

DISSERTATION

PERSONAL AND SOCIETAL FACTORS ASSOCIATED TO STUDENT DEBT LEVELS

Submitted by

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## ABSTRACT

### PERSONAL AND SOCIETAL FACTORS ASSOCIATED TO STUDENT DEBT LEVELS

The purpose of this quantitative study was to explore the factors associated with the debt accumulation of students who are currently enrolled in graduate school at a public research university in the Rocky Mountain region of the United States. Factors were examined through the following four key research questions: (a) How much self-reported debt do graduate students accumulate during their undergraduate education? (b) What financial decision making factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students? (c) What life impacting factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students? and (d) What key demographic factors are associated with total undergraduate debt accumulation?

A 17-question on-line survey, was administered to 3,852 students. The survey included demographic information and the following: overall debt, federal student loan debt, and credit card debt levels. To investigate whether low, medium, and high debt levels differ with attitudes towards using credit cards, federal loans, private loans, and loans for nonacademic expenses, individual Chi-Square tests were conducted. The research discovered that there was a relationship between attitudes towards: using credit cards ( $\chi^2=163.420$ ,  $df=8$ ,  $N=772$ ,  $p < .001$ ), federal loans ( $\chi^2=290.741$ ,  $df=8$ ,  $N=772$ ,  $p < .001$ ), and loans for nonacademic purposes ( $\chi^2=163.420$ ,  $df=8$ ,  $N=772$ ,  $p < .001$ ) with overall debt levels. In addition, a relationship between debt level and academic major ( $\chi^2=21.447$ ,  $df=10$ ,  $N=772$ ,  $p < .018$ ), and a relationship between debt level and age ( $\chi^2=22.699$ ,  $df=2$ ,  $N=772$ ,  $p < .001$ ), was also discovered. Multiple regression was conducted and the data analyzed indicated that there were three main factors

associated to college debt levels, 17(1; Tuition and college cost), 17(5; Lack of support from my family) and 17(10; Not having good financial /money management skills). The combination of these variables to predict total debt was statistically significant,  $F(3,709) = 40.20, p < .001$ .

Results of the current study contribute to the previous literature on student debt.

Recommendations for future research and survey modifications were discussed.

*Keywords:* student debt, federal loans, credit cards

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## DEDICATION

Be Strong and Flexible Like Bamboo. Dr. Judy Sakaki who was my mentor at the 2009: Alice B. Manicur NASPA conference presented this topic to our group of amazing women. I was a new, overwhelmed single mom of three beautiful boys under the age of 5. Realizing I would need to provide for them is how this doctoral journey started. This is dedicated to all the mothers out there, including my mom Cathy, who stood by me in this journey and reminded me daily I was strong! Mothers have a way of managing life like none other, the trick is in the flexibility. My mother has many gifts, however her innate generosity was the life lesson I learned, and that I believe enabled me to accomplish this goal. My mom taught me to be generous and through my life I have tried to role model that behavior. That generosity I have exhibited came back to me in many forms over the past four years- it took a village to help me get this done!

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## CHAPTER 1: INTRODUCTION

One of the most critical issues affecting the American higher education system is the rising cost of college. Average tuition and fees have increased faster than inflation, per capita family income, consumer prices, and even health insurance (Wellman, 2007). According to a report from the Project on Student Debt (2011), two-thirds of the class of 2011 held student loans upon graduation, and the average borrower owed \$26,600. That is up 5% from 2010, and is the highest level of debt in the seven years the report has been published (Project on Student Debt, 2011). Although, student financial aid—particularly grant aid—has also increased during this period, and new forms of financial aid—such as income tax credits—have been introduced, the additional monies have not kept up with tuition increases. The erosion of state funding, the increased institutional expenditures, the drive for institutional prestige, and a decline in the purchasing power of student aid are all symptoms of the affordability crisis (McDonough & Calderone, 2006).

In the present economy, many undergraduate students are choosing to enter graduate school immediately after completing their undergraduate degree. The increasing graduate school rates are due to a combination of factors: the decline in available jobs, higher salary expectations of recent graduates, and the need to defer the undergraduate loan repayment process (Burdman, 2005). Enrollment in graduate programs is also aiding the increasing debt levels for today's students. The addition of graduate loans onto potentially high undergraduate loans is increasing debt levels in a community that is highly educated, but struggling financially.

Much debate has occurred about the topic of the college premium (the difference between the earnings of college graduates and high school graduates). According to Kezar (2009), wages

for recent college graduates have declined about 5%, but wages for those without a college degree have declined more than twice that, between 10 and 12%, increasing the college premium. Furthermore, the proportion of recent graduates who have received jobs coming out of college has been virtually unchanged since before the recession in 2008. In contrast, the employment rate for high school graduates and associate-degree holders has dropped by 8 to 10%. Similarly, throughout the recent recession, the overall unemployment rate for bachelor's degree holders has consistently been half that of noncollege graduates (Kezar, 2009, p. 40).

Traditionally, college retention programs have focused on more academic obstacles than financial obstacles. Thirty-nine percent of student borrowers now graduate with unmanageable levels of debt, meaning that their monthly payments are more than 8% of their monthly incomes. According to new data from the Department of Education's National Postsecondary Student Aid Study (NPSAS) not only are the majority of students turning to loans to finance college, but debt levels are also escalating (Baum & Ma, 2013).

Some possible explanations exist for increases in student borrowing. First, the strength of the Pell grant has declined from covering 84% of tuition at a four-year public institution in 1975-76 to 39% today (Baum & Payea, 2011). While Congress has increased funding in recent years, the Pell grant maximum has not kept up with inflation and rising tuition costs. As a result, low-income students are forced to borrow to cover that unmet need. Second, wealthy families may be shifting more of the cost of college from savings to student loans. Also, as tuition increases faster than inflation and median income, students overall are facing increasing levels of need (Project on Student Debt, 2011).

## **Purpose**

This research investigated the amount of debt accumulated by college students (during their undergraduate career) at a large public research university, and examined what personal and societal factors contributed to the levels of reported debt. The following factors were examined: gender, age, racial/ethnicity background, academic major, time to degree completion, cumulative undergraduate GPA, combined parent/guardian education level, parent/guardian socioeconomic level, and parent/guardian income level.

## **Significance**

The majority of existing research on college debt levels focuses on the physical and emotional consequences of financial burdens, and the various delivery methods being offered to combat the indebtedness (Adams & Moore, 2007; Grable & Joo, 2006; Norvilitis & MacLean, 2009). While there are numerous studies focusing on student loans and persistence/retention rates, the literature on specific factors contributing to the higher levels of student debt is less prevalent.

This research will assist a multitude of stakeholders. First, it will specifically help financial aid administrators, bursars, and campus budget officers who are directly working with students on college and university campuses. This study will enable key stakeholders to identify specific factors related to financially at-risk students. Stakeholders being armed with this valuable knowledge will be able to prevent the onset of higher debt levels with students who are financially at risk. Secondly, it may also aid state and federal governmental policy researchers in discovering viable solutions that will enable policies to be developed to ensure future college students graduate with manageable debt levels. Such policies may then enable graduates to be independent, productive, and financially secure citizens. Lastly and most importantly, this

research may help students. Developing a composite of the type of student who is incurring debt may enable educators to help guide those at-risk students into making more informed decisions regarding borrowing for college. Identification of specific factors may in turn help to develop programs and services to help support those students so that they do not get so far into debt.

### **Constructs and Research Questions**

The construct that was explored is the level of debt accumulation, and the factors that have contributed to that debt level. This study asked current graduate students to report on the following three main areas of debt during their undergraduate career: (a) Approximate amount of total debt from their undergraduate experience (student loans, car loans, credit cards and all other debt); (b) approximate amount of student loan debt during their undergraduate career; and (c) approximate amount of credit card debt obtained during their undergraduate career.

Factors that will be explored as contributors to the debt levels included: age, gender, race/ethnicity, academic major, degree completion time frame, cumulative undergraduate GPA, combined parent/guardian education level, perceived socioeconomic status, and parental financial/income level.

The four key research questions for this study are:

1. How much self-reported debt do graduate students accumulate during their undergraduate education?
2. What financial decision making factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?
3. What life impacting factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?

4. What key demographic factors are associated with total undergraduate debt accumulation?

In 2007-08, NPSAS (National Post- Secondary Aid Survey) surveyed 114,000 undergraduate students. Excessive debt was defined as cumulative federal and private education loan debt greater than or equal to \$40,000 for graduating seniors at four-year institutions. For purposes of this research, the threshold amount of all federal debt over \$40,000.00 will be used as the benchmark for higher than average debt levels (Baum & Ma 2013).

## **Definitions**

There are many terms associated with the borrowing of money for college. The terms below were defined by the Project on Student Debt (2011):

**Credit Cards:** A card issued by banks, businesses, enabling the holder to obtain goods and services on credit.

**Debt:** Something that is owed or that one is bound to pay or perform for another. A liability or obligation to pay or render something. For purposes of this research, debt is defined as the amount of money owed as the result of borrowing federal student loans, or other loans (i.e. car loans, personal loans, educational loans financed through nonfederal sources, and noneducational loans.) and money owed as a result of credit card usage.

**Federal Loans:** Loans guaranteed by the U.S. government.

**Subsidized Loans:** A loan on which the government pays the interest for a student while enrolled in school at least half-time and during periods of grace and deferment (i.e. Subsidized Federal Stafford Loan).

**Unsubsidized Loans:** A loan on which the borrower is always responsible for paying the interest on the loan, while in-school, during deferment, forbearance, and grace periods. (i.e., Unsubsidized Federal Stafford Loan or Federal PLUS Loan).

**Federal Parent Loan for Undergraduate Students (PLUS):** Loans under the FFEL program for parents of dependent undergraduate students. They require a credit evaluation. The interest rate is low and repayment begins 60 days from the date of first disbursement of funds to the school.

**Federal Pell Grant:** One of the largest sources of grants, Pell Grants are distributed by the federal government and designed to help students with financial need pay for college.

**Federal Perkins Loan:** A campus-based, low-interest loan for graduate and undergraduate students. The college acts as the lender using a limited pool of funds provided by the federal government. These loans are awarded based on exceptional financial need.

**Federal Stafford Loan:** A loan under the FFEL program awarded on the basis of financial need. Stafford loans may be subsidized or unsubsidized. Stafford loans can be originated by a bank, credit union, or other eligible lender, or obtained directly from the government under the Federal Direct Lending Program.

**Financial Aid Package:** The total amount of monetary assistance available to the student, including all grants, scholarships, work-study, and loans available from school, state, and federal programs, as listed in a college's financial aid award letter. It does not include alternative, non-federally guaranteed loans.

**Grant:** A form of financial aid, similar to a scholarship, which does not have to be repaid.

**Interest:** The fee charged to borrow money, usually a percentage of the outstanding principal balance, which accrues and is paid over the life of the loan.

**Private loans:** Loans that exist outside of the federal student loan system and are not guaranteed by the federal government. These loans may be provided by banks, nonprofit agencies, or other financial institutions.

**Scholarship:** Like grants, scholarships are a form of financial aid that is not repaid. These are available from many sources including community groups, schools and private corporations. Scholarships can be awarded based on a variety of criteria including scholastic achievement, hobbies and college majors.

### **Limitations and Delimitations**

The convenience sample of graduate students from one public research university delimited the interpretations of debt levels. As a result, the types of students in the study may limit the generalizability of the results of the study to students at other institutions; because generalization to other university/college populations would be inappropriate. The results will be limited to their experiences alone and this study does not attempt to generalize to the greater population. In addition, the results of this study pertain to graduate students, excluding those in pre-professional programs (i.e. medical, dental, and veterinary sciences).

Lastly, the graduate students surveyed are self-reporting debt levels. The reported debt levels may not be accurately reported due to participant error or embarrassment of debt levels. In addition, the debt levels these graduate students reported do not take into account any students who may have transferred, or stopped at any time prior to receiving their undergraduate degree. These unexamined populations further limit the ability to generalize the results to the whole population.

## **Researcher's Perspective**

A big push exists at the high school and college level to provide financial literacy programs for students. The understanding is that these packaged programs will provide the remedy needed for students to properly manage debt upon graduation. What is not being looked at are the specific factors causing certain students to exceed the national median debt level, which is now between \$24,000 and \$26,600. Recent financial aid literature speaks of the earning-to-debt ratio intermittently being taught to undergraduate students. That literature indicates a student should not graduate with more debt than they will earn in their first year of employment (i.e., if they are going to be a teacher and earn \$35,000 their first year out they should not exceed \$35,000.00 in undergraduate debt). Ohio State University has developed a link to a page about debt management on its student loan website. This link recommends loan payments of less than 5% of salary. The site [www.planningyourfuture.org](http://www.planningyourfuture.org), which is sponsored by various student loan agencies, suggests 8 to 15% of students' first-year gross income.

I was a first-generational student frequently struggling each semester to afford college. I recall each semester having to place a red sticker of deferment on my student ID card. This sticker served as the indicator that I was approved to register for classes; however, student loans had not posted and the bursar balance was still not paid in full for that semester. This scarlet deferment sticker embarrassed and forced me to learn how to negotiate the financial aid system. I learned how to communicate with financial aid and how to get loans posted so that the bursars office would also see that the money had arrived. This was long before the days of one-stop shops for student billing. Recalling the semesters where I was \$500 short and struggling to remain in school has given me the passion and first-hand knowledge about this subject to help other students.

I currently work in higher education, but frequently meet with students who are financially at-risk for dropping out of school. The difference today is that the cost of college has skyrocketed and the amount of money necessary to attend is unattainable for most students. My interest in the financial awareness skills for college students started 12 years ago when I developed a real-life series for graduating seniors. Quickly, I realized that programmatic efforts became focused on money and how they were going to survive living in the world while managing their college debt. I then began my doctoral journey and felt passionate about the subject of student debt. My research brought forth the question: how are institutions truly able to develop programs to combat this surging issue? My research then led me to believe that finding what specific factors (personal and societal) have in the past and are currently associated to this increase in debt must first be determined prior to the execution of any program.

## CHAPTER 2: REVIEW OF LITERATURE

The purpose of this research was to identify factors, both personal and societal, that are associated to the accumulation of debt among college students. The literature reviewed primarily focused on material that provided additional information on college student debt in the United States. For the purposes of conducting a comprehensive review, the following areas have been identified: role of the family, financial socialization, credit cards, student loans, loan default rates, private loans, socioeconomic status, gender, age, and academic major.

### **Role of the Family**

Families, specifically parents, provide support to college students in many aspects of their educational journey. Students have specifically reported that their parents influence their money management behaviors (Heckman & Grable, 2011). Thus, this implication indicates the need for more educational resources for parents if they are such an influential factor in the development of financial knowledge. Early financial socialization provided by parents, and the opportunity for students to model parents' behaviors, provide social learning opportunities that can potentially outweigh negative messages provided by other socialization agents (Moore, Raymond, Mittelstaedt, & Tanner, 2002).

Previous socialization theories have considered how students acquire personal finance and credit knowledge. Pinto, Parente, and Mansfield (2005) found that one of the most important factors regarding college students and their financial habits were their socialization agents, or the significant people, groups, and institutions that shape their sense of self and social identity. These same agents help them to realize their human capacities, and teach them to negotiate the world in which they live (p. 362). A few years prior, the same authors used a sample of 1,244

students to analyze credit card habits and purchase patterns of college students, differentiating those that were considered financially at-risk (FAR) from those who were not financially at-risk (NFAR). Results of a series of independent sample *t*-tests suggested that FAR students used their cards with greater frequency for a variety of different purchases (both necessities and nonnecessities). FAR students also engaged in less responsible behaviors based on a measure of credit card use.

The literature revealed that the amount of credit card information and education given by parents is greater than any other socialization agent. Mothers and fathers are the two most important sources of influence on college students' money beliefs and attitudes. There is a correlation between the amount of credit card information learned from parents and student credit card use. Students who had a lower credit card balance were more likely to be educated by their parents about proper spending and credit debt (Mansfield, Pinto, & Parente, 2003; Pinto et al., 2005).

Parents, peers, mass media, and schools are all socialization agents that influence the psychological, emotional, and behavioral development of college students. Gronhoj (2007) further defined the term *consumer socialization*, which refers to the process during childhood and adolescence in which young people learn the functional and social aspects of consuming goods while interacting with those close to them, such as family and friends. Additional research has shown that money decisions are largely framed in accordance with important points of reference such as family, friends, and membership in various status groups (Heckman & Grable, 2011). How we spend our leisure time, and the ways in which one decides to save money are arguably patterned after familial habits and subjective understandings of what is “worthwhile,

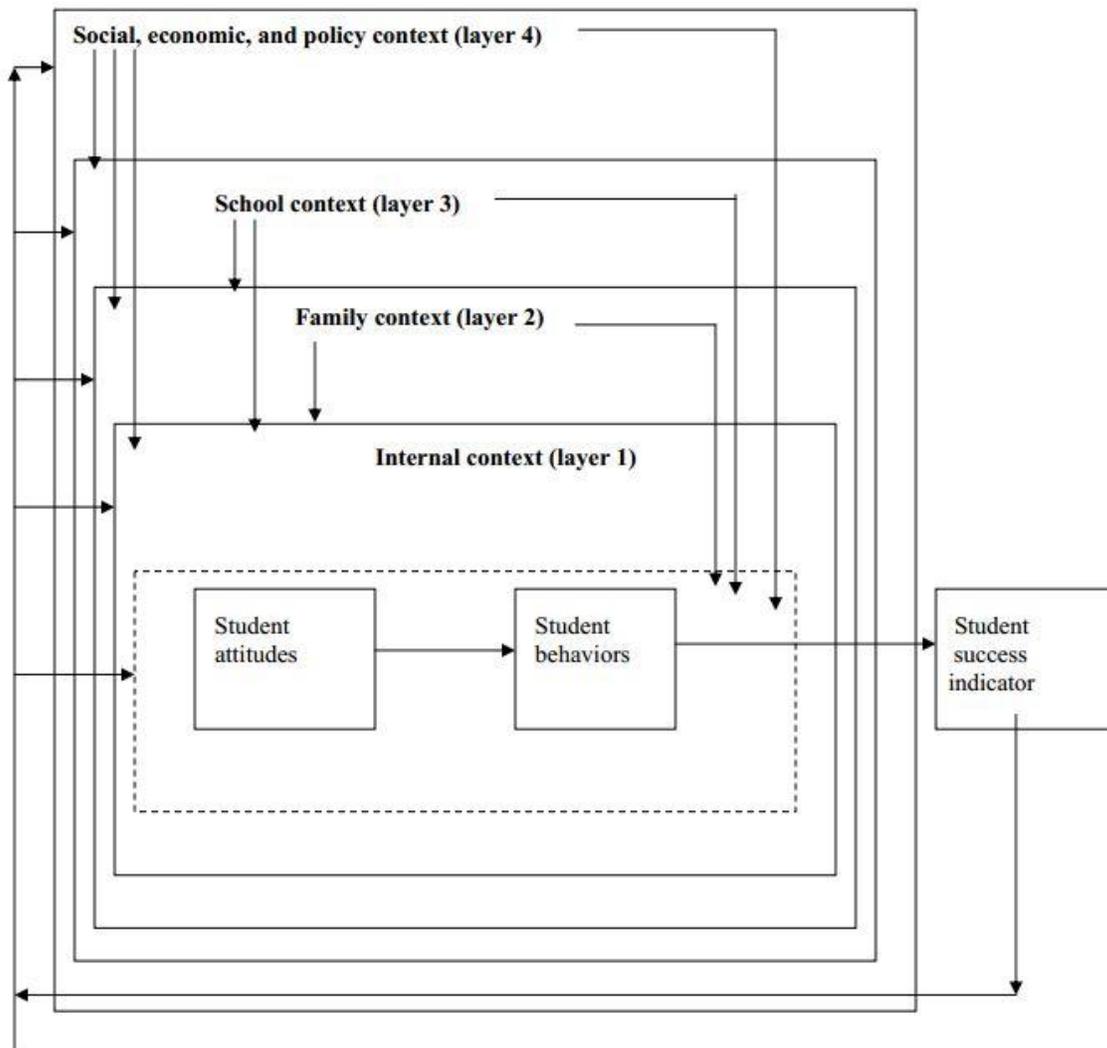
useful, or appropriate” given class standing or individual circumstance (McDonough & Calderone, 2006).

Hira (1997) examined the gender differences in consumer socialization among college students. The sample comprised 2,430 students in six public and five private universities. The researcher identified family, in general, and mothers and fathers, in particular, as the most important influences on the financial attitudes and beliefs of respondents. This suggests that young people learn their symbolic meanings of money from their parents and other family members. The same study established that parents pass down money values to their children through direct and indirect messages. Among younger respondents, the proportion of respondents that indicated parents or family members as a strong influence was higher than among older respondents. Friends were also an important influence, but only among the younger age groups.

Concerns about parental role modeling, with regards to financial literacy and money management, have surfaced over the past decade with the rise in consumer spending, debt, and the increased borrowing required to afford college (Lusardi & Mitchell, 2008; Rosacker, Ragothaman & Gillispie, 2009). Families may not have the financial knowledge to share with their children, or there may be disconnects between available information and knowledge of college pricing and financial aid.

According to Perna (2006), while exploring the working patterns and financial knowledge of approximately 2,300 undergraduate students and their parents at the University of Pennsylvania, she found that levels of awareness and understanding of college prices and financial aid appeared to be particularly low among Latino and Black parents (p. 1621). It appears that making financial information “available” to families is insufficient. Policy makers

must ensure that information is not just available, but is also accessible and relevant to individuals of different groups (Perna, 2006, p. 1626). With this research, Perna (2006) also proposed a multilevel conceptual model (based on multiple theoretical perspectives) that has been useful for understanding the acquisition and use of information about college prices and financial aid.



**Figure 1: Perna’s Conceptual Model.**

According to Norvilitis and MacLean (2009), parental hands-on mentoring of financial skills (i.e., delayed gratification) significantly resulted in lower levels of credit card debt. There

was an expectation that the parental role modeling would be much stronger for younger adolescents who live at home and are financially dependent on their families; however several studies have identified that college students still seek extensive guidance and support from their families as it pertains to financial matters (Callender & Jackson, 2005; Moore et al., 2002; Serido, Shim, Mishra, & Tang, 2010).

### **Financial Socialization**

Literature about the financial socialization of children or the transfer of financial attitudes, values, standards, or behaviors within the context of the family is scarce. Much of the research that does exist comes out of consumer socialization literature. The conceptual definition that is referred to most often is from Ward (1974), which states that consumer socialization is the “process by which young people acquire skills, knowledge, and attitudes relevant to their effective functioning as consumers in the marketplace” (p. 2). Some researchers have extended that definition to include acquiring and developing values, attitudes, norms, skills, behaviors, motives, and knowledge related to consumption and family financial management (Rettig & Mortenson, 1986). However, financial socialization is much more inclusive than learning to effectively function in the marketplace. It is the process of acquiring and developing values, attitudes, standards, norms, knowledge, and behaviors that contribute to the financial viability and well-being of the individual (Serido et al., 2010).

Shim, Barber, Card, Xiao, and Serido (2009) developed the Student Financial Well-Being Model based on their belief that markers of adulthood contain certain qualities of self-sufficiency including: autonomous decision making, taking responsibility for one’s actions, and becoming financially independent. Their model was based from studying 2,098 first-year students at a major state university. They found that college students with stronger intentions to

perform positive financial behaviors and who reported higher levels of perceived control over their personal finances were more satisfied with their financial status and less likely to incur debt. This initial research was later advanced through a cross-sectional study focusing on the socialization occurring from adolescence to young adults' current financial attitude (Shim, Xiao, Barber, & Lyons, 2009). Structural equation modeling indicated that parents, work and high school financial education during adolescence predicted young adults' current financial learning, attitude and behavior, with the role played by parents substantially greater than the role played by work experience and high school financial education combined (Shim, Xiao et al., 2009).

### **Credit Cards**

Without sufficient financial awareness and basic spending control, young adults become highly vulnerable to impulse spending and overconsumption. Students, along with their families, have been seduced by the pervasive messages of consumerism and materialism touted in the media (Robb & Sharp, 2009). One reaction to keeping up with consumerism is the increased use of credit cards amongst college students (Wang & Xiao, 2009).

In the late 1990s, credit card companies started targeting college students in an effort to expand market share. Students were encouraged to become credit card customers through direct mail promotions, on and off campus advertising, and on-campus recruitment (O'Connell, 1994; Susswein, 1995). Numerous researchers have documented the rapid expansion of credit card ownership and use on college campuses from the late 1980s through the 1990s (Adams & Moore, 2007; Kara, Kaynak, & Kucukemiroglu, 1994; Manning & Kirshak, 2005). In 2009, lawmakers confronted credit card issuers for inappropriately marketing to students. The new Credit Card Accountability and Disclosure Act, signed by President Obama, included specific measures to protect young adults from credit card misuse (Detweiler, 2009). This new law stated

that any person applying for a credit card under 21 must have an older adult co-sign the application (Robb & Sharp, 2009).

Xiao, Tang, Serido, and Shim (2011), discovered that parents significantly influence their children's financial behavior and wellbeing. They found parents who have less financial resources and limited knowledge may have children who engage in risky credit card behavior and turn to risky sources to fund their college education. The knowledge of parental influence on finances further supports the new credit card law requiring under 21-year-olds to have a parental co-signer.

Many students decide to continue their education past their undergraduate degree for financial reasons or unemployment. This increase in debt level comes from rising costs in graduate education and living expenses. A study released by Sallie Mae and Gallup (2009) stated:

The higher the grade level, the greater the credit card debt. In 2008, college seniors with at least one credit card graduated with an average of \$4,138 in card debt, up 44% from 2004. By comparison, freshmen's average credit card debt jumped 27% to \$2,038. (p. 12)

Further, one in four graduate students with credit cards in 2003 had balances between \$6,000 and \$15,000, and 15% had a balance over \$15,000 (Nellie Mae, 2007).

The effect of negative credit card behaviors was examined for association with other forms of consumer debt (automobile debt, installment debt, and personal loan debt). Results indicated that despite controlling for income, not paying off the monthly balance and reaching the maximum limit on credit cards were associated with a variety of other debts (Hillman, 2014). Although consumers can increase lifetime utility by borrowing, less-educated consumers are more vulnerable to less favorable sources of credit. Negative credit card behaviors can be easily identifiable signals of larger, lurking issues related to consumer behavior or lack of financial

literacy (Hillman, 2014). Controlling for income, younger adults accrue significantly more installment debt, possibly suggesting that younger generations perceive a larger number of required appliances and electronics as being necessary to run the household than previous generations (Dean, Joo, Gudmunson, Fischer, & Lambert, 2013).

Pinto et al. (2005) found that parents were the only socialization agent significantly correlated with credit card use, indicating that college students learn more information about credit cards from their parents than any other socialization agent. In addition, they found that greater levels of information from parents on the proper use of credit cards were correlated with lower levels of students' outstanding credit card balances.

Previous research has also identified several demographic variables that are associated with high-risk credit behavior. For both men and women, predictors of high-risk credit behaviors include: older age, more years in school (including enrollment in graduate school), more hours worked each week, and lower grade-point averages (Norvilitis & MacLean, 2009). In addition, behavioral and health variables were significantly predictive of high-risk credit behavior (Adams & Moore, 2007). Grable and Joo (2006) found that students of color were more likely to incur credit card debt that was 5% to 10% higher than their Caucasian classmates.

Many of today's students are unable to account for all direct costs (tuition, room, board, and fees). In reaction to their limited funds, students have turned to utilizing high-interest-rate credit cards to account for overages, including direct and indirect costs associated with college attendance (Wellman, 2007). In addition to the use of credit cards, student debt has been exacerbated by the increase in both federal and private loans.

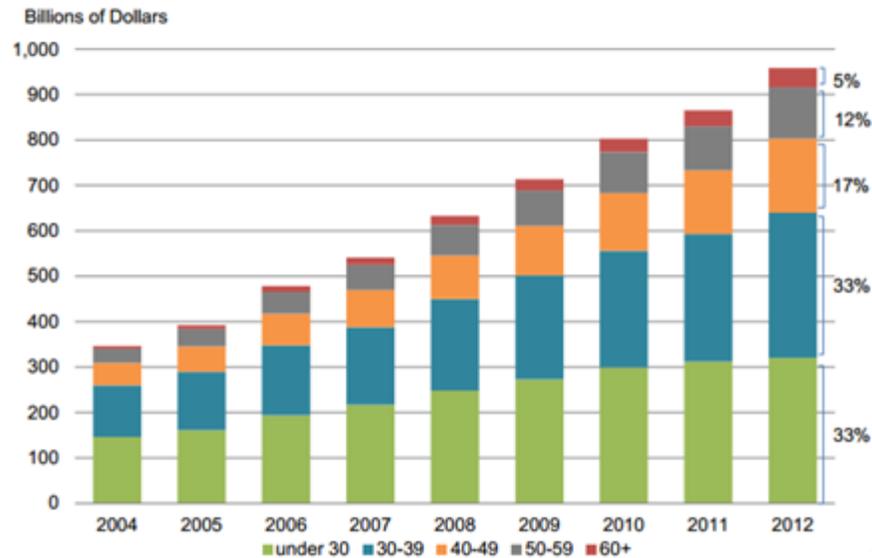
## **Student Loans**

Since the late 1970s, the federal government has attempted to address inequities caused by high college costs by adopting policies that make college loans accessible to more students. It has largely done this through programs such as the federal Parent PLUS Loans and Stafford subsidized and unsubsidized loan programs (Elliott, Destin, & Freidline, 2011). The Middle Income Student Assistance Act, in 1978, brought college loans to the middle class by removing the income limit for participation in federal aid programs. The 1992 amendments to the Higher Education Act made unsubsidized loans available, and the Omnibus Budget Reconciliation Act, in 1993, included provisions for the Federal Direct Loan Program (Elliott et al., 2011).

More recently, in 2008, Congress raised the ceiling on the amount of individual federal Stafford loans students can borrow through the Ensuring Continued Access to Student Loans Act. The Health Care and Education Reconciliation Act, in 2010, then routed all federal loans through the Direct Loan program, making it easier for students and parents to borrow directly from the U.S. Department of Education (Baum & Payea, 2011). These policies mark a shift away from societal responsibility for financing college (largely through scholarship/grants) toward greater financial obligations for students and their families (Heller & Rogers, 2006). In addition to federal loans, students are turning to private lenders to pay for college expenses.

According to the Consumer Credit Panel, based on a nationally representative data set sourced from Equifax credit reports, the average student loan balance in 2012, for all age groups was \$24,301. About one-quarter of borrowers owe more than \$28,000; 10% of borrowers owe more than \$54,000; 3% owe more than \$100,000; and less than 1%, or 167,000 people, owe more than \$200,000 (Federal Reserve Bank of New York, 2012).

## Total student loan balances by age group increasing across all age groups



**Figure 2: Total student loan balances by age group.**

According to the Project on Student Debt (2011), college students have been turning to private loans before taking out all they can in safer and more affordable federal loans. Based on that report, 52% of private student loan borrowers in 2007-2008 borrowed less than they could have in federal Stafford loans, 25% of private loan borrowers took out no Stafford loans at all, and 27% of private loan borrowers had Stafford loans, but borrowed less than they could have. Meanwhile, the percentage of all undergraduates with private loans has risen dramatically, from 5% in 2003-04 to 14% in 2007-08. In addition, balances of student loans have surpassed both auto loans and credit cards, making student loan debt the largest form of consumer debt outside of mortgages.

According to Nellie Mae's National Loan Survey (2011) of college graduates who had taken out educational loans, almost 60% agreed that the loans were worthwhile investments toward their education, based on the career opportunities they would have after earning a college

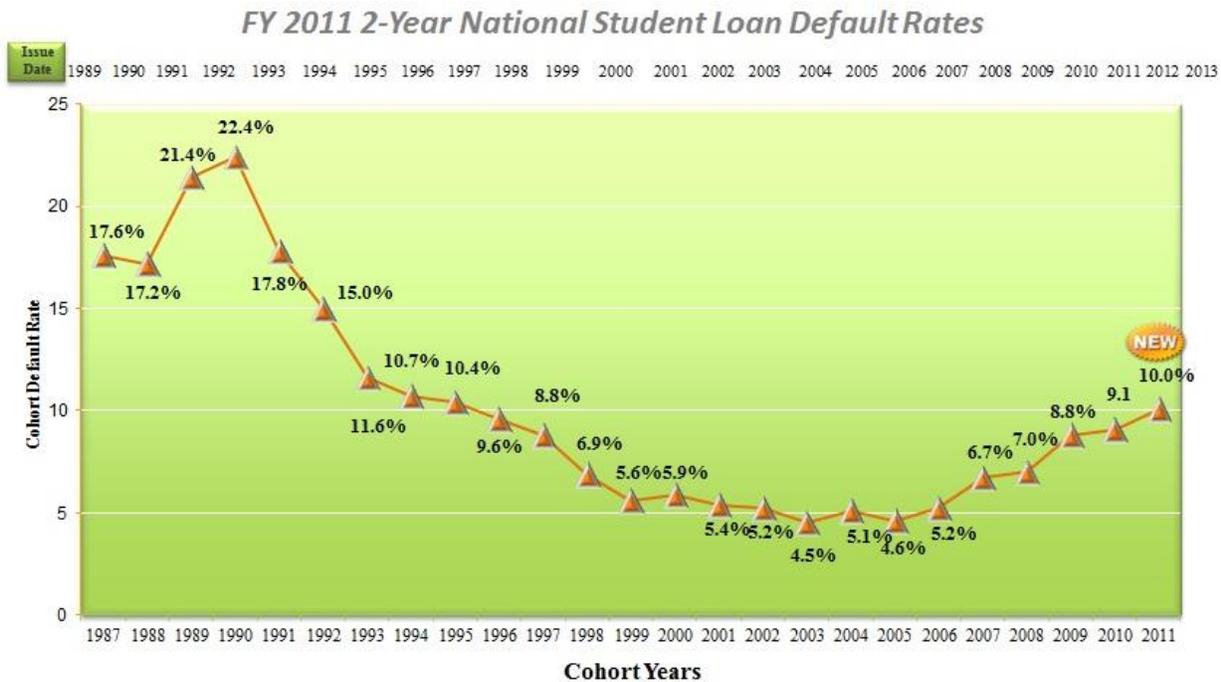
degree, and 72% of the respondents believed that borrowing loans toward the cost of their education was a worthwhile investment in their growth (Sallie Mae & Gallup, 2011).

Private Loans exist outside of the federal loan system and are not guaranteed by the federal government (The Project on Student Debt, 2011). These loans may be provided by banks, nonprofit agencies, or other financial institutions. The advancement in private loan debt and the increase in default rates are additional factors aiding in the increased debt levels faced by college students.

### *Loan Default Rates*

A study conducted by Hillman in 2014 updated and expanded the literature on student loan default. Researchers applied a multilevel regression to the Beginning Postsecondary Students survey, and found four key findings. First, attending proprietary institutions is strongly associated with default, even after accounting for students' socioeconomic and academic backgrounds. Second, cumulative loan debt has a nonlinear relationship to defaulting. Third, minorities and students from low-income families default at disproportionately high rates; and fourth, unemployment and degree completion are strongly associated with greater default rates (Hillman, 2014).

The U.S. Department of Education releases official two-year cohort default rates once per year. The FY 2011 official two-year cohort default rates, the most recent cohort default rates available, were delivered to both domestic and foreign schools on September 16, 2013 (Hillman, 2014). Graphed below are the loan default rates from 1989-2011. As seen by this graph, the two-year National loan default rate in 2011 was 10%.



**Figure 3: Two-year student loan default rates.**

Recent data from the Federal Reserve Bank of New York (2012) also suggests that the number of delinquent borrowers is increasing. About \$52 billion in loans that were current became delinquent in the first half of 2012. The alarming increase in default rates underscores the importance of an income repayment plan and reinforces the inflated cost families are having to pay for a college education. Some families exhaust all federal loans or are skeptical about using federal money and turn instead to private funding for college costs.

*Private Loans*

The advancement in private loan debt is yet another factor aiding in the increased debt levels faced by college students. Private loans exist outside of the federal student loan system and are not guaranteed by the federal government (Project on Student Debt, 2011). These loans are provided by banks, nonprofit agencies, or other financial institutions.

The increasing significance of private loans can be seen in their vast growth: currently the yearly growth rate of private loans is outpacing that of federal loans. In 2005–2006, federal loan volume equaled nearly \$69 billion, and private loan volume was slightly more than \$16 billion (Heller & Rogers, 2006). However, looking at the growth rate of student loans from 2003 through 2008, some project that annually, federal Stafford loans will grow by only 8%, whereas private loans will grow by 25%. Further, some speculate that in the right economic conditions, private loan volume could exceed federal-subsidized Stafford loans by the end of the decade (McSwain, 2008). Private loan volume grew from 6.5 billion in 2003-2004 to 17.1 billion in 2007-2008. For profit colleges had the largest proportion of students taking out private loans in 2007-2008 (Project on Student Debt, 2011).

Table 1

*Percentages of Students Who Hold Private Loans: from 2003-04 to 2007-08 (organized by sector)*

	2003-04	2007-08
For Profit (proprietary)	12%	42%
Private (non-profit) 4 year schools	11%	25%
Public 4 year schools	5%	14%
Public 2 year schools	1%	4%

Recent national data shows that the vast majority of graduates from for-profit four-year colleges (88%) took out student loans, and they borrowed an average of \$39,950; this was 43% more than graduates from other types of four-year colleges (Project on Student Debt, 2011). In addition, the percentage of African-American undergraduates who took out private loans quadrupled between 2003-2004 and 2007-2008, from 4% to 17% (Project on Student Debt, 2011).

However, the dangerous combination of credit cards, coupled with exorbitant federal loans, the increased borrowing of high-interest private loans, and the increase in default rates is positioning students of specific demographics for failure before entering college.

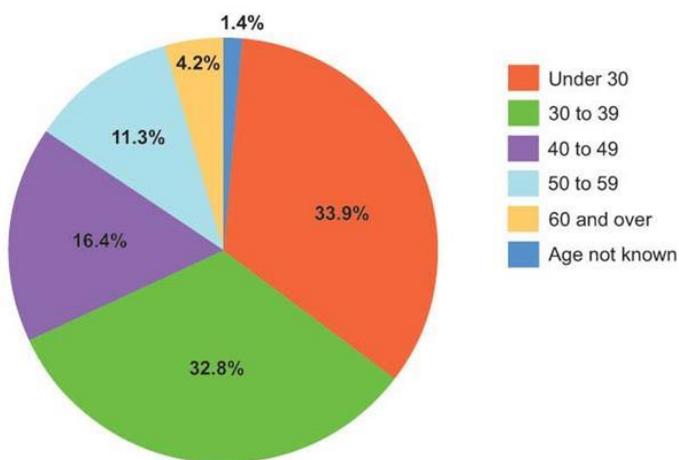
### Demographic Factors

Over one half of people who have student loans (57%) are concerned about being able to pay that debt (Sallie Mae & Gallup, 2011). The concern for educational debt repayment is far reaching and spans economic and demographic groups including: age, academic discipline choice, income, race/ethnicity, and gender.

#### *Age*

According to a study by Jones (2005), age was the only predictor of credit card debt. The same study concluded that age and race were predictors of the number of credit cards that were held by each student. Older students had more credit cards, but white students had fewer cards than other identified racial identities. In a later study, older students (juniors and seniors) had more debt than underclassmen (freshman and sophomores) in college (Robb & Sharpe, 2009).

Student Loan Balance by Age in 2011  
Total Loan Balance: \$870 Billion



**Figure 4: Student loan balance by age in 2011.**

### *Academic Major*

Research has indicated there may be minor discrepancies regarding the financial knowledge of students who are studying business versus students in other majors. In one study, a financial literacy training workshop was developed and taught by upper-level accounting majors to freshmen business majors (Rosacker et al., 2009). The workshop was developed to increase the financial literacy of freshmen business majors. Each of the participants in the study, were enrolled in a required introduction to business course and participation in the financial literacy workshop activities was a requirement of that course. The mean pre-test score for the subjects was 8.38 (13 possible), the mean post-test score was 10.17 (13 possible; and the resulting  $t = 6.063$ ). The difference between the two means was statistically significant at the 0.001 level. This finding supports an assertion that the financial-literacy training workshop had a positive impact on student learning, leading to a significant improvement in the subject's financial literacy scores.

### *Gender*

Previous research has indicated that students of color, specifically Hispanic students who are female and education majors accumulate higher, unmanageable debt levels (Crowell, 2002; Kim, 2004; Kezar, 2009; Lusardi & Mitchell, 2008; Santiago & Cunningham, 2005). While several studies suggested that women tend to have lower levels of financial knowledge than men, the findings have been mixed. Chen and Volpe (2002) found that, on average, women knew less about personal finance than men when controlling for other factors. In addition, more men than women ranked personal finance as an important subject, and men ranked themselves as more knowledgeable in personal finance than did women. In contrast, another study found that females

scored significantly higher than males on the Jump\$tart financial knowledge scale, although the average score for both genders was only 60% (Norvilitis et al., 2006).

In the area of investment knowledge, Volpe, Chen, and Pavlicko (1996) found that all student groups tend to have inadequate investment knowledge, but that females tended to have poorer investment knowledge than males. For instance, Hayhoe, Leach, Turner, Bruin & Lawrence (2000) found that female students, compared to male students, were more likely to have a budget, to keep bills and receipts, to save regularly, and to plan their spending. Lyons (2004), however, found that women were more likely to engage in risky credit card behaviors than men. Davies and Lea (1995) also found that women tend to have higher levels of debt.

Risky credit behaviors and high levels of debt have a negative effect on credit scores, which can later inhibit important milestones such as purchasing a home or getting a job. These findings are concerning for female students.

Dwyer, Hodson, and McCloud (2013) examined the debt levels at which male and female students become more likely to drop out of college than to finish their degrees. The paper was based on data from the National Longitudinal Survey of Youth, which tracked thousands of students across the country on a number of factors, including college enrollment and completion and borrowing. The researchers were able to control for factors such as wealth, high school preparation, and other characteristics, so that the focus could be on borrowing. The researchers compared the data to look for the point at which more debt has a negative as opposed to positive impact on the likelihood of completion and found different average “inflection points” for male and female students. The debt level at which male students are more likely to drop out than complete is \$12,426, while for women the figure is \$14,620, suggesting that female students may have a higher tolerance for debt.

### *Socioeconomic Status*

Today, students are being called to make larger contributions to cover college costs. Previous research discussed that expecting students to borrow to pay for higher education appears to significantly dampen the college aspirations of students from lower socioeconomic classes, who are at greater risk of default and high repayment burdens (Callender & Jackson, 2005; Gladieux & Perna, 2005; Kim, 2007).

Young people from low income families and whose parents have not attended college, as well as those from African-American and Hispanic descent, are less likely than other young people to enroll in college (Grable & Joo, 2006; Santiago & Cunningham, 2005). When enrolled, these students find themselves concentrated in lower priced institutions, such as public two- year colleges and less selective four- year colleges and universities (Baum & Payea, 2004; Thomas & Perna, 2004).

The typical low-income student must come up with more than \$11,000 a year to attend a public or private nonprofit college. This is approximately equivalent to nearly three-quarters of their family income for one child (Kezar, 2009). In comparison, this would be 27% of a middle class family's income and 14% of a high-income student's family. Low-income students are driven into debt by need, whereas affluent students can borrow at relatively high levels and view debt as being temporary. According to Trent, Lee, and Owens-Nicholson (2006), high levels of family support and a family's understanding of the financial aid process also contribute to debt tolerance (p. 1743).

Because averages do not tell the story of most individual borrowers, it is important to understand the distribution of debt levels among college graduates. While the typical debt levels of college graduates are manageable for those who successfully enter the workforce, there is

growing concern about the minority of students who borrow much more than average and who end up with unduly burdensome repayment obligations (Baum & Payea, 2011). The new federal Income-Based Repayment Program offers considerable protection for those who rely only on federal loans, but these benefits do not extend to non-federal loans (Steel & Baum, 2009).

Family background, socioeconomic status, age, race, and other personal and societal factors pertaining to students are all related to how undergraduates acquire debt. According to the research, students who are female, of a minority racial group, have easy access to credit, receive insufficient financial aid, have a low family income, and are improperly financially socialized are more likely to be in debt (Dwyer et al., 2013). These factors could have serious implications for students later in life (Wang & Xiao, 2009).

## **Conclusion**

Research has identified that college debt is becoming exorbitant for many students and their families. The Project on Student Debt found that two-thirds of 2011 college students graduated with an average student loan debt of \$26,600, or \$27,500 when adjusted for inflation. Contrast that with 1993, when less than half of students graduated with debt at all, and those who did averaged \$9,350 (The Project on Student Debt, 2011). The benefits of attending are becoming uncertain for many and borrowing money is making individuals uneasy with today's daunting economy. Millions of college students are graduating into the slowly improving economy in which many still find themselves unemployed or underemployed (Kezar, 2009). Class of 2012 graduates faced an unemployment rate of 13.3% (not seasonally adjusted), though the rate drops significantly the longer students are out of school. The national rate, which is seasonally adjusted, is 7.6% (United States Department of Labor, 2013).

Although improvements have occurred and lawmakers are trying to alleviate high interest loans, specific solutions have not been identified nor implemented to ensure that at-risk students are safeguarded against dangerous borrowing (Project on Student Debt, 2011). Graduates' debt burdens are of great concern and the identification of specific factors will assist with the development of preventative educational programming and services for students and their families.

Student debt is proving to be a roadblock to economic opportunity, and that significantly undermines this generation of students. The consequences of an escalating debt load may not be immediately noticeable in the years just after students graduate, but the long-term impact could be overwhelming (Elliott et al., 2011). The new legislation being proposed, which includes a student loan repayment system, may help to alleviate the financial burden of student loan debt on college graduates, and support them as they begin their careers and lives; however enduring changes need to be approached from a systemic model (Heckman & Grable, 2011).

## CHAPTER 3: METHODOLOGY

Previous studies have focused on how students respond (emotionally or physically) to higher levels of debt, or the various programs and the delivery methods (both on-site and remotely) that have been put in place to combat these exorbitant debt levels. However, what these previous studies have failed to explore are the specific factors that are initially placing students into these high levels of debt. The study that was conducted is an exploratory research study that relies on a quantitative methodology design (Gliner, Morgan, & Leech, 2010). The purpose of this exploratory research study was to identify factors, both personal and societal, that are associated with the level of self-reported undergraduate debt for graduate students. The four key research questions for this study were:

1. How much self-reported debt do graduate students accumulate during their undergraduate education?
2. What financial decision making factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?
3. What life impacting factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?
4. What key demographic factors are associated with total undergraduate debt accumulation?

According to the Project on Student Debt (2011), the national debt level for students completing a traditional bachelor's degree is averaging \$26,600.00. National statistics have identified that debt under \$20,000 is considered a below average amount, and undergraduate

students with \$40,000 or more in college debt are considered higher than average (Dwyer et al., 2013).

### **Research Design and Rationale**

Quantitative methodology was the most appropriate for this design. The use of an online survey provided a sense of anonymity for students as they disclosed potentially sensitive information surrounding their debt accumulation and specific factors that may have impacted their indebtedness. The surveys were self-administered, distributed by email and collected utilizing Qualtrics, a reputable and professionally administered web-based server. Online (Internet) surveys have become an increasingly popular and reliable way to administer surveys. Benefits of using online surveys include flexibility in design, more economical and easier to administer, less intrusive, and quicker response time from respondents (Dillman, 2011).

According to de Leeuw, Hox, and Dillman (2008), “When answering questions about sensitive topics, respondents may become concerned that their privacy is not sufficiently covered by standard confidentiality assurances” (p. 470). Therefore, the researcher took every precaution to protect the privacy of the participants and an outline of security measures were included in the email to participants prior to the link to take the survey.

This study focused on graduate students enrolled full-time (six or more credits) at a university in the Rocky Mountain region. Pre-professional program graduate students were not utilized for this study (i.e. medical students, law students, or pre-veterinary). The pre-professional programs were omitted from this study because the monetary amounts necessary to complete these programs are not comparable to traditional (42 credits or less) graduate programs of study. Students typically enrolled in pre-professional graduate and doctoral

programs have a higher debt tolerance, because they have higher than average earning potential levels compared to other graduate students (Kim, 2007).

### **Instrument Description and Design**

In 2001, the original survey was first pilot tested with 25 students, and was then conducted with 5,300 senior undergraduate students at Florida State University (Crowell, 2002). The original author, Dr. Perry Crowell, gave permission through a personal communication for modification and use of the original instrument, on June 27, 2013 (Appendix A). Dr. Crowell made several recommendations at the end of his dissertation and via phone, including the sequence of the questions, the positioning of demographic information and specific debt terminology students found difficult to define (i.e. socioeconomic levels). Specific clarification of parental income level was added to the final instrument (Questions 9 and 10). All of the recommendations were taken into consideration with the modification of the instrument. In addition, the original author recommended conducting the modified survey with graduate students, which is the sample population that was utilized for this study. Graduate students have completed their undergraduate degree and have experienced exit counseling with financial aid, which allows them to have more accurate numbers related to their educational debt levels. Adapting an existing, validated survey improves the likelihood that the findings will be valid and reproducible (Passmore, Dobbie, Parchman, & Tysinger, 2002).

In the spring of 2013, the researcher met face-to-face with more than 40 graduate students at the University of Hartford (in business and counseling) regarding the survey and asked them to take the instrument in person. The graduate students provided feedback on numerous aspects of the survey. Valuable information was received on how to more clearly write Questions 9 and 10. In addition, previous studies have indicated that increased debt levels were

not simply a result of student loans, but rather attributed to other forms of debt as well. The previous study's results spoke of "living expenses" and the impact those had on debt. The survey was modified to define specific living expenses, which will help to identify what living expenses are now contributing to higher debt levels for college students. Length of time to graduate has increased since 2001, and so has the cost associated with taking longer to complete one's studies. The modified survey added a specific question about time to degree completion and identified new factors (identified by a focus group of graduate students) that impact degree completion time lines (i.e., study abroad, family changes, and change in major).

After receiving that feedback the modified survey (Appendix B) was administered to 1,254 graduate students at the University of Saint Joseph in Connecticut in June of 2013. IRB approval was obtained (Appendix C). The 2013 piloted survey was modified once more prior to administration, with the study sample in 2014.

The modified survey consisted of 17 questions. Demographic information was collected first and includes the following information: gender, age, academic major as an undergraduate student (with 8 response options: Arts: English, Communications, Fine and Performing Arts and Foreign Languages; Business, Sciences: Biology, Chemistry, Mathematics, Nursing and Nutrition; Education; Social Sciences: Anthropology, Criminology, Economics, History and Political Science; Human Services: Psychology, Sociology and Social Work, Engineering; and Other). The major areas were added to the division headings to further clarify for students taking the survey. This was a modification that was suggested when the author asked for feedback on the survey instrument from two graduate classes at a private university in Connecticut (Spring 2013). The last demographic information gathered was: race/ethnic background (with 8 response

options: White /Caucasian, Black/African American, Hispanic/Latino, Asian, American Indian, Pacific Islander, Multiracial, and Prefer not to answer).

The remainder of the survey was divided into four subsections. Section One included questions asking about time to degree completion and undergraduate GPA. Section Two focused on the use of monies to afford attending college, with one part focusing on parental income level, and another asking about parental-education levels and family socioeconomic status. Section Three asked respondents to report specific debt accumulation levels (total debt, federal debt and credit card debt levels from their undergraduate education). Section Four asked questions targeted at collecting data about the factors that may have contributed to their undergraduate college debt accumulation. These factors included: tuition and college costs, having a car, medical and/or health expenses, changing major and/or taking longer to graduate than expected, lack of financial support from family, misuse of credit cards, poor academic advising that led to longer enrollment, unexpected family changes (death, divorce, relocation), participation in enrichment programs (i.e. study abroad), not having good financial/money management skills, and not understanding the financial aid process.

### **Reliability and Validity**

The modified survey was administered to 1,254 graduate students at the University of Saint Joseph in Connecticut in June of 2013. IRB approval was obtained (Appendix C). Of the 1,254 graduate students who received the survey, 148 students responded, and those results were analyzed.

In the pilot study, to assess whether the data from the variables within the entire instrument and subscales formed reliable measures, Cronbach's alpha, were computed. Measures of internal consistency, such as Cronbach's  $\alpha$ , are used to indicate the extent to which

the instrument is consistent among the overall scale and subscale items measuring a single concept or construct (Gliner et al., 2009). The alpha level for the overall instrument was good,  $\alpha = .77$ , exceeding the acceptable .70 or higher criteria and indicates that the items form a scale that has good internal consistency reliability (Gliner et al., 2009). In addition, reliability analysis on the original survey yielded an alpha coefficient,  $\alpha = .76$  (Crowell, 2002).

Four common procedures exist for establishing the validity of an instrument: (a) face validity, (b) content validity, (c) criterion validity and (d) construct validity. According to Clapper and Harris (2008), “Face and content validity are important first steps with establishing construct validity because they establish the accuracy and connection among the questions asked and variables measured” (p. 65). To ensure face and content validity with the instrument, the researcher enlisted knowledge from a panel of experts familiar with the topic of college student debt. These experts were able to judge the survey’s appearance, relevance and all other elements. According to Thomas (2002), “Experts are researchers with good knowledge of the particular substantive topic, field work issues, questionnaire design, cognitive perspectives and so on” (as cited in de Leeuw et al., 2008, p. 471). The modified survey was then reviewed by two faculty experts (one in finance and one in business), a Chief Financial Officer, and a Director of Financial Aid at a local university during the spring of 2013. After receiving expert advice, the following questions were added: undergraduate GPA and a clarification statement to the overall debt question so not to include mortgage costs. Lastly, the three questions about manageability from the original survey were omitted because they were not related to the research questions being explored.

After establishing face and content validity, a researcher must establish the instrument’s criterion related validity and construct validity before using it for quantitative analysis. To

ensure criterion related validity of the instrument, the researcher compared the piloted, modified survey results with the scores of the survey administered in 2001 at Florida State University. Next, to secure construct validity, factor analysis was conducted. Factor analysis is most often associated with securing construct validity (Burton & Mazerolle, 2011). After conducting the factor analysis, the researcher determined the dimensionality of the survey items, and it was determined that no further statistical tests were needed.

### **Sample**

Participants in this survey consisted of a random sample of graduate students from a university in the Rocky Mountain region (excluding pre-professional program graduate students). Total enrollment at the university was around 30,000 (with 10,000 graduate students). The gender breakdown of graduate students at the university was 48% male students and 52% female students. The percentage of all students receiving aid (both undergraduate and graduate) equaled 46% in grants and 47% in loans. The sampling frame consisted of an Excel list of names and e-mail addresses of all enrolled graduate students (from a pre-existing database). The sampling frame was acquired from the various graduate schools; 3,852 graduate students received an email with a link to the survey (Appendix D).

### **Data Collection**

Institutional Review Board (IRB) approval was obtained prior to this study being conducted (see Appendix E). The 17-question survey instrument was conducted through Qualtrics. The survey was emailed to students with a brief introduction and a link to the survey (Appendixes D & F). There were 3,852 graduate students in the Excel list obtained from the database. Participation for the respondents was voluntary and no incentives were utilized. The introduction letter indicated that the survey was brief (approximately 5 to 10 minutes to

complete) and would assist the researcher in helping future students with college debt issues. Dillman (2011) recommended making multiple contacts with participants in order to increase response rates for online surveys. In order to attain the largest sample size possible, thus increasing survey validity, administration of the survey was based on Dillman's recommendations. Following the initial contact, a reminder email was sent one week later (see Appendix G).

### **Consideration of Human Subjects**

Qualtrics ensures its users that its data is kept safe and secure on its module. Survey responses can be sent over a secure, encrypted connection through simply enabling SSL encryption, which is short for Secure Sockets Layer. This was used to obtain confidential user information and is supported by modern browsers. In addition, the researcher also disabled the storage of IP and email addresses to ensure the collection of anonymous survey responses. Information about: participant's rights, confidentiality, data security and anonymity were included in the introduction letter and IRB information emailed to all participants (see Appendixes D & G).

### **Analysis of Data Plan**

Data analysis for each research question consisted of appropriate descriptive and inferential statistics. Data was analyzed using the Statistical Package for the Social Sciences (SPSS) Version 21. Data analysis was organized as follows:

#### **Research Question 1: How much self-reported debt do graduate students accumulate during their undergraduate education?**

Analysis: Descriptive statistics were calculated for self-reported total undergraduate debt (Question 11), undergraduate loan debt (Question 15) and undergraduate credit card debt

(Question 16). Descriptive statistics included measures of central tendency, variance, and normal distribution.

**Research Question 2: What financial decision making factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?**

Analysis: Individual Chi-Squared tests were run for how financial decision making factors (Question 7) with overall debt accumulation (Question 12).

**Research Question 3: What life impacting factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?**

Analysis: Multiple Regression was conducted. Question 12 served as the criterion variable and Question 17 (1-11) served as the predictor variable.

**Research Question 4: What key demographic factors are associated with total undergraduate debt accumulation?**

Analysis: Individual Chi-Square tests were run for gender, race/ethnicity, major, and age with Question 11.

## CHAPTER 4: RESULTS

The purpose of this research study was to identify factors associated with student debt levels. This chapter begins with a summary of the data analysis procedures. A thorough description of the participants will be outlined, and then the results of the four research questions will be analyzed. The four key research questions for this study were:

1. How much self-reported debt do graduate students accumulate during their undergraduate education?
2. What financial decision making factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?
3. What life impacting factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?
4. What key demographic factors are associated with total undergraduate debt accumulation?

### **Data Screening, Response Rate and Testing of Assumptions**

From the total sample of 3,852 graduate students, 775 responded to their respective surveys that were emailed in June of 2014. Data were imported from Qualtrics to the Statistical Package for the Social Sciences (SPSS) version 22 and were examined prior to analysis. Of the 775 responses, it was determined that only three responses were missing completely at random (MCAR); therefore the researcher conducted a list wise deletion of the non-respondents (de Leeuw et al., 2008, p. 371). The three incomplete surveys were eliminated from the final analysis. Therefore, 772 student surveys were used in the data analysis with an overall response rate of 20%.

Next, Cronbach's coefficient alpha was computed to assess the internal consistency reliability of the instrument. The researcher computed this to indicate the extent to which the instrument is consistent among the overall scale and subscale items measuring a single concept or construct (Gliner et al., 2009). The alpha level for the overall instrument (Spring 2013 Pilot;  $\alpha = .77$ ) and the alpha level for the overall instrument (Summer 2014;  $\alpha = .79$ ), which exceeded the acceptable .70 or higher criteria, and indicates that the items form a scale that has good internal consistency reliability (Gliner et al., 2009). Data were checked for normality and all variables were approximately normally distributed with no items or variables markedly skewed.

Lastly, the researcher noticed that only six participants did not record values for Question 12. However, the researcher noticed that those respondents did answer Question 11. Because both questions were measuring the same thing, the researcher imputed class medians for Question 12 based on the participant's responses to Question 11 (de Leeuw et al., 2008, pp. 372-73). In addition, to the imputed medians, null values in Question 12 were recoded into zero.

## **Participant Characteristics/Demographic Data**

### *Student Characteristics*

Participants were asked to complete demographic questions, to help describe the sample and answer research questions. These demographic variables included: (a) gender, (b) race/ethnicity, (c) age, (d) undergraduate academic major, (e) undergraduate cumulative GPA, and (f) years to complete undergraduate degree. These variables were selected based on prior research on student debt and interest of the researcher.

A total of 772 participants' data were analyzed. Question 1 asked the participant's gender, of those respondents, 458 (59.3%) were female students and 305 (39.5%) were male. Six participants chose nonconforming, and three indicated that they preferred not to answer.

The second survey questions asked participants to select their race/ethnicity. As shown below in Table 1, the majority of students 675 (87.4%) reported that they were White/Caucasian, 9 (1.2%) reported Black/African American, 29 (3.8%) reported being Hispanic/Latino, 22 (2.8%) reported Asian, 2 (.3%) reported American Indian, 24 (3.1%) reported Multiracial, and 11 (1.4%) indicated that they would prefer not to answer.

Table 1

*Number and Percentage of Students by Race/Ethnicity*

Race/Ethnicity	<i>n</i>	%
White/Caucasian	675	87.4
Black/African American	9	1.2
Hispanic/Latino	29	3.8
Asian	22	2.8
American Indian	2	.3
Multiracial	24	3.1
Prefer not to answer	11	1.4

Question 3 asked the participant's age. Age responses ranged from 21 to over 52 years of age. The majority of participants 578 (74.9%) were between 21 and 32 years old. Table 2 outlines the ages of the participants.

Table 2

*Student Age*

Age Range	n	%
21-26	312	40.4
27-32	266	34.5
33-39	105	13.6
40-46	58	7.5
47-52	15	1.9
Over 52	16	2.1

Question 4 asked participants to identify their undergraduate major. The highest percentage 255 (33%) was found in the sciences (Biology, Chemistry, Mathematics, Nutrition, or Nursing). The next highest response category 103 (13.3%) was engineering. Table 3, outlines the breakdown by undergraduate major of survey respondents.

Table 3

*Academic Major (area of study as an undergraduate student)*

Academic Major	<i>n</i>	%
Arts (English, Communications, Fine & Performing Arts or Foreign Languages)	79	10.2
Business	65	8.4
Sciences (Biology, Chemistry, Mathematics, Nutrition or Nursing)	255	33
Education	41	5.3
Social Sciences (Anthropology, Criminology, Economics, History or Political Science)	79	10.2
Human Services (Psychology, Sociology or Social Work)	100	13
Engineering	103	13.3
Other	50	6.5

Next in Question 5, participants were asked to identify their undergraduate cumulative GPA. The categories receiving the highest responses were 3.6-4.0 (55.6%) and 3.1-3.5 (32.6%).

Table 4 outlines the undergraduate GPAs of survey participants based on a 4.0 scale.

Table 4

*Cumulative Undergraduate GPA (based on a 4.0 scale)*

GPA	n	%
2.0	1	.1
2.1-2.5	13	1.7
2.6-3.0	77	10
3.1-3.5	252	32.6
3.6-4.0	429	55.6

In Question 6, participants were asked to identify the number of years it took them to complete their undergraduate education. 705 (91.3%) of all participants took less than 5 years to complete their undergraduate degrees. Table 5 below outlines the participant's responses for the numbers of years to complete their undergraduate degrees.

Table 5

*Years to Complete Undergraduate Degree*

Number of years	n	%
Less than 4	66	8.5
4 years	478	61.9
5 years	161	20.9
6 years	41	5.3
More than 7 years	26	3.4

**Research Question 1. How much self- reported debt do graduate students accumulate during their undergraduate education?**

Survey Questions 15, 16, and 11 were computed. The researcher first recoded items into three categories to align with previous research on low, medium and high debt levels (category one=low debt-under \$20,000, category two= medium debt-\$20,001-\$40,000 and category three= high debt over \$40,001). The following results were found:

With regards to federal debt, 68.7% (525) participants were below \$20,000., 23.2% (177) were below \$40,000. , and 8.1% (62) participants indicated they had federal debt above \$40,000 ( $M=2.62$ ,  $SD=1.78$ ). With regards to credit card debt, 98.2 % (751) of participants indicated they were below \$20,000., 1.2% (9) indicated they were below \$40,000., and .7% (5) indicated that they had credit card debt above \$40,000 ( $M=1.39$ ,  $SD=.72$ ). Of the 772 total respondents, Eight respondents did not respond to the federal debt question (Question 15) and seven participants failed to respond to Question 16 regarding credit card debt. With reagrds to total debt, question number 11, 61.4% (474) participants indicated that their total debt was under \$20,000; 20.8% (161) participants indicated their total debt was under \$40,000; and 17.8% (137) had total debt levels above \$40,000 ( $M=3.14$ ,  $SD=2.23$ ). All 772 respondents that were analyzed replied to Question 11 (total debt).

Table 6

*Self-reported debt levels*

Amount	Federal loan debt		Credit card debt		Total debt	
	n	%	n	%	n	%
\$0.00	323	42.3	523	68.4	277	35.9
Under \$10,000	94	12.3	212	27.7	93	12.0
Under \$20,000	108	14.1	16	2.1	104	13.5
Under \$30,000	119	15.6	5	.7	95	12.3
Under \$40,000	58	7.6	4	.5	66	8.5
Under \$60,000	45	5.9	5	.7	77	10.0
Under \$80,000	11	1.4	0	0	31	4.0
Under \$120,000	4	.5	0	0	16	2.1
Under \$140,000	0	0	0	0	2	.3
Under \$160,000	2	.3	0	0	8	1.0
Under \$180,000	0	0	0	0	1	.1
Under \$200,000	0	0	0	0	2	.3
Total	764	100.0	765	100.0	772	100.0

**Research Question 2. What financial decision making factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?**

The researcher first recoded Question 12 into three categories to align with previous research on low, medium and high debt levels (category one=low debt-under \$20,000, category two= medium debt-\$20,001-\$40,000 and category three= high debt over \$40,001). The following results were found.

To investigate whether low, medium and high debt levels differ with attitudes towards: using credit cards, federal loans, private loans and loans for non-academic expenses, Chi-square statistics were conducted. Assumptions were checked and were met. Tables 7-10 show the Pearson Chi-square results.

There is a relationship between attitude towards credit cards and level of debt, ( $\chi^2= 83.016$ ,  $df= 8$ ,  $N=772$ ,  $p < .001$ ).

Table 7

*Chi Square Analysis of Low, Medium and High Debt Among Attitudes of Credit Card Use*

		n	Debt level			$\chi^2$	p
			Low	Medium	High		
I used credit cards to afford attending college						83.016	< .001
	Strongly Agree	48	20	8	20		
	Agree	100	41	33	26		
	Neither Agree nor Disagree	43	20	8	15		
	Disagree	112	60	34	18		
	Strongly Disagree	469	344	76	49		
Total		772	485	159	128		

There is a relationship between attitude towards federal loans and level of debt ( $\chi^2=290.741$ ,  $df= 8$ ,  $N=772$ ,  $p < .001$ ).

Table 8

*Chi Square Analysis of Low, Medium and High Debt Among Attitudes of Federal Loan Use*

		n	Debt level			$\chi^2$	p
			Low	Medium	High		
I used federal loans to afford attending college						290.741	< .001
	Strongly Agree	335	106	123	106		
	Agree	121	77	30	14		
	Neither Agree nor Disagree	10	9	1	0		
	Disagree	37	32	1	4		
	Strongly Disagree	269	261	4	4		
Total		772	485	159	128		

There is a relationship between attitude towards private loans and level of debt, ( $\chi^2=170.123$ ,  $df = 8$ ,  $N=772$ ,  $p < .001$ ).

Table 9

*Chi Square Analysis of Low, Medium and High Debt Among Attitudes of Private Loan Use*

		Debt level			$\chi^2$	<i>P</i>
		n	Low	Medium		
I used private loans to afford attending college					170.123	< .001
	Strongly Agree	90	22	29	39	
	Agree	96	30	40	26	
	Neither Agree nor Disagree	23	9	7	7	
	Disagree	94	56	27	11	
	Strongly Disagree	467	368	56	43	
Total		772	485	159	126	

There is a relationship between attitude towards non-academic items and level of debt, ( $\chi^2=163.420$ ,  $df = 8$ ,  $N=772$ ,  $p < .001$ ).

Table 10

*Chi Square Analysis of Low, Medium and High Debt Among Attitudes Towards using loans for Non-Academic Expenses*

		Debt level			$\chi^2$	P
		n	Low	Medium		
I used my student loans to pay for items other than college expenses.					163.420	< .001
	Strongly Agree	86	25	30	31	
	Agree	108	41	35	32	
	Neither Agree nor Disagree	48	18	15	15	
	Disagree	108	54	32	22	
	Strongly Disagree	422	347	47	28	
Total		772	485	159	128	

**Research Question 3. What life impacting factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?**

The researcher first checked the intercorrelations among the predictor variables prior to running the multiple regression to determine if the multicollinearity of the variables. It was found that Question 17 (10; not having good financial/money management skills) was highly correlated ( $r=.68$ ) to items 17 (6; misuse of credit cards;  $r = .66$ ) and 17(11; not understanding the financial aid process;  $r = .60$ ). For this reason, the researcher eliminated two of the highly correlated variables (misuse of credit cards and not understanding the financial aid process). These variables are believed to subcategories of the variable of not having good financial/money management skills (Leech, Barrett & Morgan, 2011).

Then the researcher conducted a simultaneous multiple regression with the remaining nine predictor variables to investigate the best predictors of total debt. The means and standard

deviations can be found in Table 11 and the intercorrelations can be found in Table 12. The combination of variables to predict total debt was statistically significant,  $F(9,703) = 14.99, p < .001$ . The beta coefficients are presented in Table 13. Note that 17(1; Tuition and college cost), 17(5; Lack of support from my family) and 17(10; Not having good financial /money management skills) significantly predict total debt when the nine variables are included. The adjusted  $R^2$  value was .150. This indicates that 15% of the variance in total debt was explained by the model.

Next, the researcher conducted a step wise regression that resulted in a three variable model, which included: 17(1; Tuition and college cost), 17(5; Lack of support from my family) and 17(10; Not having good financial /money management skills). The combination of variables to predict total debt was statistically significant,  $F(3,709) = 40.20, p < .001$ . The beta coefficients are presented in Table 14. Note that all included variables significantly predict total debt. The adjusted  $R^2$  value was .142. This indicates that 14.2% of the variance in total debt was explained by the model.

Table 11

*Means and Standard Deviations for Total Debt and Undergraduate Debt Factor Predictor Variables*

	<i>M</i>	<i>SD</i>
Total Debt	22363.94	40433.47
Predictor variable		
1. Tuition and college costs	2.33	1.63
2. Having a car	4.01	1.23
3. Medical and/or health expenses	4.28	1.04
4. Changing my major and/or taking longer to graduate than expected	4.28	1.13
5. Lack of financial support from my family	3.55	1.54
7. Unexpected family changes (death, divorce, relocation)	4.44	0.97
8. Poor academic advising that led to longer enrollment	4.42	0.98
9. Participation in enrichment programs (i.e. study abroad)	4.34	1.06
10. Not having good financial/money management skills	4.09	1.20

Table 12

*Intercorrelations for Total Debt and Undergraduate Debt Factor Predictor Variables*

Variable	Total Debt	1	2	3	4	5	7	8	9	10
Total Debt	-	-0.33*	-0.14*	-0.18*	-0.17*	-0.31*	-0.19*	-0.11*	-0.05	-0.21*
Predictor Variable										
1	-0.33*	-	0.26*	0.24*	0.22*	0.47*	0.16*	0.16*	0.19*	0.20*
2	-0.14*	0.26*	-	0.58*	0.43*	0.34*	0.40*	0.40*	0.24*	0.43*
3	-0.18*	0.24*	0.58*	-	0.38*	0.35*	0.59*	0.46*	0.36*	0.37*
4	-0.17*	0.22*	0.43*	0.38*	-	0.39*	0.45*	0.60*	0.25*	0.44*
5	-0.31*	0.47*	0.34*	0.35*	0.39*	-	0.40*	0.37*	0.17*	0.37*
7	-0.19*	0.16*	0.40*	0.59*	0.45*	0.40*	-	0.57*	0.34*	0.42*
8	-0.11*	0.16*	0.40*	0.46*	0.60*	0.37*	0.57*	-	0.31*	0.42*
9	-0.05	0.19*	0.24*	0.36*	0.25*	0.17*	0.34*	0.31*	-	0.34*
10	-0.21*	0.20*	0.43*	0.37*	0.44*	0.37*	0.42*	0.42*	0.34*	-

Note. \*  $p < .05$ .

Table 13

*Regression Analysis Summary for Undergraduate Debt Factors Predicting Total Debt-Nine Variable Model*

Variable	B	SE B	$\beta$	T	<i>p</i>
1. Tuition and college costs	-6060.65	994.75	-0.25	-6.09	0.000
2. Having a car	1924.30	1498.34	0.06	1.28	0.199
3. Medical and/or health expenses	-2692.09	1929.08	-0.07	-1.40	0.163
4. Changing my major and/or taking longer to graduate than expected	-1345.74	1642.11	-0.04	-0.82	0.413
5. Lack of financial support from my family	-3590.01	1161.54	-0.14	-3.09	0.002
7. Unexpected family changes (death, divorce, relocation)	-3981.31	2011.96	-0.10	-1.98	0.048
8. Poor academic advising that led to longer enrollment	3437.04	1989.87	0.08	1.73	0.085
9. Participation in enrichment programs (i.e. study abroad)	3290.23	1481.43	0.09	2.22	0.027
10. Not having good financial/money management skills	-3857.99	1440.02	-0.12	-2.68	0.008

*Note.* Adjusted  $R^2 = .150$  ( $N=713$ ,  $p < .001$ )

Table 14

*Regression Analysis Summary for Undergraduate Debt Factors Predicting Total Debt -Three Variable Model*

Variable	B	SE B	$\beta$	t	<i>p</i>
1. Tuition and college costs	-5747.33	977.81	-0.23	-5.88	0.000
5. Lack of financial support from my family	-4186.97	1096.89	-0.16	-3.82	0.000
10. Not having good financial/money management skills	-3394.03	1259.03	-0.10	-2.70	0.007

*Note.* Adjusted  $R^2 = .142$  ( $N=713$ ,  $p < .001$ )

**Research Question 4. What key demographic factors are associated with total undergraduate debt accumulation?**

The researcher first recoded Question 11 into three categories to align with previous research on low, medium, and high debt levels (category one=low debt-under \$20,000, category two= medium debt-\$20,001-\$40,000 and category three= high debt over \$40,001). The following results were found.

To investigate whether low, medium and high debt levels differ with gender, race/ethnicity, academic major and age, Chi-square statistics were conducted. Assumptions were checked and were met. Tables 15-18 show the Pearson Chi-square results.

The first demographic category that was analyzed was gender. The nonconforming and the other categories were sparsely populated so the researcher collapsed the gender variable into 2 categories (male and female). It was found in this study that debt level is independent of gender. There was not a relationship between debt level and gender, ( $\chi^2 = 2.537, df = 2, N=763, p < .281$ ).

Table 15

*Chi Square Analysis of Low, Medium and High Debt Among Males and Females*

	n	Gender		$\chi^2$	p
		Female	Male		
Debt Level				2.537	.281
Low	467	271	196		
Medium	160	98	62		
High	136	89	47		
Total	763	458	305		

Next the researcher collapsed the race/ethnicity variable into two categories, due to the other categories being sparsely populated. The categories were renamed Caucasian and Persons

of Color. Debt level was also found to be independent of race/ethnicity. There was not a relationship between debt level and race/ethnicity, ( $\chi^2= 1.385$ ,  $df = 2$ ,  $N=772$ ,  $p =.500$ ).

Table 16

*Chi Square Analysis of Low, Medium and High Debt Among Caucasians and POC*

	n	Race/Ethnicity		$\chi^2$	p
		Caucasian	POC		
Debt Level				1.385	.500
Low	474	419	55		
Medium	161	140	21		
High	137	116	21		
Total	772	675	97		

Next the researcher collapsed the Academic major categories into 6 categories, due to 2 categories being sparsely populated. Sciences 4(3) was combined with Engineering 4(7) and Education 4(4) was combined with Human Services 4(6). When using collapsed categories, debt level was not independent of academic major. There was a relationship between debt level and academic major, ( $\chi^2=21.447$ ,  $df = 10$ ,  $N=772$ ,  $p <.018$ ). Specifically the collapsed categories of Education and Human Services indicated the highest levels of debt from those participants.

Table 17

*Chi Square Analysis of Low, Medium and High Debt Among Academic Majors*

	n	Academic Major						$\chi^2$	p
		Arts	Business	Science/ Engineering	Education/ Human Services	Social Sciences	Other		
Debt Level								21.447	.018
Low	474	44	49	232	47	71	31		
Medium	161	19	5	69	15	39	14		
High	137	16	11	57	17	31	5		
Total	772	79	65	358	79	141	50		

Lastly the researcher collapsed age from 7 categories into 5 categories, due to sparsely populated categories. Debt levels were found to be not independent of age. There was a relationship between debt level and age, ( $\chi^2= 22.699$ ,  $df = 2$ ,  $N=772$ ,  $p <.001$ ). It was discovered that category 4 (ages 33-39) indicated the highest debt levels and the researcher noticed that the debt leveled off after age 40.

Table 18

*Chi Square Analysis of Low, Medium and High Debt Among Age Groups*

	n	Age				$\chi^2$	p
		21-26	27-32	33-39	40 and older		
Debt Level						22.699	.001
Low	474	188	167	52	67		
Medium	161	78	45	30	8		
High	137	46	54	23	14		
Total	772	312	266	105	89		

## CHAPTER V: DISCUSSION

The purpose of this study was to explore specific factors associated to undergraduate debt levels of enrolled graduate students. Recent studies have shown that undergraduate students are accumulating high levels of debt while enrolled in college (Dean et al., 2013; Heckman & Grable, 2011; Wellman, 2007). Previous studies have focused on how undergraduate college students respond (emotionally or physically) to higher levels of debt, or the various programs and the delivery methods (both on-site and remotely) that have been put in place to combat these exorbitant debt levels (Adams & Moore, 2007; Grable & Joo, 2006; Norvilitis & MacLean, 2009). However, what these previous studies have failed to explore are the specific factors that are initially placing undergraduate students, who become graduate students, into these high levels of debt. This particular research study intended to fill this gap by exploring the self-reported undergraduate debt levels of currently enrolled graduate students, and aimed to shed light on what factors are associated to these debt levels. This study relied on a quantitative methodology design for data collection, analysis and presentation of the results. The four principal research questions explored were:

1. How much self-reported debt do graduate students accumulate during their undergraduate education?
2. What financial decision making factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?
3. What life impacting factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?

4. What key demographic factors are associated with total undergraduate debt accumulation?

### **Summary of Research Study**

The research questions were explored through a 17 question survey instrument that was previously validated and modified. The survey aimed to capture the debt levels and outline specific factors associated to those levels (see Appendix F). The survey was administered via email to graduate students who had completed their undergraduate degrees. Graduate students in this study were enrolled at a public research university in the Rocky Mountain region of the United States. Completion of the survey was voluntary and student-identifying information was disabled through Qualtrics. There were 775 graduate students who participated in the study, three participants did not complete the survey and were omitted for the final analysis, resulting in 772 final responses analyzed. This chapter reveals key findings and how they align with the research questions and the literature, implications for future practice in higher education, and further recommendations for research and practical applications.

### **Discussion of Research Question Results**

#### **Research Question One: How much self-reported debt do graduate students accumulate during their undergraduate education?**

The researcher discovered that the majority of the participants in the study reported that they were either below the middle (\$20,001-\$40,000) or lower debt (under \$20,000) levels, with regards to federal debt. There was a population that reported being in the higher than average debt level (\$40,001 and higher) this was 62 participants (8.1%). With regards to credit card debt the researcher discover that, 98.2 % (751) of participants indicated they were below \$20,000. And with total debt, 61.4% (474) participants indicated that their total debt was under \$20,000;

20.8% (161) participants indicated their total debt was under \$40,000; and 17.8% (137) had total debt levels above \$40,000. The distribution/percentages of federal debt levels, with students in this current study, aligned with previous research (Federal Reserve Bank of New York, 2012). The researcher also noticed a decline in overall credit card debt level which contradicted previous research (NellieMae, 2007; Sallie Mae, 2008). This contradiction may be in response to the strict credit card policies that have been instituted at all colleges and universities (Detweiler, 2009).

**Research Question Two: What financial decision making factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?**

To investigate whether low, medium and high debt levels differ with attitudes towards: using credit cards, federal loans, private loans and loans for non-academic expenses, individual Chi-Square tests were administered. The researcher discovered that in fact there was a relationship between attitudes towards: using credit cards ( $\chi^2=163.420$ ,  $df=8$ ,  $N=772$ ,  $p < .001$ ), federal loans ( $\chi^2=290.741$ ,  $df=8$ ,  $N=772$ ,  $p < .001$ ), and loans for nonacademic purposes ( $\chi^2=163.420$ ,  $df=8$ ,  $N=772$ ,  $p < .001$ ) with overall debt levels. These findings are significant and support the previous literature indicating that differences in attitudes toward debt and actual borrowing behaviors are associated to socioeconomic influences, such as parental: education, financial knowledge and debt tolerance (Callender & Jackson, 2005; Dowd, 2008; Moore et al., 2002; Serido et al., 2010). Also in line with previous research, this study discovered that students do not have an adverse attitude to using their federal loan money for non- academic purposes (Heckman & Grable, 2011; Kim, 2007).

**Research Question Three: What life impacting factors uniquely contribute to total undergraduate debt accumulation as self- reported by graduate students?**

The researcher conducted a step wise regression which resulted in a three variable model, which included: 17(1; Tuition and college cost), 17(5; Lack of support from my family) and 17(10; Not having good financial /money management skills). Results of the current study indicated that the combination of variables to predict total debt was statistically significant,  $F(3,709) = 40.20, p <.001$ . As previously stated in the literature, the rising cost of tuition and college costs is becoming unmanageable for today's students. Tuition is increasing faster than inflation and median income, students overall are facing increasing levels of need (Institute for College Access & Success, 2011). The lack of family support may be looked at from two dimensions in this study and the literature. When students define *Lack of family support*, with regards to financial matters related to college, they may be identifying that their families simply do not understand the college financial process; or they may be indicating that their families are not participating in the financial matters related to college (i.e. paying the bill). The results of this current study supports previous research that indicated that higher levels of debt were associated to not having good money management skills (Dwyer et al., 2013; Hillman, 2014; Norvilitis et al., 2006).

**Research Question Four: What key demographic factors are associated with total undergraduate debt accumulation?**

Within the current study, the researcher did not find a relationship between total undergraduate debt accumulation and the demographic factors: gender and race/ethnicity as outlined in previous research (Dwyer et al., 2013; Kezar, 2009; Lusardi & Mitchell, 2008; Wang & Xiao, 2009). However, there was a relationship between debt level and academic major,

( $\chi^2=21.447$ ,  $df = 10$ ,  $N=772$ ,  $p <.018$ ). The current study indicated the highest levels of debt from the collapsed major categories of Education and Human Services.

This is consistent with previous literature indicating that students who are in specific majors (i.e. the helping professions) are obtaining higher than average levels of undergraduate debt (Baum & Payea, 2011; Sallie Mae, 2008; Gronhoj, 2007). It was also discovered that there was a relationship between age and debt levels. The researcher noticed that Category 4 (ages 33-39) indicated the highest debt levels and the researcher noticed that the debt leveled off after age 40. This is also consistent with previous research indicating that older students have higher than average levels of debt (Crowell, 2002; Kezar, 2009; Kim, 2004; Lusardi & Mitchell, 2008; Santiago & Cunningham, 2005).

### **Implications for Practice**

The results of this study have a variety of implications, especially for the people who help students gain access to high education. These support systems include: family members, high school teachers and counselors, college recruiters and financial aid staff. High school counselors and teachers should serve as resources about financing college. Grubb, Lara, and Valdez (2002), identified that “Consistent, frequent interaction (at least once a month) in groups and one on one is considered to be the most effective approach to counseling students and their families on the benefits of college attendance and the intricacies of financial aid” (p. 561). In addition to financial information being more frequent during the high school years, McDonough and Calderone (2006) indicated that, “Educational practitioners know that parents tend to trust college information and exhortations from parents like themselves with college-going children” (p. 712). Allowing other parents (who have children enrolled in college) to educate new families who may not understand financing college may be an influential and inexpensive educational

measure put in place to educate families. The key to implementing effective responsible student borrowing is to build an educational program around the student life cycle.

### *Life Cycle Program*

As Perna (2006) outlined in earlier research, it is imperative to deliver information students need at the time they are most likely to engage and take action. By enabling students to make smarter borrowing decisions at each stage of their higher education cycle—before, during, and after college—they are empowered to take control of their finances, remain in school, and work towards graduation. Perna’s conceptual model incorporates four layers. The first layer of Perna’s (2006) model included student demographic characteristics such as gender and ethnicity, cultural capital such as value of college attainment and social capital regarding information about college and receiving assistance with college preparation. The second layer looked at the availability and types of resources a community and school has to provide support structures for students to consider post-secondary education. The third layer focused on the higher education contexts and described the multiple ways this contexts played an influence on shaping a student’s college choice. The final layer was that of the contexts of social, economic, and political forces (Perna, 2006). In this layer, student college choice is affected by the influence of demographics, economic forces, and public education policy. Perna’s (2006) model along with the findings in this study, leads the researcher to believe that creating specific financial literacy programs/opportunities for students and their families, where multiple influence layers are addressed and collaborate, will assist students and their families with navigating, affording and managing the financial landscape associated with obtaining a college education.

## *Financial Literacy*

Another implication is the need to assist our students and their families with being financially literate. It should be the goal to help college students obtain degrees, at manageable cost levels. Debt ratios need to be outlined, and students, along with their families, need to be educated not to not take out more in debt than they will earn their first year working. According to Cude (2006), financial literacy encompasses “the ability to understand financial choices, plan for the future, spend wisely and manage and be ready for life events such as job loss or saving for retirement” (p.105). Many campuses are moving in the direction of providing more financial education; however most institutions efforts continue to focus on providing only basic information related to financial aid. According to Chenoweth, Dilworth, and Engelbrecht (2000),

Other variables that need to be researched which may prove relevant to monetary allocation include educational influences, psychological money motivators, attitudes and beliefs about money, prior financial education, and financial training during childhood. Identifying other variables, appropriate measures and offering them globally will be the key to improved financial literacy knowledge for today’s student and their families. (p.35)

Currently seven states have a personal finance requirement for high school graduation (Idaho, Illinois, Kentucky, New York, Georgia, and Alabama; Cude, 2006). The use of on line modules is proving to be an effective mode of financial literacy education. Identifying appropriate measures and delivery methods and offering them globally will be the key to improved financial literacy knowledge for today’s student and their families.

Education of how to use money and how to obtain money for college needs to occur for students and their families. This education needs to be easy to navigate, provided earlier in the life cycle of students and comprise multiple financial variables.

## **Recommendations for Future Research**

Future research should continue to study the composition of total debt that college students accumulate. Even though this current study did not find a statistically significant association between debt and race/ethnicity, previous research indicates that students of color are more at risk for higher debt levels. A more diverse sample may help to inform the literature.

Additional research should also consider analyzing student's money management skills and their overall undergraduate college debt. Understanding a student's money management skills may be a good predictor to future debt levels. It would be auspicious to study a set of students and their parents (over 10 years), who graduated with higher than average debt levels (\$40,000. and higher) to see how they managed their debt levels. Lastly, it is apparent from this research and previous studies that age and academic major are contributing factors associated to debt. Examining these specific demographics (Age and Academic Major) with another sample of students, would further add to existing research and potentially assist students with those demographics to avoid higher levels of educational debt.

## **Limitations to Study**

As with most research studies, this study had several limitations. First, the survey used for the study was distributed one time, electronically, at one specific university, to one specific graduate population. With electronic tools comes the possibility of systematic bias among students who do or do not complete the survey (Dillman et al., 2009). Distribution was only at one university, and therefore results cannot be generalized to all graduate populations. Secondly, there were limitations with the instrument that were discovered through data analysis and from personal email communications with graduate participants. One student identified her concerns with Question 12 (parental income level); she indicated that her parents were divorced and therefore

felt her level of reported parental income would be invalid. Furthermore it was suggested by another graduate student to add a note to Question 12 that stated: please list parental income—at the time of your undergraduate schooling. Question 17(5; lack of family support, needs further defining for this study to be replicated. The researcher could have split the question into two parts: My undergraduate debt was a result of: My family not helping to pay for college and My family not assisting with the financial paperwork process of college entrance. Lastly, the researcher would add an additional question, which would read: I had no undergraduate debt because of: military service, scholarship or international status.

## **Conclusion**

The purpose of this research study was to explore:

1. How much self-reported debt do graduate students accumulate during their undergraduate education?
2. What financial decision making factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?
3. What life impacting factors uniquely contribute to total undergraduate debt accumulation as self-reported by graduate students?
4. What key demographic factors are associated with total undergraduate debt accumulation?

In this study, the data suggested that there are three main factors associated to college debt levels, 17(1; Tuition and college cost), 17(5; Lack of support from my family) and 17(10; Not having good financial /money management skills). The combination of these variables to predict total debt was statistically significant,  $F(3,709) = 40.20, p < .001$ . In addition, there was a relationship between debt level and academic major ( $\chi^2=21.447, df = 10, N=772, p < .018$ ) and a

relationship between debt level and age ( $\chi^2 = 22.699$ ,  $df = 2$ ,  $N = 772$ ,  $p < .001$ ), as outlined in previous research.

Implications for practitioners included exploring programming utilizing all four of Perna's (2006) influence layers as well as providing financial literacy programs during the life cycles of students and including their families. Colleges and universities cannot afford to turn a blind eye to the student debt issue. National trends show that delinquency rates have risen six years in a row. Meanwhile, media coverage of the student debt issue has also intensified. Despite the escalating national conversation, many students remain misinformed about the loan debt they incur—or the burden they will inherit. The focus needs to shift to educate the borrowers and their respective families and to commit to educating students in all aspects of their degree.

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APPENDIX A: MODIFICATION PERMISSION E-MAIL FROM ORIGINAL AUTHOR

*June 27, 2013, 11:41 am, email correspondence*

Hi Tamara,

As we discussed over the phone, I grant you permission to modify my survey. I gave your survey a quick glance and it looks great. I hope you get a sufficient response to valid your findings. Stay the course. You're getting closer. I'm looking forward to reading your dissertation. Best regards, Perry.

Perry W. Crowell, MBA, Ed.D.  
Interim Senior Associate Athletics Director / CFO  
Assistant Vice President, Finance and Administration  
The Florida State University  
104 North Woodward Avenue  
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850.644.4780  
[pcrowell@fsu.edu](mailto:pcrowell@fsu.edu)

## APPENDIX B: PILOT SURVEY INSTRUMENT

### Pilot Survey- Spring 2013

Institutional Review Board  
Informed Consent Notice

You MUST be over the age of 18 to participate in this survey. Please exit now if you are not over the age of 18 years old.

Before agreeing to participate in this research study, it is important that you read and understand the following: explanation of the purpose, procedures, benefits and potential risks of the study and how it will be conducted.

Project Title: Debt Survey

Principal Investigator: Tamara O'Day- Stevens (tamarastevens3@gmail.com or 860-944-4489)

Purpose of Project: Dissertation/ PhD program through Colorado State University

Procedures: Participants will receive a survey through a Survey Monkey link, that survey will take approximately 5-7 minutes to complete.

Participants will be asked survey questions that fall into four categories: (one section of questions is demographic information, one section focuses on parental income level and family socioeconomic status, the next section asks questions related to specific areas of debt accumulation and the final section asks questions targeted at collecting data about the factors that may have contributed to undergraduate debt accumulation).

Risks/Benefits: There are minimal risks to participating in this study. One potential risk is the possible uncomfortable thoughts/feelings that may arise when answering personal questions about your financial/debt levels. The benefit for graduate students is participating in scholarly research.

Confidentiality: The identity of all participants will be kept confidential. The participants do not provide any name identifiers in the survey. The records of this study will be kept private. Research records will be kept in a locked file; only the researcher will have access to the records. The researcher has disabled the storage of IP and email addresses within SurveyMonkey.com - to ensure the collection of anonymous survey responses. The data collected will be used in completing Tamara O'Day- Stevens' doctoral dissertation and may be used for the doctoral dissertation and future publications.

Taking part in this study is completely voluntary. If participants decide not to take part or to skip some of the questions, it will not affect their current or future relationship with CSU. Participants are free to withdraw at any time. "You should be aware that the CSU Institutional Review Board may inspect study records as part of its mission to protect the safety of research participants." In the event of questions or difficulties of any kind during or following participation, the subject may contact the Principal investigator as indicated above.

Consent: "I have read this information and have had the study purposes, procedures, risks and benefits explained to my satisfaction.

You may print a copy of this informed consent to obtain a copy of these rights.

"If you have any questions about your rights as a research participant, please contact the CSU Institutional Review Board (IRB) at (970)491-1553. The IRB is a group of people that reviews research studies and protects the rights of individuals who agree to participate in research studies"

I have read all the information above and have had the study purposes, procedures, risks, and benefits explained to my satisfaction. I acknowledge that I may print a copy of this consent form.

I consent to participate, please click the NEXT button to proceed to the survey.

I do not consent to participate, please click the EXIT button (located on top right of screen) to EXIT.

## Student Debt Survey - Page 1 of 3

Instructions: Your feedback may assist in understanding debt and help prevent other students from accumulating excess debt while in college. Your response will be strictly confidential and reported only in summary form.

### Demographic Information

#### \*1. What is your gender?

- Female
- Male
- Non-conforming
- Prefer not to answer

#### 2. Please describe your race/ethnicity.

- White/Caucasian
- Black/African American
- Hispanic/Latino
- Asian
- American Indian
- Pacific Islander
- Multiracial
- Prefer not to answer

#### \*3. What is your age?

- 20 or younger
- 21-26
- 27-32
- 33-39
- 40-46
- 47-52
- over 52

**4. Academic Major (area of study as an undergraduate student):**

- Arts (English, Communications, Fine & Performing Arts, Foreign Languages)
- Business
- Sciences (Biology, Chemistry, Mathematics, Nutrition, Nursing)
- Education
- Social Sciences (Anthropology, Criminology, Economics, History, Political Science)
- Human Services (Psychology, Sociology, Social Work)
- Engineering
- Other

**5. What was your undergraduate cumulative GPA ( based on a 4.0 scale)**

- 2.0
- 2.0-2.5
- 2.6-3.0
- 3.1-3.6
- 3.6-4.0

**6. How many years did it take you to complete your undergraduate degree?**

- Less than 4 years
- 4 years
- 5 years
- 6 years
- 7 or more years

## Student Debt Survey - Page 2 of 3

### 7. Please answer the following question:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I used credit cards to afford attending college	<input type="radio"/>				

### 8. Please answer the following question:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I used federal loans to afford attending college	<input type="radio"/>				

### 9. Please answer the following question:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I used private loans to afford attending college.	<input type="radio"/>				

### 10. Please answer the questions:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I have used my student loans to pay for items other than college expenses.	<input type="radio"/>				

### 11. What is the highest level of education completed by your parents or guardians? ( Please combine and report the highest level of education for both of your parents- I.e. If your mother completed her masters degree and your father completed his bachelors degree you would select: Masters degree)

- Did not attend High School
- Some High School
- High School completed or GED
- Some college credit, no degree
- Associate degree
- Bachelor's degree
- Master's degree
- Doctorate Degree
- Professional Degree

**12. What was your family's (parents or guardians) total annual income from all sources, in 2013, before taxes?**

- less than \$20,000
- \$21,000-39,999
- \$40,000-59,999
- \$60,000-79,999
- \$80,000-99,999
- over \$100,000

**13. I would classify my family's socioeconomic status as:**

- Poor
- Lower middle class
- Middle class
- Upper middle class
- Rich

**14. The approximate amount of my total undergraduate debt (student loans, credit cards, car loans, etc.) (\*do not include mortgage debt into this amount) was:**

- \$0.00
- Under \$10,000.00
- Under \$20,000.00
- Under \$30,000.00
- Under \$40,000.00
- Under \$60,000.00
- Under \$80,000.00
- Under \$120,000.00
- Under \$140,000.00
- Under \$160,000.00
- Under \$180,000.00
- Under \$200,000.00

**15. Please write your specific total debt amount in the text box below. Do not use the following: the dollar symbol (\$) before the first number, any commas or decimal points. For example if your overall debt equals \$30,000.00, please just write 30000.**

**16. The approximate total amount of my undergraduate federal loan debt was (Stafford loans, Perkins, PLUS):**

- \$0.00
- Under \$10,000.00
- Under \$20,000.00
- Under \$30,000.00
- Under \$40,000.00
- Under \$60,000.00
- Under \$80,000.00
- Under \$120,000.00
- Under \$140,000.00
- Under \$160,000.00
- Under \$180,000.00
- Under \$200,000.00

**17. The approximate amount of my total credit card debt during my undergraduate education was:**

- \$0.00
- Under \$10,000.00
- Under \$20,000.00
- Under \$30,000.00
- Under \$40,000.00
- Under \$60,000.00
- Under \$80,000.00
- Under \$120,000.00
- Under \$140,000.00
- Under \$160,000.00
- Under \$180,000.00
- Under \$200,000.00

**Student Debt Survey - Page 3 of 3**

**18. My Undergraduate debt level is a result of:**

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
tuition & college costs	<input type="radio"/>				
having a car	<input type="radio"/>				
medical and/or health expenses	<input type="radio"/>				
changing my major and/or taking longer to graduate than expected	<input type="radio"/>				
lack of financial support from my family	<input type="radio"/>				
misuse of credit cards	<input type="radio"/>				
unexpected family changes (death, divorce, relocation)	<input type="radio"/>				
poor academic advising that led to longer enrollment	<input type="radio"/>				
participation in enrichment programs (i.e. study abroad)	<input type="radio"/>				
not having good financial/money management skills	<input type="radio"/>				
not understanding the Financial Aid process	<input type="radio"/>				

**Thank you for your participation in this survey!**

APPENDIX C: IRB APPROAVE FOR INITIAL PILOT



UNIVERSITY OF SAINT JOSEPH  
CONNECTICUT

May 17, 2013

Ms. Tamara O'Day-Stevens  
University of Saint Joseph  
1678 Asylum Avenue  
West Hartford, CT 06117

Dear Ms. O'Day-Stevens:

Based on the nature of your study the proposal you submitted qualified for expedited review under Part A and Part B 2.b of the Saint Joseph College IRB Manual of Policies and Procedures. This review was favorable and as such it is with pleasure that I report that your research project entitled: *Debt Survey* has been approved.

On behalf of the USJ IRB Committee, I would like to applaud your efforts in conducting this research.

Sincerely,

R. Halstead

Rick Halstead, Ph.D., Chair  
Institutional Review Board  
University of Saint Joseph

C: IRB File

## APPENDIX D: EMAIL CONSENT WITH SURVEY LINK

Subject line: Participants Needed for Online Survey

Dear Graduate Student,

My name is Tamara O'Day-Stevens and I am a doctoral candidate at Colorado State University in the School of Education. I am conducting a research study on debt levels of students from their undergraduate studies. The title of my study is: "Personal and Societal Factors Associated with Student Debt Levels." The Principal Investigator is Dr. Sharon Anderson, School of Education, at Colorado State University and I am the Co-Principal Investigator.

We would like you to take an anonymous online survey. Your participation is voluntary. The survey should take you approximately 5 to 10 minutes to complete. If you decide to participate in the study, you may withdraw your consent and stop participation at any time without penalty.

We will not collect your name or personal identifiers. When we report and share the data to others, we will combine the data from all participants. While there are no direct benefits to you, we hope to gain more knowledge on the factors associated to increased debt levels for today's students which may help develop long term solutions- to help decrease educational debt.

There are no known risks to participation in this research study. It is not possible to identify all potential risks in research procedures, but the researcher(s) have taken reasonable safeguards to minimize any known and potential, but unknown, risks.

By clicking "Survey Link" below you acknowledge that you have read and understand that:

- Your participation in this survey is voluntary. You may withdraw your consent and discontinue participation in the project at any time. Your refusal to participate will not result in any penalty.
- You have given consent to be a subject of this research.

To participate in this research and to continue on to the survey, please click here:

[https://qtrial2013.qualtrics.com/SE/?SID=SV\\_cD7TcARcHxqmFkF](https://qtrial2013.qualtrics.com/SE/?SID=SV_cD7TcARcHxqmFkF)

If you have any questions about the research, please contact Tamara O'Day-Stevens at email: [tamarastevens3@gmail.com](mailto:tamarastevens3@gmail.com) and phone: 860-944-4489 or Dr. Sharon Anderson at email: [sharon.anderson@colostate.edu](mailto:sharon.anderson@colostate.edu) and phone: 970-491-6861.

If you have any questions about your rights as research participant or the administration of the

survey, please contact the Colorado State University Institutional Review Board Coordinator at RICRO\_IRB@mail.colostate.edu or 970-491-1553.

Sincerely,

Dr. Sharon Anderson  
Professor  
School of Education  
Colorado State University  
sharon.anderson@colostate.edu  
970.491.6861

Tamara O'Day-Stevens  
Ph.D. candidate  
School of Education  
Colorado State University  
tamarastevens3@gmail.com  
860-944-4489

APPENDIX E: CSU IRB APPROVAL LETTER



Research Integrity & Compliance  
Review Office Office of Vice  
President for Research Fort Collins,  
CO 80523-2011 (970) 491-1553 FAX  
(970) 491-2293

DATE: May 29, 2014

TO: Sharon Anderson, Education  
Tamara O'Day-Stevens, Education



FROM: Janell Barker, IRB Coordinator  
Research Integrity & Compliance Review Office

TITLE: Personal and Societal Factors Associated to Student Debt Levels

IRB ID: 090-15H      Review Date: May 29, 2014

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**This project is valid from three years from the review date.**

The Institutional Review Board (IRB) Coordinator has reviewed this project and has declared the study exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b)(1): Research conducted in established or commonly accepted education settings, involving normal education practices, such as a) research on regular and special education strategies, or 2) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods. The IRB determination of exemption means that:

- **This project is valid for three years from the initial review.** After the three years, the file will be closed and no further research should be conducted. If the research needs to continue, please let the IRB Coordinator know before the end of the three years. You do not need to submit an application for annual continuing review.
- You must carry out the research as proposed in the Exempt application, including obtaining and documenting (signed) informed consent if stated in your application or if required by the IRB.
- Any modification of this research should be submitted to the IRB through an email to the IRB Coordinator, prior to implementing any changes, to determine if the project still meets the Federal criteria for exemption.
- Please notify the IRB Coordinator if any problems or complaints of the research occur.

Please note that you must submit all research involving human participants for review by the IRB. **Only the IRB or designee may make the determination of exemption**, even if you conduct a similar study in the future.

## APPENDIX F: FINAL DISSERTATION DEBT SURVEY INSTRUMENT

Q1 What is your gender?

- Male (1)
- Female (2)
- Non-conforming (3)
- Prefer not to answer (4)

Q2 Please describe your race/ethnicity.

- White/Caucasian (1)
- Black/African American (2)
- Hispanic/Latino (3)
- Asian (4)
- American Indian (5)
- Pacific Islander (6)
- Multiracial (7)
- Prefer not to answer (8)

Q3 What is your age?

- 20 or younger (1)
- 21-26 (2)
- 27-32 (3)
- 33-39 (4)
- 40-46 (5)
- 47-52 (6)
- Over 52 (7)

Q4 Academic Major (area of study as an undergraduate student)

- Arts (English, Communications, Fine & Performing Arts or Foreign Languages) (1)
- Business (2)
- Sciences ( Biology, Chemistry, Mathematics, Nutrition or Nursing) (3)
- Education (4)
- Social Sciences (Anthropology, Criminology, Economics, History or Political Science) (5)
- Human Services ( Psychology, Sociology or Social Work) (6)
- Engineering (7)
- Other (8)

Q5 What was your undergraduate cumulative GPA (based on a 4.0 scale)

- 2.0 (1)
- 2.1-2.5 (2)
- 2.6-3.0 (3)
- 3.1-3.5 (4)
- 3.6-4.0 (5)

Q6 How many years did it take you to complete your undergraduate degree?

- Less than 4 years (1)
- 4 years (2)
- 5 years (3)
- 6 years (4)
- More than 7 years (5)

Q7 Please answer the following questions:

	Strongly Agree (1)	Agree (2)	Neither Agree nor Disagree (3)	Disagree (4)	Strongly Disagree (5)
I used credit cards to afford attending college (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I used federal loans to afford attending college (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I used private loans to afford attending college (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have used my student loans to pay for items other than college expenses (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8 What is the highest level of education completed by your parents or guardians? (Please combine and report the highest level of education for both of your parents/guardians-i.e. if your

mother completed her masters and your father completed his bachelor's degree you would select: master's degree below).

- Did not attend high school (1)
- Some High school (2)
- High school completed or GED (3)
- Some college, no degree (4)
- Associates degree (5)
- Bachelor's degree (6)
- Master's degree (7)
- Doctorate degree (8)
- Professional Degree (9)

Q9 What was your family's (parents or guardians) total annual income from all sources, in 2013, before taxes?

- less than \$20,000 (1)
- \$21,000-\$39,999 (2)
- \$40,000-\$59,999 (3)
- \$60,000-\$79,999 (4)
- \$80,000-\$99,999 (5)
- Over \$100,000 (6)

Q10 I would classify my family's socioeconomic status as:

- Poor (1)
- Lower middle class (2)
- Middle class (3)
- Upper middle class (4)
- Rich (5)

Q11 The approximate amount of my total undergraduate debt (student loans, credit cards, car loans, etc.) (\*do not include mortgage debt into this amount) was:

- \$0.00 (1)
- Under \$10,000 (2)
- Under \$20,000 (3)
- Under \$30,000 (4)
- Under \$40,000 (5)
- Under \$60,000 (6)
- Under \$80,000 (7)
- Under \$120,000 (8)
- Under \$140,000 (9)
- Under \$160,000 (10)
- Under \$180,000 (11)
- Under \$200,000 (12)

Q12 Please write your specific total debt amount in the text box below. Do not use the following: the dollar symbol (\$) before the first number, any commas or decimal points. For example: if your total debt equals \$30,000.00, please just write 30000.

Q15 The approximate total amount of my undergraduate federal loan debt was (i.e. Stafford loans, Perkins, PLUS):

- \$0.00 (1)
- Under \$10,000 (2)
- Under \$20,000 (3)
- Under \$30,000 (4)
- Under \$40,000 (5)
- Under \$60,000 (6)
- Under \$80,000 (7)
- Under \$120,000 (8)
- Under \$140,000 (9)
- Under \$160,000 (10)
- Under \$180,000 (11)
- Under \$200,000 (12)

Q16 The approximate amount of my total credit card debt during my undergraduate education was:

- \$0.00 (1)
- Under \$10,000 (2)
- Under \$20,000 (3)
- Under \$30,000 (4)
- Under \$40,000 (5)
- Under \$60,000 (6)
- Under \$80,000 (7)
- Under \$120,000 (8)
- Under \$140,000 (9)
- Under \$160,000 (10)
- Under \$180,000 (11)
- Under \$200,000 (12)

Q17 My undergraduate debt level is a result of:

	Strongly Agree (1)	Agree (2)	Neither Agree or Disagree (3)	Disagree (4)	Strongly Disagree (5)
Tuition and college costs (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Having a car (2)	<input type="radio"/>				
Medical and/or health expenses (3)	<input type="radio"/>				
Changing my major and/or taking longer to graduate than expected (4)	<input type="radio"/>				
Lack of financial support from my family (5)	<input type="radio"/>				
Misuse of credit cards (6)	<input type="radio"/>				
Unexpected family changes (death, divorce, relocation) (7)	<input type="radio"/>				
Poor academic advising that led to longer enrollment (8)	<input type="radio"/>				
Participation in enrichment programs (i.e. study abroad) (9)	<input type="radio"/>				
Not having good financial/money management skills (10)	<input type="radio"/>				
Not understanding the financial aid process (11)	<input type="radio"/>				

## APPENDIX G: REMINDER EMAIL FOR NONRESPONDENTS

Subject Line: Online Survey Reminder

Dear Graduate Student,

Reminder #1. [Recently you were sent a request to participate in an important survey about Student Debt].

My name is Tamara O'Day-Stevens and I am a doctoral candidate at Colorado State University in the School of Education. I am conducting a research study on debt levels of students from their undergraduate studies. The title of my study is: "Personal and Societal Factors Associated with Student Debt Levels." The Principal Investigator is Dr. Sharon Anderson, School of Education, at Colorado State University and I am the Co-Principal Investigator.

We would like you to take an anonymous online survey. Your participation is voluntary. The survey should take you approximately 5 to 10 minutes to complete. If you decide to participate in the study, you may withdraw your consent and stop participation at any time without penalty.

We will not collect your name or personal identifiers. When we report and share the data to others, we will combine the data from all participants. While there are no direct benefits to you, we hope to gain more knowledge on the factors associated to increased debt levels for today's students which may help develop long term solutions- to help decrease educational debt.

There are no known risks to participation in this research study. It is not possible to identify all potential risks in research procedures, but the researcher(s) have taken reasonable safeguards to minimize any known and potential, but unknown, risks.

By clicking "Survey Link" below you acknowledge that you have read and understand that:

- Your participation in this survey is voluntary. You may withdraw your consent and discontinue participation in the project at any time. Your refusal to participate will not result in any penalty.
- You have given consent to be a subject of this research.

To participate in this research and to continue on to the survey, please click here:

[https://qtrial2013.qualtrics.com/SE/?SID=SV\\_cD7TcARcHxqmFkF](https://qtrial2013.qualtrics.com/SE/?SID=SV_cD7TcARcHxqmFkF)

If you have any questions about the research, please contact Tamara O'Day-Stevens at email: [tamarastevens3@gmail.com](mailto:tamarastevens3@gmail.com) and phone: 860-944-4489 or Dr. Sharon Anderson at email: [sharon.anderson@colostate.edu](mailto:sharon.anderson@colostate.edu) and phone: 970-491-6861.

If you have any questions about your rights as research participant or the administration of the survey, please contact the Colorado State University Institutional Review Board Coordinator

at RICRO\_IRB@mail.colostate.edu or 970-491-1553.

Sincerely,

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Professor  
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Colorado State University  
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Tamara O'Day-Stevens  
Ph.D. candidate  
School of Education  
Colorado State University  
tamarastevens3@gmail.com  
860-944-4489

## APPENDIX H: INTRODUCTORY E-MAIL FOR PILOT SURVEY PARTICIPANTS

Hello <Name>,

My name is Tamara O'Day-Stevens, and I am a doctoral student at Colorado State University in the Higher Education Leadership Program. Below, you will find a link for a pilot study I am conducting with graduate students on the important topic of debt, specifically factors that are contributing to the rise in educational debt for today's student. The link below will bring you to the informed consent information, as well as the survey questions. The entire survey should take approximately 5-10 minutes to complete. I would appreciate your help as I begin my journey into the dissertation phase of my program.

To participate in the survey, please click [HERE](#) to start, or copy and paste this link into your web address bar:

If you have any questions my phone number is 860.944.4489 and my e-mail is tamarastevens3@gmail.com. Have a wonderful day!

Sincerely,

Tamara O'Day- Stevens