 to $34,999, (4)$35,000 to $49,999, (5) $50,000 to $64,999, (6)$65,000 to $79,999, (7) $80,000 to $99,999, (8) $100,000 to $124,999, (9) $125,000 to $149,999, (10) $150,000 to $199,999, or (11) $200,000 or more" (http://cshe.berkeley.edu/research/seru/).

The next group of independent variables was Academic Considerations. This group included the student's cumulative grade point average (GPA), the college in which the student has enrolled at the University of Minnesota, and the number of credits completed at the University of Minnesota. The cumulative GPA was provided by University of Minnesota-Office of Institutional Research.

The second variable, the college in which the student was enrolled, was created by the researcher using the student's major (which was provided by the University of Minnesota-Office of Institutional Research) and tied it directly to the appropriate University of Minnesota College. I used the online University of Minnesota Catalog to identify the college to which each major was tied. The colleges were: (1) College of Liberal Arts, (2) Carlson School of Management, (3) College of Science and Engineering, (4) College of Food, Agriculture, and Natural Resource Science, (5) College of Design, (6) College of Biological Sciences, (7) College of Education and Human Development, (8) Academic Health Center Shared, (9) College of Continuing Education, (10) School of Dentistry, (11) Medical School, (12) School of Nursing, (13) Undeclared/Undecided, (14) Lower Division, and (7777) Missing. I, then, hand coded each student's college based upon major. For any major which I could not find in the University of Minnesota online catalog, I contacted the University of Minnesota Student Affairs office by email and asked them to identify the correct college. Finally, the UMCollege were all changed into indicators with "0" indicator meaning that the student was NOT in that college and a "1" indicating that the student was in that particular college.

The final group of independent variables was demographics. The demographics category is comprised of Ethnicity, Age, and Gender. Though each of these variables was provided the University of Minnesota Office of Institutional Research as part of the dataset, each had to be adjusted for my statistical analyses.

For Ethnicity, I started by creating value labels: (1) American-Alaskan Native, (2) African American, (3) Chicano-Latino, (4) Asian-Phillipino-Pacific Islander, and (5) White. Next, I used these designations for Minority or Majority. Minority is made up of labels 1 through 4 while the Majority category is White. Majority was given a value of 0 in the data set while Minority was assigned the value of "1".

For age, I created categories first using the age variable information provided by University of Minnesota Office of Institutional Research. In doing this, first, I eliminated outliers, assuming they were incorrect. Then, I defined two age categories. If students were older than 22 but younger than 30, they were assigned the value of 0 which means they are a “traditional” student. If students’ age was greater than 30, they were labeled as 1 indicating they were non-traditional.

The final variable in the demographic group of independent variables was gender. It was recoded so that male equaled “0” and female equaled “1”.

In the next chapter, Chapter 4, you will find information regarding the statistical analyses completed for this study. The analysis offers the reader a clearer picture of the students’ backgrounds and how variables affect students’ financial considerations. This data begins by looking at information regarding data means and standard deviations. Next, in order to do a more in-depth look at the variables within the study and their relationships, the statistical analysis expands to include regressions. The data view shifts to an examination of standardized regressions of financial concerns as functions of first-generation status, demographic variables, and academic status focusing on students who indicated they are financially independent. Next, the statistics explore via regression the reported behaviors of students based upon first-generation status, demographic variables, and University of Minnesota college enrollment, and finally, the regressions focus on the manageability of college costs and these financially independent students as functions of first-generation status, demographic variables, and academic status. These regressions are immediately followed regressions examining the relationships between first-generation status, demographic variables, and academic status using financially dependent students.

# CHAPTER FOUR

## Results

In order to meet the monetary demands of paying for college, students are being faced with choices they are, many times, unprepared to deal with. With money tight and concerns about financing a college education at the forefront of their minds, more and more students need to work in order to afford to attend college, and yet that very employment can compromise a college education. It is the purpose of this study to explore the relationship between college student status and financial concerns through the question, “What is the relationship between first-generation college student status and financial considerations among research university students?”

This chapter presents the findings of a research study based on the data from the Student Experience at the Research University survey and demographic information from the University of Minnesota-Twin Cities in an effort to identify what relationships exist between first-generation student status and financial considerations. The chapter begins with descriptive statistics, specifically looking at first-generation and non-first-generation students.

### Descriptive Findings

Descriptive information for the independent variables is presented within the first section of this analysis. The first set of descriptive information is presented in Table 2, which provides basic demographic information on discrete variables by first-generation status. First-generation status is significantly related to most demographic variables. Of course, 100 percent of first-generation students have parents who do not have any advanced education, whereas 42.3 percent of non-first generation students’ parents have had advanced education. There is also a significant relationship between ethnicity and first-generation status: 9.5 percent of first-generation students are minority members while only 7.1 percent of non-first-generation students are minority. In addition, 29 percent of first-generation subjects are non-traditional age whereas 15 percent of non-first-generation students are non-traditional age. Furthermore, 32.2 percent of first-generation students are financially independent while only 15.9 percent of non-first-generation students have independent financial status.

Table 3 presents first-generation student status in relation to continuous variables: parent income, cumulative grade point average, and credits completed at the University of Minnesota. First-generation status is significantly related to the 2009 parental income and cumulative grade point average (GPA). First-generation students had a mean GPA of 3.19 while non-first generation students had a mean GPA of 3.30. When examining parental income, first-generation students' parental income had a mean of 5.24 while non-first-generation students' parental income had a mean of 6.98.

Next, I examined the relationship between first-generation status and the financial concern variables. In Table 4, students are divided into two categories: continuing students and seniors in their responses to some questions. Overall, table 4 shows continuing students who are first-generation are significantly more concerned about current financial concerns and about next years' finances as well. Seniors who are first-generation exhibit the same patterns of financial concerns: they are concerned about current finances and about their accumulated debt as well.

In order to deal with these concerns, first-generation students are making more changes in their financial, academic, and lifestyle behaviors related to spending in

Table 2: Percentage Distribution of Parental Education, Race/Ethnicity, Age, Gender, Financial Status, and College by First-Generation Status (N=10,223)

| | First-Generation | Non-First Generation | Chi-Squared |
|---|---|---|---|
| Parental Education | | | |
| Advanced education | 0.0 | 42.3% | 610.4 *** |
| No advanced education | 100.0 | 57.7 | |
| Race/Ethnicity | | | |
| Majority | 90.5 | 92.9 | 6.5 * |
| Minority | 9.5 | 7.1 | |
| Age | | | |
| Traditional | 71.0 | 85.0 | 112.2 *** |
| Non-traditional | 29.0 | 15.0 | |
| Gender | | | |
| Male | 37.6 | 38.9 | .6 |
| Female | 62.4 | 61.1 | |
| Financial Status | | | |
| Independent | 32.2 | 15.9 | 142.3*** |
| Dependent | 67.8 | 84.1 | |

Levels of significance: * p<.05; ** p<.01; *** p<.001

Table 3: Means and Standard Deviations of Parent Income, Cumulative Grade Point Average, and Credits Completed by First-Generation Status (N=10,223)

| | First-Generation | Non-First Generation | F |
|---|---|---|---|
| Parent Income | 5.24 | 6.98 | 296.04*** |
| | (2.19) | (2.35) | |
| *Range: 1-11* | | | |
| Cumulative Grade Point Average | 3.19 | 3.30 | 33.87*** |
| | (0.54) | (0.48) | |
| *Range: 0-4.0* | | | |
| Credits Completed | 57.07 | 58.67 | 1.36 |
| | (38.20) | (38.52) | |
| *Range: 0-228* | | | |

Levels of significance: * p<.05; ** p<.01; *** p<.001

Table 4: Means and Standard Deviations of Financial Concern Variables by First-Generation Status (N=10,223)

| | First Generation | Non-First Generation | F |
|---|---|---|---|
| Continuing students' current financial concern[1] | 4.27 (1.64) | 3.72 (1.72) | 56.0*** |
| Continuing students' concern about next year[1] | 4.51 (1.61) | 4.05 (1.73) | 40.1*** |
| Seniors' current concern[2] | 4.05 (1.89) | 3.46 (1.85) | 16.7*** |
| Seniors' accumulated debt concern[2] | 4.19 (1.91) | 3.70 (2.02) | 10.0** |
| Financial Savings Behaviors | 2.17 (1.16) | 2.06 (1.09) | 6.5* |
| Academic Change Behaviors | 3.17 (1.78) | 2.87 (1.67) | 22.1*** |
| Lifestyle Change Behaviors | 1.71 (.77) | 1.55 (.71) | 28.5*** |
| Worry | 8.56 (2.96) | 7.25 (3.14) | 137.8*** |
| Manageability of Costs | 3.51 (1.34) | 3.66 (1.29) | 11.9** |

Levels of significance: * p<.05; ** p<.01; *** p<.001
comparison to non-first-generation students. Financial savings behaviors include

[1] The first two variables within this table are for continuing students.

[2] The second two variables within this table are for students who are seniors.

applying for financial aid for the first time or adding a roommate, while academic changes include such behaviors as taking fewer are minority members while only 7.1 percent of non-first-generation students are minority. In addition, 29 percent of first-generation subjects are non-traditional age whereas 15 percent of non-first-generation students are non-traditional age. Furthermore, 32.2 percent of first-generation students are financially independent while only 15.9 percent of non-first-generation students have independent financial status.

Table 3 presents first-generation student status in relation to continuous variables: parent income, cumulative grade point average, and credits completed at the University of Minnesota. First-generation status is significantly related to the 2009 parental income and cumulative grade point average (GPA). First-generation students had a mean GPA of 3.19 while non-first generation students had a mean GPA of 3.30.  When examining parental income, first-generation students' parental income had a mean of 5.24 while non-first-generation students' parental income had a mean of 6.98.

Next, I examined the relationship between first-generation status and the financial concern variables. In Table 4, students are divided into two categories: continuing students and seniors in their responses to some questions. Overall, table 4 shows continuing students who are first-generation are significantly more concerned about current financial concerns and about next years' finances as well. Seniors who are first-generation exhibit the same patterns of financial concerns:  they are concerned about current finances and about their accumulated debt as well.

In order to deal with these concerns, first-generation students are making more changes in their financial, academic, and lifestyle behaviors related to spending in comparison to non-first-generation students. Financial savings behaviors include applying for financial aid for the first time or adding a roommate, while academic changes include such behaviors as taking fewer courses or choosing not to have a second major. Lifestyle change behaviors include items such as working more hours or taking more student loans.

We now turn to parent education and its association with financial considerations (Table 5). Table 5 separates students as continuing students and seniors as appropriate. Continuing students whose parents do not have an advanced educational level show more concern about paying for their current educational expenses and educational expenses for next year as well. As seniors, students are more concerned, when compared to students with parents who possess advanced educational levels, about both their current finances and also their accumulated educational debt. Students whose parents lack advanced education are making more changes in their financial savings behaviors and their lifestyle change behaviors. They also continue to exhibit more worry about their educational debt and are less likely to see their educational costs as manageable.

We also examine the relationships between minority status and financial concern variables within Table 6. Chen and Carroll (2005) found that students' race/ethnicity is related to first-generation status, as students of color make up 36 percent of first-generation students, but only 16 percent of continuing-generation students (Chen & Carroll, 2005). Therefore, first-generation students may have another hurdle set before them, that of color according to Lundberg et al. (2007) who indicated that on a predominantly white campus, these minority students may have to "cross multiple boundaries related to race/ethnicity and social class" and may, therefore, be "inhabiting

Table 5: Means and Standard Deviations of Financial Concern Variables by Advanced Parent Education (N=10,223)

| | Not Advanced Parent Education | Advanced Parent Education | F |
|---|---|---|---|
| Continuing students' current financial concern[1] | 3.98 (1.67) | 3.46 (1.75) | 97.32*** |
| Continuing students' concern about next year[1] | 4.29 (1.66) | 3.79 (1.79) | 88.83*** |
| Seniors' current concern[2] | 3.72 (1.82) | 3.24 (1.89) | 23.36*** |
| Seniors' accumulated debt concern[2] | 4.03 (1.92) | 3.34 (2.09) | 40.30*** |
| Financial Savings Behaviors | 2.11 (1.12) | 2.00 (1.07) | 11.93*** |
| Academic Change Behaviors | 2.93 (1.68) | 2.89 (1.70) | .55 |
| Lifestyle Change Behaviors | 1.61 (.73) | 1.50 (.69) | 19.14*** |
| Worry | 7.76 (3.06) | 6.84 (3.21) | 131.88*** |
| Manageability of costs | 3.56 (1.30) | 3.78 (1.29) | 42.19*** |

Levels of significance: * p<.05; ** p<.01; *** p<.001

[1] The first two variables within this table are for continuing students.

[2] The second two variables within this table are for students who are seniors.

Table 6: Means and Standard Deviations of Financial Concern Variables by Minority Status (N=10,223)

| | Majority Status | Minority Status | F |
|---|---|---|---|
| Continuing students' current financial concern[1] | 3.79 (1.71) | 3.92 (1.78) | 4.07* |
| Continuing students' concern about next year[1] | 4.11 (1.72) | 4.35 (1.70) | 16.11*** |
| Seniors' current concern[2] | 3.56 (1.87) | 3.78 (1.97) | 2.84 |
| Seniors' accumulated debt concern[2] | 3.75 (2.02) | 4.03 (2.05) | 4.17* |
| Financial Savings Behaviors | 2.07 (1.10) | 2.20 (1.20) | 12.23*** |
| Academic Change Behaviors | 2.88 (1.66) | 3.17 (1.83) | 28.47*** |
| Lifestyle Change Behaviors | 1.57 (.72) | 1.61 (.74) | 2.17 |
| Worry | 7.38 (3.14) | 8.15 (3.13) | 65.12*** |
| Manageability of costs | 3.64 (1.29) | 3.85 (1.36) | 29.42*** |

Levels of significance: * p<.05; ** p<.01; *** p<.001

[1] The first two variables within this table are for continuing students.

[2] The second two variables within this table are for students who are seniors.

intersecting sites of oppression, based on race, class, and ethnicity" (p. 60). According to Table 6, continuing minority status students are significantly more concerned about their current educational expenses and those for next year as well. If they are seniors, there was a significant relationship found between minority students and concern about accumulated debt. Minority students are also significantly more likely to make changes in two aspects of their financial behaviors when compared to majority status students—financial saving changes and academic changes. They are, however, more likely to say that costs are manageable.

According to Table 7, there are significant differences between traditional-aged students and non-traditional-aged students when it comes to financial concerns. Non-traditional-aged students, whether continuing students or seniors, are more concerned about all the financial aspects of their college education in comparison to traditional-aged students. They are more concerned about paying for their current and future educational expenses. They are also significantly more concerned about their accumulated educational debt. Non-traditional-aged students are more likely to make changes in their academic behavior and lifestyle behaviors. Non-traditional-aged students worry more and are less likely to see their costs as manageable.

Gender can also affect decisions students make. There are significant gender differences among both continuing students and senior as Table 8 shows. Female students show significantly more concern about current finances and next year's, when compared to male students. Senior females also indicate a greater concern about their current finances and their accumulated debt. Overall, female students showed more change in both financial savings and academic change behaviors when compared to their male counterparts. Female subjects are more worried, but are also more likely to see their costs as manageable, compared to male students.

Finally, financial dependency status also impacts students' financial considerations. Table 9 shows that when it comes to financial status, continuing students who indicated they are independent are more concerned about their current finances and those of next year. Dependent students who are seniors are more concerned than their independent counterparts about paying for their present educational expenses while independent students who are seniors are more concerned about accumulated debt. Furthermore, independent status students are significantly more likely to report making academic changes in behavior and lifestyle changes in behavior when compared to dependent students. Independent students are also more likely to indicate more worry about their finances and are less likely to see their costs as manageable.

**Analytical Findings**

The analytical results are based on regression analyses. Tables 10 through 12 are based on the responses of financially independent students while Tables 13 through 15 are based on responses of financially dependent students. Within tables 10 and 13, concern variables are analyzed separately for continuing students and for seniors. All but two of the 18 regression models are statistically significant at the .05 level or better.

Table 10 presents the standardized regressions of financial concern variables on first-generation status, academic status, and demographic variables for financially independent students. For continuing students, there were two statistically significant relationships found. Women are more concerned than men about next year's finances. Students who have completed more credits are more concerned about current finances

Table 7: Means and Standard Deviations of Financial Concern Variables by Age (N=10,223)

| | Traditional Status | Non-Traditional Status | F |
|---|---|---|---|
| Continuing students' current financial concern[1] | 3.79 (1.71) | 4.20 (1.78) | 40.25*** |
| Continuing students' concern about next year[1] | 4.14 (1.70) | 4.42 (1.78) | 18.76*** |
| Seniors' current concern[2] | 3.44 (1.87) | 4.09 (1.85) | 40.21*** |
| Seniors' accumulated debt concern[2] | 3.62 (2.04) | 4.27 (1.91) | 35.15*** |
| Financial Savings Behaviors | 2.09 (1.10) | 2.09 (1.18) | .00 |
| Academic Change Behaviors | 2.90 (1.66) | 3.10 (1.85) | 13.43*** |
| Lifestyle Change Behaviors | 1.52 (.70) | 1.73 (.79) | 64.30*** |
| Worry | 7.30 (3.14) | 8.22 (3.10) | 102.92*** |
| Manageability of costs | 3.72 (1.29) | 3.56 (1.34) | 18.50*** |

Levels of significance: * p<.05; ** p<.01; *** p<.001

[1] The first two variables within this table are for continuing students.

[2] The second two variables within this table are for students who are seniors.

Table 8: Means and Standard Deviations of Financial Concern Variables by Gender (N=10,223)

| | Male | Female | F |
|---|---|---|---|
| Continuing students' current financial concern[1] | 3.62<br>(1.77) | 4.00<br>(1.68) | 65.90*** |
| Continuing students' concern about next year[1] | 3.96<br>(1.76) | 4.31<br>(1.67) | 58.26*** |
| Seniors' current concern[2] | 3.40<br>(1.89) | 3.73<br>(1.87) | 12.48*** |
| Seniors' accumulated debt concern[2] | 3.58<br>(2.0) | 3.91<br>(2.04) | 11.22*** |
| Financial Savings Behaviors | 2.03<br>(1.16) | 2.12<br>(1.13) | 10.14***<br>. |
| Academic Change Behaviors | 2.75<br>(1.68) | 3.05<br>(1.70) | 49.53*** |
| Lifestyle Change Behaviors | 1.55<br>(.72) | 1.57<br>(.72) | 1.15 |
| Worry | 6.98<br>(1.17) | 7.77<br>(3.13) | 125.99 |
| Manageability of costs | 3.64<br>(1.28) | 3.76<br>(1.33) | 16.96*** |

Levels of significance: * p<.05; ** p<.01; *** p<.001

[1] The first two variables within this table are for continuing students.

[2] The second two variables within this table are for students who are seniors.

Table 9: Means and Standard Deviations of Financial Concern Variables by Financial Dependency Status (N=10,223)

| | Dependent | Independent | F |
|---|---|---|---|
| Continuing students' current financial concern[1] | 3.77 (1.71) | 4.24 (1.76) | 62.15*** |
| Continuing students' concern about next year[1] | 4.11 (1.70) | 4.48 (1.72) | 37.79*** |
| Seniors' current concern[2] | 4.44 (1.86) | 4.19 (1.87) | 47.56*** |
| Seniors' accumulated debt concern[2] | 3.64 (2.04) | 4.31 (1.92) | 32.58*** |
| Financial Savings Behaviors | 2.08 (1.11) | 2.14 (1.17) | 2.91 |
| Academic Change Behaviors | 2.88 (1.66) | 3.17 (1.85) | 31.11*** |
| Lifestyle Change Behaviors | 1.52 (.70) | 1.73 (.77) | 76.52*** |
| Worry | 7.29 (3.14) | 8.20 (3.09) | 107.55*** |
| Manageability of costs | 3.71 (1.28) | 3.61 (1.38) | 8.23* |

Levels of significance: * p<.05; ** p<.01; *** p<.001

[1] The first two variables within this table are for continuing students.

[2] The second two variables within this table are for students who are seniors.

Table 10: Standardized Regression Coefficients for Concern Variables for Financially Independent Students (N=1,567)

| | Continuing Students | | Seniors | |
|---|---|---|---|---|
| | Current Financial Concern | Concern About Next Year | Current Financial Concern | Accumulated Debt Concern |
| First-Generation | .22 | .016 | .030 | .056 |
| Ethnicity (Minority) | .010 | .034 | -.096 | -.068 |
| Age (Nontraditional) | -.049 | -.035 | -.029 | .023 |
| Gender (Female) | .078 | .089* | .068 | .091 |
| Cumulative Grade Point Average | -.046 | -.039 | -.021 | -.047 |
| Credits Completed | .125** | .144*** | -.103 | -.124 |
| UM Colleges: | | | | |
| Management | .048 | .022 | -.129 | -.239*** |
| Science and Engineering | .005 | -.039 | -.102 | -.086 |
| Natural Resources | -.017 | .026 | -.073 | -.127 |
| Design | .069 | .015 | .029 | .010 |
| Biological Sciences | -.024 | -.079* | .034 | -.002 |
| Education | .005 | -.004 | -.056 | -.079 |
| Health | .011 | .004 | -.057 | -.006 |
| Continuing Education | .039 | -.006 | -.101 | -.026 |
| Dentistry | .044 | ---- | .013 | .034 |
| Medicine | .051 | .043 | -.103 | -.054 |
| Nursing | .009 | .009 | -.056 | .015 |
| Undeclared | -.008 | -.025 | .038 | .033 |
| Lower Division | -.013 | -.009 | ---- | ---- |
| R Squared | .043 | .047* | .076 | .120** |

Levels of significance: *p<.05; **p<.01; ***p<.001

and next year's finances.  Compared to students in the College of Liberal Arts, students in the College of Biological Sciences are less concerned about next years' finances. Seniors in the School of Management are less concerned than those in the College of Liberal Arts about their accumulated debt.

Table 11 presents the standardized regressions of financially related behaviors on first-generation status, demographic variables, and University of Minnesota college enrollment for students who indicated they are financially independent. First-generation students are more likely to show lifestyle change behaviors. Older, non-traditional-aged students report making fewer financial-savings, academic changes, and lifestyle-change behaviors. Females were more likely to report making academic behavior changes and lifestyle behavior changes. Students with lower cumulative grade point averages reported making more academic and lifestyle change behaviors. Students with fewer course credits completed were more likely to be making academic changes in behaviors while students with more credits were more likely to be making fewer academic changes. Those in science and engineering, education, and continuing education are less likely than those in the liberal arts to make lifestyle change behaviors.

Table 12 presents the standardized regressions for financially independent students. First-generation and female students show more worry. Those with higher GPA's and those in management and science/engineering are less worried. Students with higher GPA's and those in management tend to see their costs as manageable, whereas those with more credits completed and those in nursing tend not to see them as manageable.

Table 11: Standardized Regression Coefficients for Behaviors of Financially Independent Students (N=1,567)

| | Financial Savings Behaviors | Academic Change Behaviors | Lifestyle Change Behaviors |
|---|---|---|---|
| First-Generation | -.038 | .030 | .059* |
| Ethnicity (Minority) | -.011 | -.017 | .004 |
| Age (Nontraditional) | -.149*** | -.086* | -.085** |
| Gender (Female) | .040 | .078* | .096** |
| Cumulative Grade Point Average | -.088 | -.085* | -.098** |
| Credits Completed | -.098 | -.092** | -.022 |
| UM Colleges: | | | |
| Management | .004 | .001 | -.022 |
| Science and Engineering | -.035 | -.051 | -.093** |
| Natural Resources | -.062 | -.019 | -.058 |
| Design | -.022 | -.030 | .025 |
| Biological Sciences | -.014 | .034 | -.003 |
| Education | -.023 | .038 | -.063* |
| Health | -.053 | -.061 | -.004 |
| Continuing Education | .005 | -.017 | -.061* |
| Dentistry | .012 | -.033 | -.028 |
| Medicine | .021 | -.040 | -.003 |
| Nursing | .001 | .000 | -.023 |
| Undeclared | -.006 | .004 | -.029 |
| Lower Division | -.072* | -.064 | -.042 |
| R Squared | .045** | .043** | .057*** |

Levels of significance: *p<.05; **p<.01; ***p<.001

Table 12: Standardized Regression Coefficients for Worry and Manageability of Costs for Financially Independent Students (N=1,567)

| | Worry | Manageability of Costs |
|---|---|---|
| First-Generation | .064* | -.003 |
| Ethnicity (Minority) | .023 | .013 |
| Nontraditional Age | .002 | .006 |
| Gender (Female) | .110*** | -.003 |
| Cumulative Grade Point Average | -.098** | .100*** |
| Credits Completed | -.014 | -.092** |
| UM Colleges: | | |
| Management | -.071* | .084** |
| Science and Engineering | -.099** | .047 |
| Natural Resources | -.044 | .040 |
| Design | .031 | -.023 |
| Biological Sciences | -.013 | .024 |
| Education | -.044 | .000 |
| Health | .019 | .001 |
| Continuing Education | -.011 | .046 |
| Dentistry | .021 | .012 |
| Medicine | -.022 | .010 |
| Nursing | .025 | -.066** |
| Undeclared | .006 | .027 |
| Lower Division | -.060 | .034 |
| R Squared | .058*** | .035** |

Levels of significance: * p<.05; ** p<.01; *** p<.001

Table 13 presents the standardized regressions of financial concern variables on first-generation status, academic status, and demographic variables for financially dependent students. The results for this group are quite different from those for financially independent students. Continuing first-generation students and female students are more concerned about both their current finances and those of next year while continuing students who are minority students, those with higher cumulative grade point averages, and those in the College of Science and Engineering are less concerned about their current finances and those of next year. When examining financially dependent seniors, we find that females are more concerned about their current finances and about their accumulated debt, whereas those with higher GPA's are less concerned about both. Seniors who are in the College of Design or the College of Education are more concerned about their accumulated debt and those in the College of Science and Engineering or the College of Nursing are less concerned about their accumulated debt than those in the College of Liberal Arts.

Table 14 presents the standardized regressions of behaviors for financially dependent students. First-generation students are more likely to make academic and lifestyle changes in behaviors. Female students are more likely to make changes in all areas of behavior—financial savings, academic, and lifestyle. Students with higher cumulative grade point averages were less likely to report making changes in any of the three behaviors while students who had completed more credits were more likely to make lifestyle change behaviors. Compared to their peers in the College of Liberal Arts, students in the College of Design were more likely to make financial savings behavior changes. Students in the College of Management and students in the College of Science

Table 13: Standardized Regression Coefficients for Financially Dependent Students (N=6,766)

| | Continuing Students | | Seniors | |
|---|---|---|---|---|
| | Current Financial Concern | Concern about next year | Seniors Current Concern | Accumulated Debt Concern |
| First-Generation | .057*** | .036* | .035 | -.006 |
| Ethnicity (Minority) | -.054*** | -.046** | -.054 | -.046 |
| Nontraditional Age | .009 | -.004 | .049 | .044 |
| Gender (Female) | .135*** | .122*** | .103*** | .080** |
| Cumulative Grade Point Average | -.067*** | -.057*** | -.140*** | -.162*** |
| Credits Completed | .001 | .001 | -.019 | -.033 |
| UM Colleges: | | | | |
| Management | .016 | .025 | -.020 | -.028 |
| Science and Engineering | -.066*** | -.066*** | -.039 | -.072* |
| Natural Resources | -.026 | -.023 | -.007 | -.024 |
| Design | .011 | .009 | .023 | .069* |
| Biological Sciences | -.033 | -.019 | .009 | -.012 |
| Education | -.004 | -.010 | .027 | .064* |
| Health | -.023 | -.016 | | |
| Continuing Education | -.004 | .011 | .007 | .032 |
| Dentistry | -.015 | -.005 | .063* | .051 |
| Medicine | -.009 | -.010 | .019 | .025 |
| Nursing | -.002 | -.005 | -.031 | -.055* |
| Undeclared | -.006 | -.006 | -.047 | -.044 |
| Lower Division | -.019 | -.007 | -.041 | -.045 |
| R Squared | .120*** | .116*** | .164*** | .179*** |

Levels of significance: * p<.05; ** p<.01; *** p<.001

Table 14: Standardized Regression Coefficients of Behaviors for Financially Dependent Students (N=6,766)

| | Financial Savings Behaviors | Academic Change Behaviors | Lifestyle Change Behaviors |
|---|---|---|---|
| First-Generation | .024 | .037* | .049*** |
| Ethnicity (Minority) | -.018 | .024 | -.003 |
| Nontraditional Age | .030 | .011 | .011 |
| Gender (Female) | .032* | .097*** | .082*** |
| Cumulative Grade Point Average | -.089*** | -.097*** | -.135*** |
| Credits Completed | -.003 | -.005 | .040* |
| UM Colleges: | | | |
| Management | -.051** | -.043** | -.062*** |
| Science and Engineering | -.060*** | -.099*** | -.077*** |
| Natural Resources | -.014 | -.006 | -.049*** |
| Design | .034* | -.021 | .014 |
| Biological Sciences | -.011 | -.005 | .010 |
| Education | .020 | -.026 | -.030* |
| Health | .024 | -.020 | -.006 |
| Continuing Education | .002 | -.009 | -.006 |
| Dentistry | -.003 | -.043** | -.010 |
| Medicine | -.023 | -.009 | -.007 |
| Nursing | .008 | -.047 | -.016 |
| Undeclared | -.015 | -.073*** | -.019 |
| Lower Division | -.035* | -.059*** | -.039** |
| R Squared | .034*** | .045*** | .094*** |

Levels of significance: * p<.05; ** p<.01; *** p<.001

and Engineering were less likely to make any behavior changes. Students in the College of Natural Resources were less likely to report making lifestyle changes in behavior while students in the College of Dentistry and students with undeclared majors were less likely to report making academic changes in behaviors. Lower-division students tended to make fewer changes in any of the behaviors examined.

Table 15 presents the standardized regressions of worry and manageability of costs for financially dependent students. First-generation students, non-traditional-aged students, and female students expressed more worry. Students with higher cumulative grade point averages, students who were enrolled in the College of Management, the College of Science and Engineering, the College of Natural Resources, or lower division courses expressed less worry. When looking at the manageability of costs, first-generation students, female students, and students with more credits completed were less likely to see costs as manageable. Minority students, students with higher cumulative grade point averages, students in the College of Management and students in the College of Science and Engineering tended to see their costs as manageable.

Table 15: Standardized Regression Coefficients of Manageability of Costs for Financially Dependent Students (N=6,766)

| | Worry | Manageability of Costs |
|---|---|---|
| First-Generation | .069*** | -.036** |
| Ethnicity (Minority) | -.014 | .055*** |
| Nontraditional Age | .042** | -.007 |
| Gender (Female) | .124*** | -.047** |
| Cumulative Grade Point Average | -.099*** | .124*** |
| Credits Completed | .008 | -.066*** |
| UM Colleges: | | |
| Management | -.037** | .066*** |
| Science and Engineering | -.109*** | .084*** |
| Natural Resources | -.030* | .024 |
| Design | .018 | -.027 |
| Biological Sciences | .000 | .013 |
| Education | -.020 | -.025 |
| Health | -.010 | -.011 |
| Continuing Education | -.010 | -.011 |
| Dentistry | -.004 | .009 |
| Medicine | -.009 | .022 |
| Nursing | -.014 | -.005 |
| Undeclared | .015 | -.024 |
| Lower Division | -.036* | .000 |
| R Squared | .166*** | .044*** |

Levels of significance: * p<.05; ** p<.01; *** p<.001

# CHAPTER FIVE
## Discussion

The relationship between first-generation college status and financial considerations among research-university students is important because making financial decisions and balancing life, college, and good choices is critical for every college student and every family who has a student in college. Every day, students are faced with decisions and are making decisions that impact far more than just that one day. Many of these students make the difficult decision to take a term off or even to leave college and never come back again. They are making choices about how to spend their money or not spend their money, whether to work or not, or perhaps even whether to add more hours of work.

What college students do when faced with a financial challenge is something that has not been examined at length in the literature. Authors such as Ishitani (2003, 2006), Pascarella et al. (2003, 2004, 2005), Strayhorn (2006), Hayes (2006), Marsh (2006), and others have explored data about college students, and some researchers have examined various aspects of parents' educational levels, student demographics, students' financial status, and academic considerations. Prior to this dissertation's research, however, it appears that no one has combined this group of independent variables and dependent variables in the way this study does and looked not only at students' financial concerns but also at what behaviors are impacted by their financial concerns.

The study was driven by the question, "What is the relationship between first-generation college student status and financial considerations among research-university students?" It explored the relationships between such variables as first-generation student status, parents' educational levels, student demographics, student's financial status, and academic considerations and the dependent variables of students' financial concerns including their level of student financial concerns associated with paying for college, students' behaviors, and the perceived manageability of college costs and the worry associated with those costs.

**Discussion**

Some, but not all, first-generation students are significantly more concerned about paying for their education. Continuing (that is, non-senior), financially-dependent students are more concerned about their finances, but other groups of first-generation students do not show greater concern than their peers who are non-first-generation. First-generation students are more likely to show lifestyle-change behaviors, and financially dependent, first-generation students show academic change behaviors. First-generation students are more worried and the financially dependent ones are less likely to see their costs as manageable.

Minority students who are not yet seniors and who are financially dependent are less likely than their majority peers to be concerned about current and future college expenses. Financially dependent minority students in general tend to see their costs as manageable.

Non-traditional-aged students who are financially independent are less likely to show changes in any of their behaviors including financial savings, academic change, or lifestyle-change behaviors. Non-traditional-aged, financially-dependent students show greater worry about their college expenses.

Continuing, financially-independent females are significantly more concerned than their male peers about their finances for next year. Financially independent women are more likely to have changes in their academic and lifestyle change behaviors. In addition, overall, females who are financially independent are more likely to express worry about the costs of college. Financially dependent women (both continuing female students and female seniors) are significantly concerned about all aspects of their finances including current finances, next year's finances, and accumulated debt. Furthermore, financially dependent females are also more likely to report changes in all aspects of their behaviors including financial, academic, and lifestyle behaviors, and they are significantly more worried about college costs and less convinced of the manageability of those costs.

As we look at the overall patterns of the research regarding financially independent first-generation students, we find that they indicated being more likely to have made changes in their lifestyle behaviors and also expressed more worry than their non-first-generation, financially-independent counterparts. Financially dependent females who were continuing students were more likely to express concern about next year's expenses and also were more likely to have made changes in their academic and lifestyle behaviors while also expressing more worry about their overall college expenses.

Where the contribution of this study becomes very apparent, however, is in the patterns found among financially dependent students. Here we see that first-generation continuing students were more concerned about their current expenses as well as those of next year. We also see that financially dependent, first-generation students were more likely to have reported making changes in their academic and lifestyle behaviors while also expressing more worry about their overall expenses and indicating that they did not see their overall college expenses as manageable. Significant findings within this study were also of concern regarding financially dependent females. Female subjects, whether continuing or senior, were more likely to express concern about their current expenses, express concern about their expenses for next year, and, as seniors, express concern about their overall accumulated debt. Financially dependent female subjects also showed that they were making more changes in all aspects of their behavior — financial, academic, and lifestyle — as well as expressing more worry about their overall college costs and tending not to see their college costs as manageable.

**Implications for Practice**

The current published literature on first-generation students has not focused on ways in which first-generation students and college students in general react to financial concerns. This is an important aspect for colleges to consider, because, once these student responses to financial concerns become more clearly defined, colleges can begin to help guide students' decision- making processes. Part of this guidance of the student decision-making process could certainly take place in open seminar-type learning experiences where students might hear how more experienced students made financial decisions that were either healthy or unhealthy for their financial futures. By hearing, first hand, about the good and bad financial decision-making of other college students, current students experiencing financial concerns could begin to see a way of weighing their decisions to ensure that they do not have to quit college or take a semester or two off in order to handle financial challenges. This becomes a win-win situation where students maker smarter choices for their financial situation and make choices that will allow them to stay in college and complete their higher education.

In addition, based upon the large number of significant findings regarding financially dependent first-generation students and financially dependent female students, the University of Minnesota should strongly consider focusing additional attention on these two groups of students. It is evident from the results of this study that financially dependent first-generation students are more concerned as continuing students about their current college expenses as well as those for next year. In addition, first-generation students within this study also indicated that they are more likely to make changes in two of the three categories of behaviors and activities — academic changes and lifestyle changes. This finding, along with those that show that first-generation students expressed more worry about their current college finances and also indicated they did not see their overall college costs as manageable, creates the perfect storm for these students. If the university does not pay more attention to financially dependent first-generation students and their financial concerns, these students could end up no longer enrolling for college classes.

The same can be said for financially dependent female students enrolled at the University of Minnesota. The results of the study indicate that financially dependent female students, whether continuing students or seniors, were more likely to be concerned about all aspects of their finances including their current college expenses, expenses for next year, and overall accumulated college debt. In addition, female subjects indicated that they were more likely to have made changes in all aspects of their behaviors to meet college expenses including their financial savings, academic, and lifestyle change behaviors. Further, these individuals expressed more worry about their overall college expenses and, like financially dependent, first-generation students, tended to not see their college expenses as manageable. This group of female students is also at great risk of being lost to the University of Minnesota if they are not given some additional attention.

**Limitations**

This study is subject to limitations. The most obvious limitation is that the data used in this study was derived from only one institution. A majority of the information used within this study was also self-reported by the subjects who completed the survey and therefore subject to the limitation of self-reporting. The study was also limited by the snapshot in time of these students. In addition, this study involved a secondary data analysis, which meant that the information used in the study was provided by an already completed survey rather than an instrument created by the researcher.

**Directions for Future Research**

The most promising direction would be to replicate this study, focusing on behaviors, activities, and financial considerations, at other colleges. One could take the variables used in this study and use the Student Experience at the Research University data from another similar institution and replicate the study.

A second direction for future research would be to delve further into the decisions about activities and behaviors that students make. One could analyze the decisions that allow the student to continue on with their college education and those that lead to a college departure. This would be a valuable research study to pursue, because it would add a look at retention along with examining finances and student activities and behaviors.

A third direction for future research would be to replicate some aspects of this study using a different type of student body. For example, looking at the financial concerns and the decision-making of students in community colleges using similar surveys could make inroads in another level of higher education. Since many students begin, and end, their college educational careers in community colleges, looking at the financial concerns and decision- making of community college students could well create a situation where community colleges and universities could work collectively to increase retention and transfer.

**Conclusion**

To close, we return to Sally, the first-generation college student mentioned in Chapter 1. Sally, if you recall, was challenged by her college financial situation and was trying to determine her options for remaining in college and not moving back into her parents' home or affecting their financial situation further. We can now see that Sally possesses many of the characteristics that were present in the research study subjects. As a first-generation, continuing, dependent student, she expressed concern about her current financial situation and her financial situation for the upcoming academic year. As a female student, like the female research study subjects, her financial concerns encompass all aspects of her financial picture

Based upon the information gathered in this research study, if we asked Sally if she was concerned about her current financial situation as it relates to college, we would likely hear that she was. If we asked her what she was doing about her situation in regards to financial, academic, and lifestyle behavior changes, we would probably learn that she is making changes in all these areas, just like the first-generation student subjects in this study.

Let's assume that we were members of a college community that had been aiming to assist college students in making smart decisions that would allow them to be in school. Sally might show up as a student who is experiencing financial concerns. We could reach out to her and help her to work through her financial concerns, potentially helping her to identify funding sources for her college expenses. We could help her get an on-campus work-study job that would help her to be more involved in the campus while also bringing in some much needed money. We could also help her to make good, academically-focused, financial decisions that would allow her to stay in college while still meeting her need of feeling more financially secure and not turning to her parents any more than necessary for financial support. With our assistance, Sally could become the pride of a college campus—a successful college graduate.

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Appendix A: Letter of Approval to use Dataset

Ronald Huesman Jr <huesm003@umn.edu> 4/27/11

to me

Hi Judy, been extremely busy so I apologize for how long it is taking to get back to you. Will this language suffice for the IRB?

As the University of Minnesota SERU project coordinator I can grant you access to these survey data and associated supplemental data. I will provide you with a de-identified SPSS data file with the requested survey items and items needed to operationalize study variables (ie. first generation), plus associated UM fields as described in your variable description document from 4/22/11. The data will be from the 2009 U of M SERU administration which occurred during the spring of 2009.

No attempt will be made to determine invidual student identities from the data provided and all results will be reported in the aggregate. Do you agree?

The SERU was administered to 21,325 degree seeking undergraduates on the Twin Cities campus spring 2009.

5,872 responded (3,463 female, 2,408 male, 1 unknown)

28% response rate.

Hope this helps. Ron.

On Wed, Apr 27, 2011 at 2:25 PM, <shult004@umn.edu> wrote:
Ron,

Just wanted to be sure you had received my earlier emails about my doctoral study? I haven't heard back from you, so I wasn't sure if maybe they hadn't been received?

I am in a holding pattern until I receive your responses and, of course, you willing agreement to provide me with a data set.

Hope your week is going well. My guess is you are massively busy!

Judy Shultz

Appendix B: IRB Approval Letter

The IRB: Human Subjects Committee determined that the referenced study is exempt from review under federal guidelines 45 CFR Part 46.101(b) category #4 EXISTING DATA; RECORDS REVIEW; PATHOLOGICAL SPECIMENS.

**Study Number:** 1105E99015

**Principal Investigator:** Judith Shultz

**Title(s):**
First Generation College Students and Financial Concerns

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This e-mail confirmation is your official University of Minnesota RSPP notification of exemption from full committee review. You will not receive a hard copy or letter. This secure electronic notification between password protected authentications has been deemed by the University of Minnesota to constitute a legal signature.

The study number above is assigned to your research. That number and the title of your study must be used in all communication with the IRB office.

If you requested a waiver of HIPAA Authorization and received this e-mail, the waiver was granted. Please note that under a waiver of the HIPAA Authorization, the HIPAA regulation [164.528] states that the subject has the right to request and receive an accounting of Disclosures of PHI made by the covered entity in the six years prior to the date on which the accounting is requested.

If you are accessing a limited Data Set and received this email, receipt of the Data Use Agreement is acknowledged.

This exemption is valid for five years from the date of this correspondence and will be filed inactive at that time. You will receive a notification prior to inactivation. If this research will extend beyond five years, you must submit a new application to the IRB before the study's expiration date.

Upon receipt of this email, you may begin your research. If you have questions, please call the IRB office at (612) 626-5654.

You may go to the View Completed section of eResearch Central at http://eresearch.umn.edu/ to view further details on your study.

The IRB wishes you success with this research.

We have created a short survey that will only take a couple of minutes to complete. The questions are basic, but will give us guidance on what areas are showing improvement and what areas we need to focus on:
https//umsurvey.umn.edu/index.php?sid=94693&lang=um