

Examining the Influence of Personal Finance Education on Decision-Making among Graduate Students

by

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Abstract

Graduate students enrolled in programs leading to careers in health-related fields graduate with some of the highest student loan debt levels of any educational disciplines. Colleges and universities that participate in the Federal loan programs are required to educate these student borrowers during mandatory entrance and exit counseling about their repayment obligation, repayment plans and schedules, and the deferment and forbearance options, and the borrower's rights and responsibilities (U.S. Department of Education, 2008).

There is a gap in the research in identifying how financial literacy education influences future financial decision-making among students who attend financial educational sessions. This study specifically investigated the results of financial education sessions at a medical school and pharmacy school at two universities in the southeastern United States. The research determined how and to what extent financial programs influenced students' financial decision-making behavior after participation in personal finance education sessions.

A one-way analysis of variance (ANOVA) was calculated with the independent variable being the number of financial education sessions attended and participants' scores, based on answers to questions about financial decision-making. The results of the ANOVA analysis suggested that there was a positive correlation between the number of financial education sessions attended and responsible financial behavior. The results of a post-hoc LSD test indicated that participants who attended financial education sessions had higher scores than those who did not.

In order to determine if personal finance education influenced responsible financial behavior, the results suggested there was a statistically significant relationship between students' participation in personal finance education sessions and students' responsible financial behavior.

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Chapter 1

Introduction

The Project on Student Debt reports that the class of 2011 found that the debt levels of students who graduate with loans continued to rise, with considerable variation among states as well as among colleges. The report estimates that two-thirds (66%) of college seniors who graduated in 2011 had student loan debt, with an average of \$26,600 for those with student loans. The five percent increase in average debt at the national level is similar to the average annual increase over the past few years. Also similar to previous years, about one-fifth of graduates' debt is comprised of private loans (Reed & Cochrane, 2012).

State averages for student debt at (the) time of graduation from four-year colleges and institutions ranged widely in 2011, from \$17,227 in Utah to \$32,440 in New Hampshire. Depending on the institution, the average amount of debt per student varied widely. High-debt states remain concentrated in the Northeast and Midwest, with low-debt states mainly in the West and South. Average debt continues to vary even more at the campus level than at the state level, from \$3,000 to \$55,250. Colleges with higher costs tend to have higher average debt, but there are many examples of high-cost colleges with low average debt, and vice versa (Reed & Cochrane, 2012).

Recent college graduates have entered an enormously difficult job market, which poses particular challenges for those who need to begin paying back student loans. The unemployment rate for young college graduates in 2011 remained high at 8.8 percent, a slight decrease from

2010, which saw the highest annual rate on record for this group (9.1%). In addition, many more young graduates were considered underemployed. Among those who wanted to be working full time, as many as 19.1 percent were either working part time or had given up looking for work. Further, 37.8 percent of working young graduates had jobs that did not require a college degree, depressing their wages (Reed & Cochrane, 2012).

In addition, median credit card debt among college students grew from \$946 in 2004 to \$1,645 in 2009 (both figures in 2004 dollars), a 74% increase (Sallie Mae 2009). There are other potentially costly consequences of accumulating high levels of debt early on, such as bankruptcy (Roberts & Jones, 2001).

Debt loads are of particular concern given evidence that young people may lack sufficient knowledge to successfully navigate their financial decisions. For instance, a National Council on Economic Education study of high school students and working-age adults showed widespread lack of knowledge among respondents regarding fundamental economic concepts (National Council on Economic Education, 2005), confirming evidence provided by the Jump\$tart Coalition for Personal Financial Literacy (Mandell, 2008). Policymakers have become so concerned about young people's finances that the Credit Card Accountability, Responsibility, and Disclosure Act (2009) included several provisions specifically targeted at protecting younger credit card consumers. Credit cards are not issued to young people under the age of 21 unless they have an adult co-signer or can show proof that they have the means to repay the debt; college students will be required to receive permission from parents or guardians to increase credit limits on joint accounts; and those under 21 will be protected from pre-screened credit card offers unless they specifically opt in for the offers (Credit Card Accountability, Responsibility and Disclosure Act, 2009).

Financing a degree in higher education is an increasing burden for students as the cost of education continues to rise faster than the rate of inflation and the payback of student loan debt, over a period of up to 30 years, impacts future financial decisions and lifestyle choices (Draut, 2005; Kamenetz, 2005). Additionally, many students begin college with little knowledge or skill related to basic consumer finance (U.S. Department of Education, 2008).

Some financial literacy programs are evaluated based on student satisfaction, content learned, or where others have no method of evaluation. While evaluating whether the content is learned is important, the students' application of the content is even more critical. There is a substantial gap in the research on translating financial literacy education programs into changes in students' subsequent responsible financial behavior (Brown, 2009).

The U.S. Department of Education (FY 2009) reported national student loan cohort default rate, which rose from 7.0 percent in FY 2008 to 8.8 percent in FY 2009. The cohort default rates increased for all sectors from 6.0 percent to 7.2 percent for public institutions, from 4.0 percent to 4.6 percent for private institutions, and from 11.6 percent to 15 percent at for-profit schools. The default rates represent a snapshot in time, with the FY 2009 cohort consisting of borrowers whose first loan repayments came due between Oct. 1, 2008, and Sept. 30, 2009, and who defaulted before Sept. 30, 2010. More than 3.6 million borrowers from 5,900 schools entered repayment during this window of time, and more than 320,000 defaulted (U. S. Department of Education, 2011).

“These hard economic times have made it even more difficult for student borrowers to repay their loans, and that’s why implementing education reforms and protecting the maximum Pell grant is more important than ever,” according to Duncan. “We need to ensure that all students are able to access and enroll in quality programs that prepare them for well-paying jobs

so they can enter the workforce and compete in our global marketplace” (U.S. Department of Education, 2011, para. 4).

College and university financial aid professionals nationwide have made efforts to educate their students on matters of financial literacy with hopes of decreasing reliance on student loans and credit cards, and improving personal finance (U.S. Department of Education, 2001). Some financial literacy programs evaluate their effectiveness through student satisfaction or content learned where others use no method of evaluation. While evaluating whether the content is learned is certainly important, the students’ application of that learned content is even more critical. How financial literacy education programs translate into changes in students’ subsequent responsible financial behavior has not been extensively researched (Brown, 2009). Durban and Britt (2012) interviewed campus student affairs administrators to learn the delivery methods used in financial education. The researchers found a wide variety of delivery methods were used including for-credit courses, one-time workshops, one-on-one personalized sessions, and online tutorials. The results another survey indicated that regardless of the delivery method of the lessons, evidence of long-term benefit is still needed (Braunstein & Welch, 2002).

Graduate students enrolled in programs leading to careers in health-related fields graduate with some of the highest student loan debt levels of any educational disciplines. Colleges and universities that participate in the Federal loan programs are required to educate these student borrowers during mandatory entrance and exit counseling about their repayment obligation, repayment plans and schedules, and the deferment and forbearance options, and the borrower’s rights and responsibilities (U.S. Department of Education, 2008).

In addition to mandatory counseling some schools offer further sessions on financial literacy topics such as budgeting, investing, starting a practice, buying a car or home, evaluating

and managing credit reports and scores, and planning for retirement (Cude, et al., 2007). While students typically attend these programs, evaluation of their influence on responsible financial behavior is virtually nonexistent (Brown, 2009).

There is a gap in research in what ways financial literacy education influenced future responsible financial behavior among students who attended financial educational sessions. This study specifically investigated the results of financial education sessions at a medical school and pharmacy school at two universities in the Southeastern United States. The research determined how and to what extent financial programs influenced students' responsible financial behavior after participation in personal finance education sessions.

In terms of annual borrowing, first year professional students, such as those entering pharmacy or medical school, were the most likely to take out loans in 2003–04. 78 percent of first professional students took out loans compared to 40 percent of master's students and 30 percent of doctoral students. First professional students also borrowed the most, \$26,000 on average compared to \$13,500 for graduate students working toward a master's degree. The average student loan amount was \$17,800 at the doctoral level. Doctoral students borrowed at a lower rate but 19 percent were foreign/international students and thus ineligible to participate in federal student loan programs (see Tables 1-3) (Choy & Cataldi, 2006).

Nationwide efforts on the part of colleges and universities to educate students on issues of financial literacy, debt management, loan repayment options, and the consequences of loan default are recognized as contributing to the dramatic reduction in the nation's cohort default rate from a high in 1992 of 22.4 percent to 6.9 percent in 2000 (U.S. Department of Education, 2001). These programs contributed to further reducing this rate over the following five years to the all-time low in 2005 of 4.5 percent (U.S. Department of Education, 2009). However, these

programs were rarely measured to evaluate the impact of the education about responsible financial behavior. The financial aid industry emphasized the importance of personal finance education and the benefit to students, but the specific ways it influences future financial decisions has had little exploration.

Studies have been conducted to evaluate the need for personal financial literacy education at the college level (Chen & Volpe, 1998; Cude, Lawrence, Lyons, Metzger, LeJeune, et al., 2006; Jariah, Husniyah, Laily, & Britt, 2004; Lyons, 2004/2005; Lyons, Hogarth, Schuchardt, Smith, & Toussaint-Comeau, 2003). Surveys have been conducted to evaluate students' satisfaction levels with the programs and to ascertain if they were meeting students' perceived needs and desires for personal finance education. A few studies at colleges and universities have conducted pre- and post-tests to assess the learning of content taught in the programs (Borden, Lee, Seriodo, & Collins, 2007; Gross, Ingham, & Matasar, 2005; Peng, Bartholomae, Fox, & Cravener, 2007). One program evaluated the students' anticipated future behaviors about the financial topics studied (Borden et al.). Before Brown's (2009) study, it had not been determined if the content learned was then applied when a student faced real-life financial decisions. It is essential for institutions to have an assessment that determines the effectiveness of their programs on future responsible financial behavior; simply evaluating the learning of content does not measure the extent to which these programs truly impact students' financial lives.

Within the specialized field of enrollment management in higher education, financing an education is an important issue. Enrollment managers in the graduate level students in health-related fields, in particular, are concerned with how the cost of professional education and the almost exclusive reliance on student loans to finance that education, affects their recruitment efforts. Additionally, these enrollment managers are concerned with how student loan debt and

students' overall financial responsibilities will affect student success, performance, and attrition. These comprehensive personal finance education programs are important to manage the institution's cohort default rate, but also to the institution as a whole. The importance of these programs permeates virtually every area of a university. A financial aid office may be the most obvious group that benefits from students' changes in decision-making regarding finances. Ability to pay and understanding of financial aid options available are important during the recruitment process. An applicant who is comfortable with the financial implications of attending a particular institution is going to be less likely to use finances as a reason to decline admission. The financial aid office is typically responsible for the institution's cohort default rate so personal finance education could make a positive impact on the students' decisions regarding repayment of these loans (Brown, 2009).

A real dilemma of student debt is that while for some students, the availability of low-interest loans widens opportunities, for others, the increasing prominence of loans could actually narrow their options and decrease their chances of attending and completing college. Given the critically important role of student loans in the financial aid equation, some students' and families' perceptions about debt could interfere with loan programs' ability to achieve their goal of equalizing opportunity for students at all income levels (Burdman, 2005). Gladieux and Perna (2005) found that borrowers are twice as likely to be unemployed and are ten times more likely to default if they do not complete their degrees.

Purpose of the Study

The purpose of this study was to examine the extent of participation in personal finance education sessions and how the sessions influenced responsible financial behavior among graduate students in health-related fields. This study examined the amount of personal finance

education and how financial education influenced student loan borrowing, how students budgeted and spent their money while in school, how it affected review of their credit reports and scores, and how participation influenced their decisions on the use of credit cards.

This study determined the effects personal financial education has on responsible financial behavior for students enrolled in medical school or pharmacy schools, both located in the Southeastern United States. This topic was important to determine if educating students in personal finance influenced students to make responsible financial decisions in order to minimize their student loan debt and repayment burden, ultimately ensuring the ability to repay their loans. It was also important to discover if there is a difference in responsible financial behavior among students who participated in personal finance education sessions when compared to those who did not participate (Brown, 2009).

Research Question

The following research question was investigated in this study:

What is the relationship between the number of personal finance education sessions among graduate students in health-related fields and their responsible financial behavior?

The participants in this study were medical and pharmacy students enrolled in medical school or pharmacy school. There were two hypotheses to be tested (at the $\alpha = .05$ level).

Statement of the Problem

There is a gap in research in what ways personal finance education influenced responsible financial behavior among students who attended personal finance education sessions. This study was significant as it explored an area that had little previous research. Personal finance educational programs are prevalent in higher education, but measurement of the effectiveness of these programs is limited. Satisfaction surveys abound, and pre- and post-tests

are considered extraordinary in the effort to measure success. Examples include the National Endowment for Financial Education's CashCourse, which allows participating colleges and universities to choose whether to evaluate, as well independently determining the design of the evaluation instrument. Bowling Green State University's financial education program asks students to identify the most valuable part of the session. The impact of these programs on students' responsible financial behavior had not been extensively explored. Brown (2009) was the first study that examined the influence these programs have had on the subsequent actions students take in the financial aspect of their lives.

Significance of the Study

This study may begin a national dialogue within the financial aid community regarding program evaluation. By evaluating the impact of these programs, a nationwide standard for evaluation of the influence of financial literacy education could be created.

Assumptions

One assumption is that the sample of participants in this study was representative of graduate students within the medical and pharmacy colleges and schools. The sample chosen was from a medical college and a pharmacy school, both located in the Southeastern United States. The sample chosen was from pharmacy and medical school profession disciplines, so was also not necessarily representative of high school students, undergraduate college students, or of graduate students in other disciplines. Another assumption is that due to previous use of the instrument with analysis, (Brown, 2009) it was assumed that the survey instrument is both valid and reliable.

Limitations

A limitation of the study is that the sample does not necessarily mirror the national population's demographics, educational attainment levels, or economic circumstances. Another limitation of this study is that the long-term impact of these programs is unknown. This study surveyed students who were still completing their education and not yet working full-time. It only examined the influence of the program on their decision-making while in school and their current financial circumstances. Attendance in the personal finance education sessions is an additional limitation of the study. Those who attended more personal finance education sessions may have been individuals who were more fiscally responsible than those who chose not to attend the sessions. This interest in being fiscally responsible could be the reason the students chose to attend the additional sessions and responded with more positive responsible financial behavior on the survey. It is assumed for this study that participants were all interested in attending personal finance education sessions and is not a limitation of this study. One more limitation of this study is that the participants were not randomly selected. Academic department heads of each participating school sent students the website link for participation in the study.

Delimitations

Due to the large number of potential participants in the study population, the population involved in the current study focused only on graduate students enrolled in medical or pharmacy, schools at two universities in the Southeastern United States to participate in the study.

Definitions

The following terms are used throughout this paper.

Cohort — borrowers who enter repayment in a given fiscal year

Cohort default rates — the rate calculated by dividing the number of borrowers who defaulted at the end of the specified time interval, by the total number of borrowers in the cohort; a cohort of student borrowers who entered repayment in the same year may be tracked over a specific time interval to determine the percentage of students who default on their loans; a cohort default rate may also be based on the total dollar amount loaned to students. In this case, the rate would be expressed as the percentage of dollars borrowed that are defaulted

Default — failure to repay a loan in accordance with the terms of the promissory note

Deferment — the temporary postponement of loan payments

Delinquency — Incidents of late or missed loan payments, as specified in the terms of the promissory note and the selected repayment plan

Dependent student — a student that is financially dependent upon a parent or legal guardian or a student who does not meet certain criteria for being classified as independent

Financial literacy — the ability to use knowledge and skills to manage one's financial resources effectively for lifetime financial security

Forbearance — an arrangement to postpone or reduce a borrower's monthly payment amount for a limited and specified period, or to extend the repayment period; the borrower is charged interest during forbearance

Independent student — a student who meets one of the following criteria: The student is 24 years or older, a graduate or professional student, married, orphaned or a ward of the court, veteran of the armed services, or has documents describing circumstances of independence

National cohort default rate — the number of student borrowers that entered repayment in a cohort fiscal year and defaulted on these loans divided by the total number of student borrowers that entered repayment in the cohort fiscal year

Personal finance — all financial decisions and activities of an individual, this could include budgeting, insurance, savings, investing, debt servicing, mortgages and more.

Organization of the Study

Chapter 1 introduces the study, presenting the problem, purpose, research questions, limitations, and definition of terms. Chapter 2 includes a review of related literature concerning experiential learning, desired competencies in personal finance, and utility concepts. Chapter 3 reports the procedures utilized in this study, including the population and sample, instrumentation, the method of data collection, and the data analysis. The findings of the study are presented in Chapter 4. Chapter 5 includes a summary of the study, conclusions, implications, and recommendations for further practice and research.

Summary

College students have debt levels that continued to rise, with considerable variation among states as well as among colleges. The Report on Student debt estimates that two-thirds (66%) of college seniors who graduated in 2011 had student loan debt, with an average of \$26,600 for those with student loans. The five percent increase in average debt at the national level is similar to the average annual increase over the past few years. Also similar to previous years, about one-fifth of graduates' debt is comprised of private loans (Reed & Cochrane, 2012).

The purpose of this study was to examine the extent of participation in personal finance education sessions and how the sessions influenced responsible financial behavior among graduate students in health-related fields. This study examined the amount of personal finance education and how financial education influenced student loan borrowing, how students budgeted and spent their money while in school, how it affected review of their credit reports and scores, and how participation influenced their decisions on the use of credit cards.

This study may begin a national dialogue within the financial aid community regarding program evaluation. By evaluating the impact of these programs, a nationwide standard for evaluation of the influence of financial literacy education could be created.

Table 1

Percentage distribution of doctoral degree students' demographic, enrollment, and employment characteristics, average age, and percentage who worked full time, by type of degree: 2003–04

Student, enrollment, and employment characteristics	Total	Ph.D. (except in education)	Education (any doctorate)	Any other doctoral degree
Total	100.0	100.0	100.0	100.0
Gender				
Male	49.2	54.8	35.9	44.9
Female	50.8	45.2	64.1	55.1
Citizenship				
U.S. citizen	77.1	68.6	91.1	87.1
Foreign/international student	19.4	27.7	6.8	9.1
Delay after bachelor's degree	19.5	21.4	3.0	25.0
Full-time/part-year	7.0	8.4	3.4	5.9
Part-time/full-year	33.1	30.1	57.0	25.4
Part-time/part-year	9.6	7.6	15.5	10.3

Institution type				
Public	58.9	65.7	58.7	44.4
Private not-for-profit	36.5	32.1	34.8	47.2
More than one institution	2.5	1.6	6.6	2.0
Primary role				
Student working to meet expenses	56.1	69.9	27.5	43.3
Employee enrolled in school	26.4	15.1	65.8	27.6
Student, not working	17.5	15.1	6.6	29.2
Average age as of 12/31/03	32.9	31.6	40.0	31.6
Worked 35 or more hours per week ¹	37.2	29.9	70.4	33.4

Rounds to zero.

¹ Based on all students, including those who did not work.

NOTE: Data include students in Puerto Rico. Detail may not sum to totals because of rounding. Standard error tables are available at <http://nces.ed.gov/das/library/reports.asp>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2003–04 National Postsecondary Student Aid Study (NPSAS:04).

Table 2

Percentage distribution of first-professional students' demographic, enrollment, and employment characteristics, average age, and percentage who worked full time, by type of degree: 2003–04

Student, enrollment, and employment characteristics	Total	Medicine (M.D.)	Other health science	Law (L.L.B. or J.D)	Theology
Total	100.0	100.0	100.0	100.0	100.0
Gender					
Male	53.2	48.9	46.9	54.0	77.0
Female	46.8	51.1	53.1	46.0	23.0
Citizenship					
U.S. citizen	93.0	95.8	89.1	97.2	77.9
Resident alien	4.4	3.6	9.0	2.1	4.2
Foreign/international student	2.7	0.7	1.9	0.7	17.9
Delay after bachelor's degree					
Less than 1 year	34.4	41.9	40.4	30.8	15.5
1–2 years	32.1	36.4	34.4	30.9	20.9
3–6 years	21.3	18.1	18.0	24.9	23.2
7 years or more	12.1	3.6	7.3	13.4	40.4
Attendance pattern					
Full-time/full-year	80.2	93.5	92.0	78.5	23.9
Full-time/part-year	4.6	2.7	3.5	6.5	4.5
Part-time/full-year	11.9	3.6	4.5	13.8	43.9
Part-time/part-year	3.3	0.3	#	1.2	27.7
Institution type	39.8	55.4	48.7	34.5	#

Public					
Private not-for-profit	57.7	42.5	48.8	62.7	97.8
Private for-profit	#	#	#	#	#
More than one institution	2.5	2.1	2.5	2.8	2.2
Primary role					
Student working to meet expenses	39.5	29.5	47.7	40.6	39.5
Employee enrolled in school	8.1	2.5	4.0	9.8	25.8
Student, not working	52.4	68.1	48.4	49.6	34.7
Average age as of 12/31/03	27.5	25.6	26.5	27.6	34.6
Worked 35 or more hours per week*	11.8	7.1	7.0	13.2	30.0

Rounds to zero.

* Based on all students, including those who did not work

NOTE: Data include students in Puerto Rico. Detail may not sum to totals because of rounding. Standard error tables are available at <http://nces.ed.gov/das/library/reports.asp>.
 SOURCE: U.S. Department of Education, National Center for Education Statistics, 2003–04 National Postsecondary Student Aid Study (NPSAS: 04).

Table 3

Average amount of financial aid received by aided graduate and first-professional students, by type of aid, type of degree, and selected student characteristics: 2003-04.

Type of degree and student characteristics	Any aid	Grants	Loans	Assistant-ships	Tuition waivers	Stafford loans	Work study
All students							
U.S. total (excluding Puerto Rico)	\$15,200	\$5,700	\$16,900	\$10,100	\$6,600	\$15,500	\$3,500
Total (50 states, DC, and Puerto Rico)	15,100	5,700	16,800	10,000	6,500	15,400	3,500
Master's students							
U.S. total (excluding Puerto Rico)	11,700	4,500	13,500	8,300	5,500	12,900	3,400
Total (50 states, DC, and Puerto Rico)	11,700	4,500	13,500	8,300	5,300	12,800	3,400
Gender							
Male	11,900	5,100	13,800	8,200	6,300	12,800	3,500
Female	11,500	4,000	13,300	8,400	4,700	12,800	3,300
Race/ethnicity ⁵							
White	11,100	4,200	13,100	8,500	5,000	12,500	3,100
Black	13,600	4,800	14,300	7,600	‡	14,200	‡
Hispanic	12,200	3,500	14,200	7,500	‡	13,100	‡
Asian/Pacific Islander	12,500	6,000	15,000	8,900	7,000	13,400	‡
Other	13,700	6,200	13,000	‡	‡	11,300	‡
Age as of 12/31/03							

Younger than 25	13,500	6,000	12,100	8,600	6,300	11,700	3,100
25–29	12,800	4,700	14,200	8,400	6,000	12,800	‡
30–34	10,600	4,100	13,500	8,200	3,700	13,100	‡
35–39	10,000	3,600	13,800	‡	‡	13,500	‡
40 or older	9,900	3,500	13,600	7,800	2,800	13,300	‡
Marital status							
Married	9,500	3,900	12,700	6,600	4,100	12,600	‡
Not married or separated	13,300	5,000	13,900	8,900	6,000	12,900	3,200
Income in 2002 (including spouse's)							
Less than \$5,000	13,400	6,200	12,600	7,900	9,100	11,800	‡
\$5,000–9,999	15,700	5,700	14,300	8,700	5,000	13,000	‡
\$10,000–19,999	14,800	5,600	14,000	9,400	4,900	13,100	‡
\$20,000–29,999	12,900	4,400	12,900	7,100	4,500	12,200	‡
\$30,000–49,999	11,300	4,100	13,300	8,600	5,000	12,700	‡
\$50,000 or more	8,700	3,800	14,000	7,000	3,500	13,600	‡
Citizenship							
U.S. citizen	11,600	4,200	13,400	8,200	4,700	12,700	3,300
Resident alien	13,700	6,000	16,900	‡	‡	14,500	‡
Foreign/international student	11,500	6,900	‡	8,400	7,900	‡	‡

See notes at end of table.

Table 3

Average amount of financial aid received by aided graduate and first-professional students, by type of aid, type of degree, and selected student characteristics: 2003–04—Continued

Type of degree and student characteristics	Any aid	Grants	Loans	Assistant-ships	Tuition waivers	Stafford loans	Work study
Master's degree/program	\$12,600	\$4,900	\$16,200	\$7,500	‡	\$14,300	‡
Business administration	9,500	2,800	12,500	7,800	4,300	12,300	‡
(M.B.A.) Education (any master's)	12,400	5,100	12,300	8,000	5,700	12,200	‡
M.A. except in education	12,000	5,100	13,600	9,400	6,200	12,800	‡
M.S. except in education	13,100	5,200	13,200	6,800	4,500	12,600	‡
Any other master's degree	12,900	5,700	13,200	7,500	5,400	12,400	‡
Graduate field of study	14,700	5,700	12,700	8,900	‡	12,500	‡
Humanities	14,000	5,700	11,200	10,800	‡	11,200	‡
Social/behavioral sciences	11,200	6,000	12,100	9,200	6,900	12,100	‡
Life and physical sciences	9,500	2,800	12,400	8,300	4,300	12,300	‡
Engineering/computer science/mathematics	11,900	4,500	15,300	6,300	5,000	14,000	‡
Education	14,200	3,900	15,600	5,400	3,400	14,200	‡
Business/management	12,300	5,300	12,000	8,500	5,300	11,400	‡
Health							
Other/undeclared							
U.S. total (excluding Puerto Rico)	20,200	10,300	17,800	13,300	8,300	16,800	5,000
Total (50 states, DC, and Puerto Rico)	20,200	10,200	17,800	13,300	8,300	16,700	5,000
Gender							
Male	20,200	10,700	16,000	13,700	8,800	14,800	4,800
Female	20,200	9,800	19,200	12,700	7,600	18,100	5,100
Race/ethnicity ⁵							
White	20,100	9,900	17,400	13,100	7,900	16,200	4,800

Black	18,700	8,600	19,300	12,300	8,100	18,400	‡
Hispanic	20,300	10,500	17,300	11,700	6,000	16,600	‡
Asian/Pacific Islander	20,700	11,800	17,700	13,900	9,800	17,400	‡
Other	21,900	9,900	20,100	14,100	6,700	18,300	‡
Age as of 12/31/03							
Younger than 25	26,700	13,400	23,100	14,400	10,400	20,800	‡
25–29	23,200	11,900	18,700	14,400	8,900	16,700	4,600
30–34	18,500	9,400	14,900	12,700	7,100	15,200	‡
35–39	15,200	7,300	14,700	10,100	6,800	14,100	‡
40 or older	11,600	5,600	14,400	10,200	5,700	14,800	‡
Marital status							
Married	17,200	9,000	15,600	13,000	7,400	15,500	6,600
Not married or separated	22,400	11,200	19,100	13,500	8,800	17,500	4,400

See notes at end of table.

Table 3

Average amount of financial aid received by aided graduate and first-professional students, by type of aid, type of degree, and selected student characteristics: 2003–04—Continued

Type of degree and student characteristics	Any aid	Grants	Loans	Assistant-ships	Tuition waivers	Stafford loans	Work study
Income in 2002 (including spouse's) Less than \$5,000	\$24,400	\$9,200	\$23,400	\$11,600	\$7,900	\$21,000	‡
\$5,000–9,999	22,500	10,400	19,400	10,600	8,600	16,600	‡
\$10,000–19,999	22,100	11,800	16,000	13,300	9,400	14,900	‡
\$20,000–29,999	22,600	12,600	15,100	15,200	8,500	14,900	‡
\$30,000–49,999	20,600	11,000	17,000	14,200	7,200	16,800	‡
\$50,000 or more	13,600	7,300	14,700	11,700	6,800	15,000	‡
Citizenship							
U.S. citizen	20,400	9,800	18,100	12,900	7,600	16,800	4,500
Resident alien	19,300	11,000	18,300	13,800	6,500	17,200	‡
Foreign/international student	19,600	11,500	6,700	14,000	10,000	‡	‡
Doctoral degree/program							
Ph.D. except in education	21,200	12,200	12,800	14,000	8,500	12,300	7,200
Education (any doctorate)	12,700	5,300	15,000	10,100	6,200	15,400	‡
Any other doctoral degree	21,700	7,000	22,800	10,100	7,900	20,700	3,800
Graduate field of study							
Humanities	15,600	9,600	11,500	10,300	6,900	11,500	‡
Social/behavioral sciences	20,600	10,200	16,400	11,600	8,600	15,500	‡
Life and physical sciences	23,500	13,700	11,100	15,500	7,700	11,300	‡
Engineering/computer science/mathematics	21,500	12,300	11,200	14,500	9,900	10,700	‡
Education	12,800	5,300	15,100	10,200	6,200	15,600	‡
Business/management	15,200	8,500	13,800	12,600	6,800	13,800	‡

Other/undeclared First-professional students	23,200	9,500	22,800	13,600	8,100	20,300	3,600
U.S. total (excluding Puerto Rico)	27,700	7,100	26,500	7,500	7,200	22,600	2,900
Total (50 states, DC, and Puerto Rico)	27,500	7,100	26,400	7,500	7,200	22,500	2,900
Gender							
Male	26,900	8,100	25,700	9,400	‡	21,900	3,200
Female	28,200	5,900	27,100	5,400	‡	23,200	2,600
Race/ethnicity							
White	27,500	6,800	26,300	8,200	8,100	22,400	2,800
Black	28,100	11,300	24,400	‡	‡	21,100	‡
Hispanic	26,900	7,000	24,200	‡	‡	21,000	‡
Asian/Pacific Islander	27,300	6,600	28,700	‡	‡	25,600	‡
Other	29,400	‡	28,200	‡	‡	22,100	‡

See notes at end of table.

Table 3

Average amount of financial aid received by aided graduate and first-professional students, by type of aid, type of degree, and selected student characteristics: 2003–04—Continued

Type of degree and student characteristics	Any aid	Grants	Loans	Assistant-ships	Tuition waivers	Stafford loans	Work study
Age as of 12/31/03							
Younger than 25	\$29,400	\$6,400	\$27,900	‡	‡	\$23,200	\$3,400
25–29	28,300	7,300	26,400	9,100	‡	22,600	‡
30–34	25,100	6,700	25,100	‡	‡	22,700	‡
35–39	22,500	‡	19,700	‡	‡	18,900	‡
40 or older	14,400	3,900	19,700	‡	‡	‡	‡
Marital status							
Married	25,900	6,100	26,000	‡	‡	23,500	‡
Not married or separated	28,000	7,400	26,500	7,500	8,500	22,300	2,900
Income in 2002 (including spouse's)							
Less than \$5,000	29,800	6,300	28,200	8,300	‡	24,500	3,500
\$5,000–9,999	26,700	8,000	23,200	‡	‡	20,300	‡
\$10,000–19,999	28,100	8,100	27,200	‡	‡	21,800	‡
\$20,000–29,999	26,400	8,200	25,300	‡	‡	21,400	‡
\$30,000–49,999	27,100	5,700	26,500	‡	‡	21,500	‡
\$50,000 or more	21,500	7,300	23,700	‡	‡	21,600	‡
Citizenship							

U.S. citizen	27,700	7,000	26,200	7,300	7,200	22,300	3,000
Resident alien	31,900	‡	31,900	‡	‡	27,600	‡
Foreign/international student	‡	‡	‡	‡	‡	‡	‡
First-professional degree/program							
Medicine (M.D.)	33,700	7,200	32,000	7,300	‡	29,400	‡
Other health science degree	29,200	4,700	28,400	‡	‡	25,700	2,600
Law (L.L.B. or J.D.)	25,600	8,400	23,000	5,200	‡	17,600	‡
Theology (M.Div., M.H.L., B.D.)	11,800	7,100	10,800	‡	‡	10,400	‡

Notes:

‡ Reporting standards not met.

Grants include scholarships, fellowships, tuition waivers, and employer aid.

Assistantships are based on amounts reported by students or institutions.

Waivers are included in “Grants” column as well.

Stafford loans are included in “Loans” column as well.

Race/ethnicity-Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude

Hispanic origin unless specified. “Other” includes American Indian, Alaska Native, other races, and more than one race.

NOTE: Unless specifically excluded, data include students in graduate programs other than master’s, doctoral, and first-professional, students in private for-profit institutions, and students in Puerto Rico. Standard error tables are available at <http://nces.ed.gov/das/library/reports.asp>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2003–04 National Postsecondary Student Aid Study (NPSAS: 04).

Chapter 2

Literature Review

The literature review consists of a historical review of federal financial aid in higher education, describing the evolution of students' financial aid options from the inception of federal grants to today's heavy reliance on student loans to finance an education.

This study determined the effects personal finance education programs have had on personal finance decision-making for graduate students enrolled in medical school or pharmacy school, both located in the Southeastern United States. This topic was important to determine if educating students in personal finance influenced students to be responsible in responsible financial behavior in order to minimize their student loan debt and repayment burden, ultimately ensuring the ability to repay their loans. It was also important to discover if there is a difference in responsible financial behavior among students who participated in personal finance educational sessions when compared to those who did not participate. The purpose of this study was to examine the extent of participation in personal finance education sessions and how the sessions influenced responsible financial behavior among graduate level students in health-related fields. This study examined the amount of personal finance education and how the education influenced student loan borrowing, how students budgeted and spent their money while in school, how it affected review of their credit reports and scores, and how participation influenced their decisions on the use of credit cards.

Research Question

The following research question was investigated in this study:

What is the relationship between the number of personal finance education sessions among graduate students in health-related fields and their responsible financial behavior?

Financial Aid in Higher Education

When financial aid programs were first provided, they consisted of free monies to assist veterans and financially needy students to attend college. As the cost of education has increased, these free monies were covering less of the cost of education. As a result, student loan programs have become the primary source of payment for higher education today (Gladieux, 2003).

Many students enter college with little knowledge related to basic consumer finance (U.S. Department of Education, 2008). A combination of heavy reliance on student loans and limited knowledge of financial matters has led some students to default on their loans (O'Neal & Cabeen, 2007). The Consumer Financial Protection Bureau undertook the effort to understand the size of the private student loan market, which went through the same boom and bust cycle that played out in markets for mortgages and other credit products. The CFPB's initial findings on the size of the private student loan market are sobering. When the outstanding debt is added in the federal student loan program, it appears that outstanding student loan debt hit the trillion-dollar mark in 2011 and is much larger than estimates from other recent reports.

Unlike other consumer credit products, student debt keeps growing at a steady clip. Students borrowed \$117 billion in just federal student loans in 2011. In addition, students continue to borrow private student loans, which lack the income-based repayment and deferment options of federal student loans. If current trends continue, there will be consequences not just for young people, but for all of us. According to data from the Department of Education (2011), federal student loan debt isn't growing just with new

originations – with so many borrowers unable to keep up with interest payments, debt is growing even for many who have left school (Chopra, 2012).

Some colleges evaluate their financial education programs to assess content knowledge or even intended positive changes in financial practices. However, most colleges and universities have no method of evaluation in place to measure the impact of their financial education programs. There has been little discussion about the challenges facing financial professionals and educators who are delivering and evaluating programs (Lyons, et al. 2006). Lyons et al. surveyed education providers to address these critical gaps in the literature and to provide an overview of the current state of financial education and program evaluation. This study seeks to bridge that gap in research and add to the literature on personal finance education.

Higher Education Legislation

Servicemen's Readjustment Act of 1944

There have been many events in the history of federal financial aid that have had an impact on higher education; however, one act in particular had a tremendous impact overall. The Act that was the inception of federal financial aid was the Servicemen's Readjustment Act of 1944, otherwise known as the GI Bill of Rights. This Act has been deemed the United States' most important education legislation of the 20th Century (Cox, 2004; Gladieux, 2003). The GI Bill was created as an education and job-training program to assist soldiers returning from World War II in transitioning back into the workforce. Although this law was very controversial at the time, it proved that a much wider segment of the population could benefit from a college education. According to Cox (2004), with the passing of time "the GI Bill has been accepted for what it was: a piece of landmark legislation that affected the United States in multiple ways,

from a profound impact on racial and ethnic integration to the democratization of higher education and spread of suburbia” (p. 13). This act provided tuition, subsistence, books and supplies, equipment, and counseling services for veterans to continue their education in school or college. Within the following 7 years, approximately 8 million veterans received educational benefits. Under the act, approximately 2,300,000 attended colleges and universities, 3,500,000 received school training, and 3,400,000 received on-the-job training. The number of degrees awarded by U.S. colleges and universities more than doubled between 1940 and 1950, and the percentage of Americans with bachelor degrees, or advanced degrees, rose from 4.6 percent in 1945 to 25 percent a half-century later.

By 1956, when it expired, the education-and-training portion of the GI Bill had disbursed \$14.5 billion to veterans—but the Veterans Administration estimated the increase in Federal income taxes alone would pay for the cost of the bill several times over. By 1955, 4.3 million home loans had been granted, with a total face value of \$33 billion (Servicemen's Readjustment Act (1944)).

National Defense Education Act of 1958

When President Dwight D. Eisenhower signed the National Defense Education Act (NDEA) into law on September 2, 1958, he was responding to a perceived national threat represented by the Soviet Union's launch of the Sputnik I satellite the previous year. In the years following World War II, science and technology (S&T) had become key measures of a nation's military prowess and international strength. The NDEA's funding of science, engineering, and foreign language education would, it was hoped, enable the United States to regain scientific and technological preeminence over its Cold War rival. However, the launch of Sputnik I was only the immediate catalyst for the legislation in its final form. The momentum for the passage of

comprehensive federal education legislation could be traced back at least a decade to the President's Commission on Higher Education of 1947, which proposed a national goal of having one-third of the young men and women in the United States graduate from four-year colleges. Three years later, an increased focus on national defense because of the Korean Conflict prompted the National Institutes of Health (NIH) to reintroduce training grants, fellowships, and teaching grants. In the early 1950s, the National Science Foundation (NSF) began to fund education and training activities, such as individual fellowships and teacher training institutes. By 1957, this support had expanded to include cooperative graduate fellowships such as institutional training grants. Originally described by President Eisenhower as short-term emergency legislation to address the Sputnik Crisis, the NDEA was intended to complement and augment more selectively targeted federal educational programs through the Office of Education within the Department of Health, Education, and Welfare (HEW). The NDEA's emphasis on "general education" was intended to strengthen the U.S. educational infrastructure by steering people into teaching and guidance counseling careers. The provisions of the NDEA also promoted greater access to post-secondary education and broader geographic distribution of federal education funding. For the years that the NDEA provisions were in force from 1959-1973, many areas covered by the legislation experienced broad positive trends. For example, observers noted increases in the number of first-time freshman and postsecondary enrollments in the number of bachelors and doctoral degrees attained, and in the number of degree-granting institutions established. Although the post-war baby boom caused primary and secondary school enrollments to increase dramatically, the influx of new teachers enabled student-to-teacher ratios to decrease. Long after the sense of urgency created by Sputnik has dissipated, the impact of

federal support for student loans and fellowships, infrastructure development, and career counseling continues to be felt (Flattau et al., 2007).

Economic Opportunity Act of 1964

Congress adopted the Economic Opportunity Act (EOA) of 1964 when President Lyndon Johnson was in office. In his first State of the Union message, President Johnson declared the EOA would launch the war on poverty.

The philosophy behind the statute was not wealth distribution, but the belief that government can and must provide poor people with opportunities to earn a decent living and maintain their families in a comfortable living standard. President Johnson identified the constitutional basis for the legislation, stating, "The Congress is charged by the Constitution 'to provide ... for the general welfare of the United States'" (Pollak, 2004, p. 2)

The act employed two mechanisms to reach its lofty goal. First, it established eleven new programs that the Office of Economic Opportunity (OEO) would operate or supervise. The new programs included:

1. The Job Corps, which provides work, basic education, and training in separate residential centers for young men and young women, ages sixteen to twenty-one;
2. Neighborhood Youth Corps, which provides work and training for young men and women, ages sixteen to twenty-one, from impoverished families and neighborhoods;
3. Work Study, which provides grants to colleges and universities for part-time employment of students from low-income families who need to earn money to pursue their education;
4. Urban and Rural Community Action, which provides financial and technical assistance to public and private nonprofit agencies for community action programs developed with

"maximum feasible participation" of the poor and giving "promise of progress toward elimination of poverty";

5. Adult Basic Education, which provides grants to state educational agencies for programs of instruction for persons eighteen years and older whose inability to read and write English is an impediment to employment;
6. Voluntary Assistance for Needy Children, which establishes an information and coordination center to encourage voluntary assistance for deserving and needy children;
7. Loans to Rural Families, which provides loans not exceeding \$2,500 that will assist low income rural families in permanently increasing their income;
8. Assistance for Migrant Agricultural Employees, which provides assistance to state and local governments, public and private nonprofit agencies or individuals in operating programs to assist migratory workers and their families with housing, sanitation, education, and day care of children;
9. Employment and Investment Incentives, which provides loans and guarantees, not in excess of \$25,000 to a single borrower, for the benefit of very small businesses;
10. Work Experience, which provides payments for experimental, pilot, and demonstration projects to expand opportunities for work experience and needed training of persons who are unable to support or care for themselves or their families, including persons receiving public assistance; and
11. Volunteers in Service to America (VISTA), which recruits, selects, trains, and refers volunteers to state or local agencies or private nonprofit organizations to perform duties in combating poverty (Pollak, 2004).

Recognizing that there were already many federal programs addressing problems of the poor, the statute empowered the OEO Director to coordinate the anti-poverty efforts of all federal agencies. It directed those agencies to cooperate with the director and established an Economic Opportunity Council, chaired by the director and composed of the members of the president's Cabinet, to consult with the director in carrying out his functions.

On balance, while the label war against poverty reflected the overstatement of politics, the Economic Opportunity Act focused the attention of the nation and the agencies of the federal government on poverty and the need for coordinated, multidimensional approaches to reduce, if not to eliminate, its root causes. The statute launched several effective programs that demonstrated what could be accomplished and challenged the citizenry and government not to accept the adage that the poor will always be with us (Landsberg, 2004).

Higher Education Act of 1965

The next significant event was the enactment of The Higher Education Act of 1965 (HEA). HEA is a comprehensive and complex piece of legislation that was established to create the family of federal student aid programs. The initial intent was to create “need-based grants for the disadvantaged, while helping middle-class families with government-guaranteed but minimally subsidized bank loans” (Gladieux, 2003, p. 5). These aid programs, administered by the U.S. Department of Higher Education, are governed by the Title IV regulations of the HEA. When the HEA was created, it encompassed the legislation of two previously developed federal programs, the National Defense Student Loan Program (NDSL), which is today called the Perkins Loan Program, and the College Work-Study program, today called the Federal Work-Study program (FWS). It also created two new programs called the Educational Opportunity Grant Program, today called the Supplemental Educational Opportunity Grant Program (SEOG), and

the Guaranteed Student Loan Program (GSL), today called the Federal Family Education Loan Program (FFELP).

Reauthorization and Amendments to the Act

The Higher Education Act has been reauthorized and amended a number of times since 1965. One of the key amendments to the act occurred in 1972 with the creation of the Basic Opportunity Grant Program, known today as the Pell Grant Program (Gladieux, 1995; Hearn, 2001). The Pell Grant, the first student-based, not institution-based aid program, is a grant for low- to middle-income families providing free money to assist students with their costs of education. Also in 1972, the legislative language was changed from higher education to post-secondary education to allow community colleges, proprietary schools, career and vocational schools, and part-time students the right to utilize Title IV funds (Gladieux, 1995). This change in legislation gave students increased access to a higher education, allowing many more options in their college selection and ability to pursue a higher education.

Also known as the Higher Education Act amendments of 1978, the Middle Income Assistance Act allowed more middle-income families to qualify for the Pell Grant (Hearn, 2001). The downside to this expansion in Pell eligibility is that funding levels were not increased by the government, thus the same amount of dollars had to be spread among a larger population of eligible students, leaving lower-income students with less available funding (Gladieux, 2003). In times of higher inflation, student loans with a 7% interest rate were appealing loans to students. The loan volume exploded, as did federal costs for loan subsidies. The act also removed the income ceiling on eligibility for the Guaranteed Student Loan Program (GSL), allowing middle- to upper-income students the opportunity to apply for a student loan regardless of income. This

eligibility change was later overturned when legislation in the 1980s limited guaranteed loans to only those who qualified based on need (Hansen, 1991).

The 1986 Reauthorization of the Act of 1965 created the Supplemental Loan to Students (SLS) for graduate, professional, and independent students. The SLS allowed these students the ability to borrow more loan monies to cover expenses that the Stafford loan could not cover due to the annual loan limits. The legislation also restricted Parent Loan for Undergraduate Students (PLUS) loan borrowing to parent borrowers and added the FFEL consolidation loan program. The Act also changed the name of the NDSL to the Perkins Loan Program in honor of the late Congressman Carl D. Perkins, who was a long-time advocate of student aid (Center for Higher Education Support Services, 2011).

The 1992 Reauthorization of the Higher Education Act had quite an impact on higher education. This legislation included the creation of one universal Free Application for Federal Student Aid (FAFSA) and many technical changes that standardized lender and guarantor forms and procedures, changed the names of the federal programs, increased loan limits, removed the limit on the PLUS Loan, and many other technical changes which were quite significant in the offices of financial aid administration. In 1992, the pilot program was initiated for the Direct Lending program, where students could borrow their federal loans directly from the U.S. Department of Education instead of a lender (Kantrowitz, 2009). One of the most significant effects of the 1992 reauthorization on higher education was the expansion of access to unsubsidized Stafford loans for middle-income students who were ineligible for subsidized Stafford loans (Gladieux, 1995). This change provided access for this low-cost, federally guaranteed loan to students who were previously denied all forms of need-based aid. In addition,

the Reauthorization of 1992 raised the loan limits on all of the FFEL programs (Center for Higher Education Support Services, 2011).

Wei, Li, and Berkner (2004) of the National Center for Education Statistics compared statistics between 1989-90 and 1999-2000 to show the benefits of the Reauthorization of 1992. They found that of those who received any type of aid, the percentage of total cost of attendance that was covered by any type of aid increased from 47% to 54%. Those receiving grant awards increased from 51% to 60% and loans from 36% to 47%. In addition, once the restriction was lifted on dependent students borrowing the unsubsidized loans, the overall rate of unsubsidized loan borrowing increased from 3% to 23% between 1989-90 and 1999-2000. This increase was also attributed to increased access by independent undergraduates utilizing the unsubsidized loans, which in 1989-90 was 11% and in 1999-2000 was 35% (Wei et al.). Again, because of these events in Federal financial aid, an education continues to become even easier for all students to access.

The 1992 Reauthorization also made several changes to the cohort default rate legislation. The length of time before a borrower is deemed to be in default was increased from 180 days to 270 days (Kantrowitz, 2009). The 1992 Reauthorization introduced the legislation whereby a college or university would have their eligibility to participate in the federal programs eliminated if they had a default rate of 25% or more for three consecutive years or 40% in one single year (Kantrowitz, 2009).

In 1993, the Supplemental Loan to Students (SLS) was repealed and loan limits on the unsubsidized Stafford loan were increased to replace what the SLS formerly provided. In 1997, federal policy moved further away from a need-based philosophy in financial aid by enacting the Taxpayer Relief Act of 1997. This act included the Hope Scholarships and the Lifetime Learning

Tax Credits, which was established to primarily benefit middle- and upper middle-income taxpayers (Gladieux, 2003). However, over time it was proven that these tax benefits did little to help the poorest of the population, as the majority of those claiming these benefits had incomes of over \$50,000 (Long, 2008).

In 2002 interest rates on federal Stafford and PLUS loans changed from a fixed to variable interest rate (Kantrowitz, 2009). In 2005, these rates reached a historic low of 2.88%, allowing students to consolidate their loans at an unprecedented low interest rate for the duration of their loan repayment. Also in 2005, the Higher Education Reconciliation Act began to allow graduate and professional students to borrow under the PLUS loan program, which was formerly only available to the parents of dependent students. The Graduate PLUS allows students all of the benefits of a federal loan, including consolidation, deferment, and forbearance options, and dramatically decreases students' reliance on private loans to supplement their educational costs.

The College Cost Reduction Act of 2007 (CCRA) was deemed by the government as the largest increase in federal aid to students since the GI bill. This increase was accomplished at no cost to taxpayers, instead cutting payments to lenders and guarantee agencies (Kantrowitz, 2009). The Pell Grant was authorized an increase from \$4,310 in 2007-08 to \$5,400 in 2012-13. In addition, interest rates on subsidized Stafford loans for undergraduate students were authorized to be cut in half by 2011-12. Graduate students did not benefit from the changes in 2007.

In 2008, after many years of extensions, the Higher Education Act of 1965 was reauthorized. The reauthorization, entitled the Higher Education Opportunity Act of 2008, was beneficial for veterans in that it removed their benefits from being counted in their income when financial aid eligibility is calculated. Another significant change was in the cohort default rate calculation, which was changed from a two-year to a three-year window.

The reporting of the new cohort default rate occurred for fiscal year 2009, but this new calculation will not be used for sanctions for schools until three consecutive years of the new cohort default rate data are available in fiscal year 2012. Because of this change in the cohort default rate calculation, the 25% threshold in effect for fiscal year 1994 through fiscal year 2011 will be replaced with a 30% threshold for fiscal year 2012 and forward (Kantrowitz, 2009).

The American Recovery and Reinvestment Act passed in February 2009. This Act increased the maximum Pell Grant by \$500 in 2009-2010 and the Hope Scholarship tax credit by \$700 for 2009 and 2010. It also added \$200 million in additional Federal Work-Study funding and \$200 to AmeriCorps funding (Kantrowitz, 2009). In August 2009, the new Post-9/11 GI Bill went into effect. This GI Bill is an education benefit program for those who served on active duty on or after September 11, 2001. The benefit covers the full cost of tuition and fees, up to the highest cost in-state public undergraduate institution, and additionally gives a housing allowance and covers books and supplies (U.S. Department of Veterans Affairs, 2008).

The Health Care and Education Reconciliation Act of 2010 was passed by the House and Senate on March 25, 2010 along party lines and signed into law by President Obama on March 30, 2010. The bill eliminates the federally guaranteed student loan program (FFELP), with all new federal education loans made through the Direct Loan program starting July 1, 2010. The savings are redirected to the Pell Grant program, deficit reduction, improvements in income-based repayment, and a variety of smaller programs. Most of the Pell Grant funding was used to backfill a funding shortfall from the American Recovery and Reinvestment Act of 2009 (stimulus bill) and to make permanent the increased maximum Pell Grant from that legislation. The rest of the Pell Grant funding indexes the maximum Pell Grant to the

Consumer Price Index for five of the ten years, with the maximum Pell Grant unchanged for the remaining five years. The legislation cuts the monthly payment under income-based repayment by one third from 15% of discretionary income to 10% of discretionary income, and accelerates the loan forgiveness from 25 years to 20 years, but only for new borrowers of new loans made on or after July 1, 2014 (The Health Care and Education Reconciliation Act, 2010).

Education and Financial Aid

Since the inception of federal financial aid in 1944, the government has assumed a heavy role in funding education, initially by providing grant monies. As costs have increased and grants have not kept pace with these increased costs, government has also since shifted financial aid assistance to a primarily loan-based system, moving the burden of payment to the student. This burden has caused many students to take on significant debt to complete their degrees, impacting future financial decisions and lifestyle choices, where it has caused others to drop out of college or to not pursue their dream of an education at all (Dillon & Carey, 2009; Draut, 2005, Kamenetz, 2005; Wagoner & Suriano, 2008). Since federal grants are not available to graduate students, the entire burden of payment is often on the student in the form of loans (Redd, 2006; U.S. Department of Education, 2008). A 2002 study of both undergraduate and graduate student borrowers found that 42% of respondents did not even pursue graduate school due to concerns over student loan debt (Baum & O'Malley, 2002). Other potential students, particularly those from low-income families, may not consider applying to medical school due to the prospect of \$200,000 in student loan debt (Steinbrook, 2008).

Students may rely to some extent on financial assistance from their parents, part-time jobs, or grants and scholarships to pay for the costs of tuition, fees, and living expenses;

however, most students, particularly at the graduate level, must supplement their unmet need with student loans. For many, financing through student loan programs is the only way they can afford to attend college (Dillon & Carey, 2009). Of the students surveyed by Baum and O'Malley (2002) who attended graduate school, 72% said student loans were very or extremely important in allowing them to pursue graduate studies. For professional students loans are essential, as studies of professional programs have consistently found that over 80 percent of these students receive loans to fund their education (American Association of Colleges of Osteopathic Medicine, 2008; American Dental Association, 2011; Association of Schools and Colleges of Optometry, 2008; Kipp, 1997; Redd, 2006; Wagoner & Suriano, 2006).

The reason for such heavy reliance on student loans in professional schools is partially attributed to the high cost of tuition for a professional degree. In 2008-2009, the annual median cost for an in-state student at a public university's medical school was \$44,390 and at private medical schools, tuition averaged \$62,243 per year (Steinbrook, 2008). Generally, the cost of tuition will increase at twice the rate of inflation, with an average tuition increase of 8% per year since 1958 (Kantrowitz, 2008). In the 1990s, the cost of tuition increased four times as much as the median family income (Kamenetz, 2005). Medical school tuition has increased even more dramatically than the national averages over the past two decades. From 1984 to 2004 public medical schools had a 317% increase in tuition and private medical schools had a 151% tuition increase on average (Morrison, 2005). Tuition increases are often attributed to decreased state appropriations, increased cost of utilities and other university operational expenses, and increased competition causing additional expenses to upgrade, expand, and enhance a university's facilities and services to its students (Kamenetz, 2005; Steinbrook, 2008).

Regardless of the reasons, these tuition increases have surpassed the rate of increase in both the Consumer Price Index (CPI) and the compensation for both primary care doctors and specialists (Steinbrook, 2008). In addition to tuition increases, this suggests that students are increasingly borrowing for the additional costs of funding a medical education, such as computers and other electronic equipment, a car to commute to classes and rotations, and the costs to support a spouse and children for the many medical students who are married (Morrison, 2005). The curriculum and demands of professional school do not allow time for students to work so they must rely on student aid in most cases for their costs of living including rent, food, utilities, transportation, health insurance, and personal expenses. Turning to student loans to supplement their expenses seems to be the primary choice. The costs of both education and living expenses lead to not only increased student loan borrowing by students to fund their educational costs, but also the increased use of credit cards to supplement what the loans do not cover. Sallie Mae found in a 2009 study that eighty-four percent of undergraduates had at least one credit card, up from 76 percent in 2004. On average, students have 4.6 credit cards, and half of college students had four or more cards. The average (mean) balance grew to \$3,173, higher than any of the previous studies. Median debt grew from 2004's \$946 to \$1,645 (Sallie Mae, 2009).

The higher the grade level, the more heavily students used their credit cards, with seniors graduating with an average credit card debt of more than \$4,100, up from about \$2,900 in 2004. The study found that freshmen carried a median debt of \$939; nearly triple the \$373 in 2004. Only 15 percent of freshmen had a zero credit card balance, a dramatic drop from 69 percent in the 2004 study (Sallie Mae, 2009).

In a review of the indebtedness levels of recent graduates, revealed that two-thirds of graduates from colleges of pharmacy schools reported graduating with some student loan debt

over the study period. (see Appendix A). The proportion of pharmacists reporting having student loan debt at graduation increased from 55% for pharmacists licensed between 1980 and 1984 to 87% for pharmacists licensed between 2005 and 2006. Similarly, the proportion of respondents having high student loan debt increased over the study period. Only 23.8% of respondents that were licensed in the 1980-1984 period reported a high student loan debt while 39.1% of those licensed between 2005 and 2006 reported a high amount of student loan debt. Between 1980 and 2006, the proportion of pharmacists reporting a high student loan debt increased by about 160% (Akeem et al., 2011).

Graduates from colleges of optometry averaged \$125,685 in graduate student loan debt in 2007, which does not include any existing pre-medical or undergraduate debt (Association of Schools and Colleges of Optometry, 2008). Dental school graduates in 2008 averaged \$170,367 in student loan debt (Okwuje et al. 2009). In 2009, graduates from allopathic medical schools entered their internships and residencies with an average of \$131,530 in debt for graduates of public institutions and \$173,304 for those who attended private institutions (Association of American Medical Colleges, 2009). Of these graduates, 25% had a debt load of at least \$200,000 (Association of American Medical Colleges, 2009). These debt figures include the average of \$14,055 in undergraduate debt that 22 % of allopathic students had upon entry into medical school (Association of American Medical Colleges, 2009).

For osteopathic medical schools the indebtedness at graduation is even higher than allopathic medicine. For those attending public institutions the average debt was \$168,031 for 2007 graduates and \$171,240 for those graduating from private institutions (American Association of Colleges of Osteopathic Medicine, 2007). These debt levels are self-reported by the graduates and they are asked to include any pre-medical or undergraduate education debt in

the totals. These debt levels are not surprising given that Redd (2006) found in the 2003-2004 academic year that 90% of all professional students had loans in their financial aid packages, and 84% of students pursuing a doctorate in medicine and 86% of students pursuing other health-related degrees received student loans.

Studies have found that college and university administrators and educators in the medical education community have great concern about the increases in tuition rates and high levels of student debt at graduation (Jolly, 2004; Jolly, 2007; Morrison, 2005; Steinbrook, 2008). These concerns include students' ability to repay the debt and have a comfortable lifestyle, and the influence debt load has over specialty choice. Because medical salaries are not increasing at the same rate student debt loads are increasing, it is possible that medical specialties also may be selected based on the projected income rather than career desires. Tu and Ginsburg (2006) found in a physician income tracking survey that the average physician's net income declined about 7% between 1995 and 2003. Primary care physicians, who are already the lowest paid of all physicians, had the worst decline at 10.2% since the mid-1990s (Tu & Ginsburg, 2006). In Jolly's (2004) study no evidence was found to show graduates choose higher paying specialties because of high student loan debt. However, a survey conducted by the American Association of Colleges of Osteopathic in 2004 found that financial considerations may weigh more heavily on career choices, influencing the traditional career choices of osteopathic students. The survey of graduating seniors from osteopathic medical schools found only 32% planned a career in primary care, which was down significantly from the peak of 50% in 1996 (Singer, 2005).

Anecdotal evidence gathered by the Association of American Medical Colleges, as they have worked with residents on managing their student loan debt, indicates debt does influence

specialty choice (Santana, 2002). Additionally, medical school financial aid directors predict that students may not answer honestly when asked in a questionnaire if debt had any impact on their professional decisions; however, in talking with students and residents anecdotally, these groups do indicate debt had an influence on their specialty choice (Santana, 2002). While currently there may not be empirical evidence that debt levels are impacting specialty choice, those in medical education anticipate that as indebtedness rises relative to income that the debt is bound to have a measurable effect on specialty choice, particularly for the lowest paid specialty of primary care (Steinbrook, 2008; Wagoner & Suriano, 2006, Wagoner & Suriano, 2008). Lowes found in a 2005 survey that the average income for primary care physicians in their first five years of practice is \$150,000. The survey results also found that over the next decade of their career typically primary care physicians have a salary increase of only 11% in comparison to physicians in other specialties show a 30% increase in income (Lowes, 2005).

Student loan debt causes some health professionals to delay the purchase of homes or cars and others from entering into marriage or starting a family (Santana, 2002, Swarthout, 2006). Student debt even affects day-to-day life including what size apartment a person can afford, whether he or she can eat out for dinner, or travel for pleasure (Williams, 2006). The debt level ultimately could lead to a loan default, which has serious ramifications for the borrower including garnishment of wages, legal action, financial penalties and collection costs, and tarnished credit (U.S. Department of Education, 2008).

Cohort Default Rates

Student loan availability is of utmost importance to the students who rely exclusively on these loans to pursue a higher education. Continued eligibility for federal aid programs is critical for institutions in order to recruit and retain the student population, many of which need this aid

to pursue an education. One of the measurements for an institution's continued eligibility for federal student aid is the annual cohort default rate. A general definition of the cohort default rate is the percentage of borrowers who enter repayment on Stafford loans during a fiscal year (FY) and default on their loans by the end of the next FY period (U.S. Department of Education, 2008). Beginning in FY 2009, the formula for calculation rates changed to reflect the number of borrowers who enter repayment on Stafford loans during a fiscal year and the percentage of those borrowers who default on their loans by the end of the following fiscal year (Kantrowitz, 2009). For a borrower to default, no payment must have been made on the loan for 270 days or more (U.S. Department of Education, 2008). If a graduate or former student defaults on a student loan, the institution is at risk as well. If the cohort default rate for a college or university exceeds 25% for the three most recent fiscal years or if the most recent cohort default rate is greater than 40%, an institution will be suspended from making further loans (U.S. Department of Education, 2008). Due to legislation in the Higher Education Opportunity Act of 2008, the annual threshold will increase from 25% to 30% beginning with the rates for fiscal year 2011 (Kantrowitz, 2009).

The U.S Department of Education is in the process of switching from a two-year cohort default rate to a three-year measurement as required by the Higher Education Opportunity Act of 2008. The national two-year rate rose to 9.1 percent for the FY 2010 cohort, from 8.8 percent in FY 2009. Congress included this provision in the law because there are more borrowers who default beyond the two-year window, and the three-year rate captures a more accurate picture of how many borrowers ultimately default on their federal student loans. In particular, for-profit colleges demonstrate a large increase in borrowers who defaulted during year three (U.S. Department of Education, 2012).

The cohort default rate is the percentage of borrowers who enter repayment in a fiscal year and default by the end of the next fiscal year. The Department issues default rates according to the fiscal year that borrowers entered repayment. For example, the fiscal year 2010 default rate is based on students that entered repayment between 10/1/2009 and 9/30/2010. The Department publishes default rates approximately two years after the fiscal year that students enter repayment. The Department issued the first national default rates for fiscal year 1987 in calendar year 1989. Direct loan data was included for the first time with the fiscal year 1995 rates. Effective July 1, 2010, schools are no longer eligible to make FFEL Loans. In accordance with the Default Prevention and Management Initiative, the Department imposed congressionally mandated sanctions for the first time with the release of the fiscal year 1989 rates in calendar year 1991. Nearly 1,200 schools have lost student loan program eligibility since the beginning of the Default Management Initiative. The fiscal year 2010 rate included 5,958 schools. There has been an increase in the FY 2010 cohort default rate over last year's rate (see Figure 1).

FY 2010 2-Year Official National Student Loan Default Rates

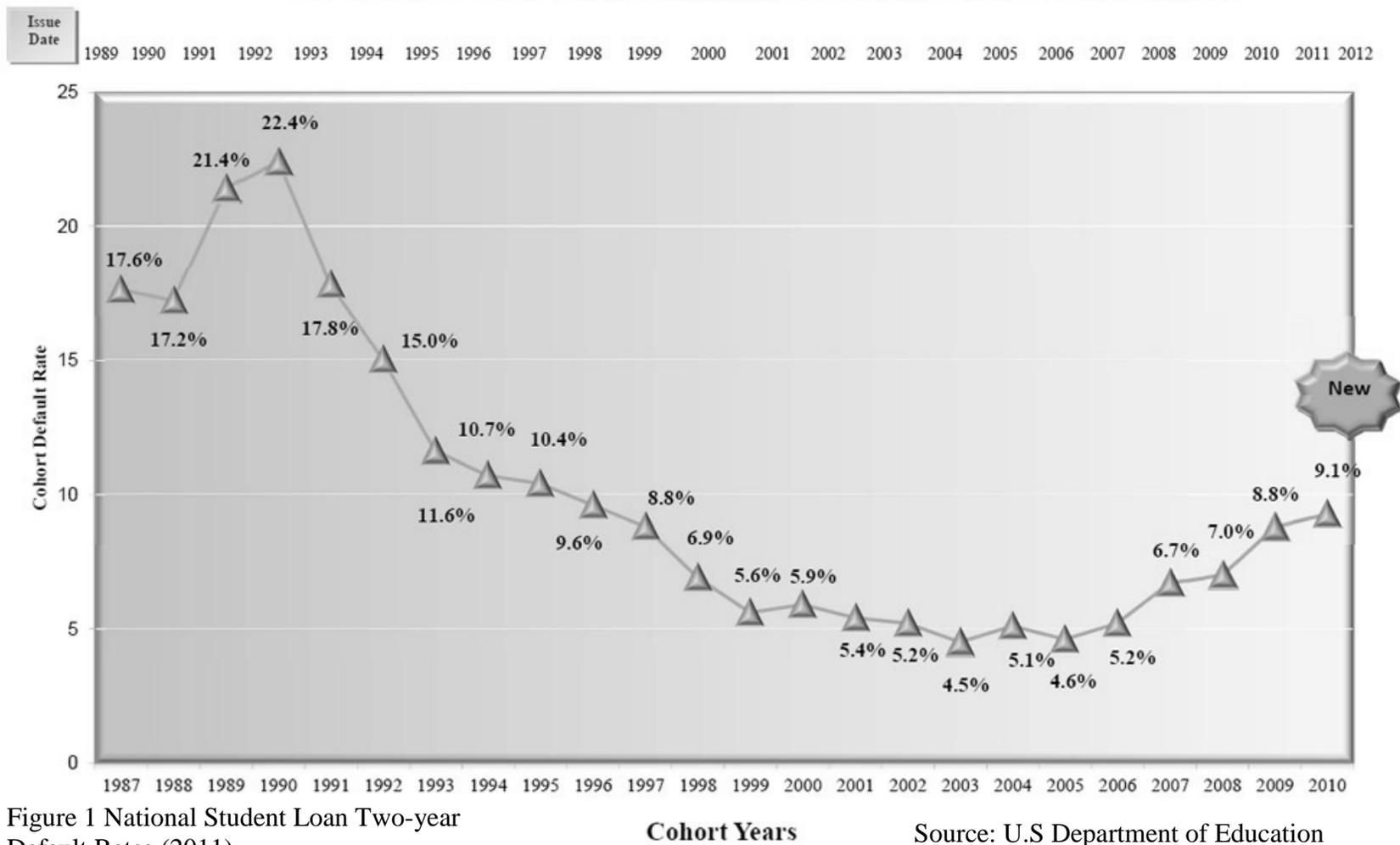


Figure 1 National Student Loan Two-year Default Rates (2011)

Default prevention is critical to ensure not only a college or university's continued ability to offer federal loans, but also to manage retention and recruitment efforts. Indebtedness can certainly affect student retention, which ultimately can cause default. The Ohio State University conducted a study in 2003 that found 27.7% of students with student loan debt neglected their academic work and 20.5% had either dropped out or considered dropping out of college because of their student loan debt. Another 22% of The Ohio State students who participated in the study had reduced their class load because of their student loan debt. Students who withdraw and do not complete their education are much more likely to default on their student loans (O'Neal & Cabeen, 2007). Borrowers are twice as likely to be unemployed and are ten times more likely to default if they do not complete their degrees (Gladieux & Perna, 2005). Student loan debt influences alumni giving among graduates as well. A study of 16,000 graduates found that those who graduate with student loan debt are less likely to contribute to their alma mater than graduates with no student loan debt (American Student Assistance, 2007).

The consequences to the individual student who defaults can be financially devastating. Tax refunds are retained by the Department of the Treasury and applied towards the defaulted loan. The loan will be assigned to a collection agency and the borrower is responsible for the payment of all late fees and collection costs. Up to 15% of the borrower's after-tax wages may be garnished, and credit bureaus will be notified of the default, which will negatively impact the credit rating. Additionally, legal action may be taken against a borrower. Defaulted borrowers also are no longer eligible for deferment and forbearance options and may not receive any further federal student aid until the loan has undergone rehabilitation (U.S. Department of Education, 2008).

When the nation experienced its all-time high cohort default rate of 22.4% in 1992, colleges and universities, lenders, and student loan guarantors began to take extraordinary

measures in developing programs for default prevention (U.S. Department of Education, 2001). A major component of these programs involved educational efforts focused primarily on teaching the responsibilities of loan repayment and prevention of loan default. The national default rate has decreased significantly over the years to the current national rate of 6.7% for 2009 (U.S. Department of Education, 2009). Many colleges and universities have attributed this success partially to financial literacy education programs (U.S. Department of Education, 2001). As students have increased their reliance on student loans over the years, they continue to enter college with very little basic financial management knowledge (The Harford Financial Services Group, 2007; O'Neal & Cabeen, 2007; U.S. Department of Education, 2008). Because of all of the aforementioned challenges students face, at minimum they need counseling on financial aid options and how to manage debt to help them make educated decisions and minimize the impact of their student loan debt (Steinbrook, 2008). Financial literacy education programs seek to bridge that gap in students' financial knowledge.

Financial Literacy Educational Programs

Financial literacy education is defined by the Institute for Socio-Financial Studies as cited by O'Neal and Cabeen (2007) as the ability to read, analyze, manage, and communicate about the personal financial conditions affecting material well-being. It includes the ability to discern financial choices, discuss money and financial issues without (or despite) discomfort, plan for the future, and respond competently to life events that affect every day financial decisions (p. 32). According to O'Neal and Cabeen (2007) being able to understand money and make choices about finances are skills many college students are lacking, since neither these students nor their parents have ever experienced great financial tragedies such as that of the Great Depression. A study by the National Council on Economic Education (2005) shows that students entering college score on average only 53%, a failing grade, on a basic economics and

personal finance quiz. These students are not learning basic personal financial skills in high school and upon entering college are signing up to borrow thousands of dollars of student loans. These students have no idea how to budget for their monthly living expenses, save money for the future, and have no concept of how they will repay these student loans (O'Neal & Cabeen, 2007).

Since the rise of the national average cohort default rates to all-time high in the early 1990s, default prevention efforts have become a vital part of a financial aid office's core responsibilities (U.S. Department of Education, 2001). Colleges and universities have always held mandatory entrance and exit counseling sessions, or utilized online counseling. Now many financial aid offices have added debt management and financial literacy programs to their students' freshman orientation classes. Other institutions take additional steps to educate their borrowers throughout their student career about repayment options, loan consolidation, and options they may exercise if they experience personal hardship, such as loan deferment or forbearance. Some institutions take their efforts even further to educate students on topics such as budgeting, financial planning, return on investment, buying a home, starting a practice, and retirement planning to name a few (American Council on Consumer Interests, 2007).

In October 2000, the Office of Student Financial Assistance at the United States Department of Education invited the most experienced representatives from the financial aid community to participate in a Student Loan Repayment Symposium. Participants consisted of financial aid directors who had spent their entire careers working in financial aid, executives from student loan guarantors, student loan lenders, students, and representatives from the Department of Education. During the symposium, these experts spent three days discussing ideas for reducing student loan defaults. Because of the symposium the *Ensuring Student Loan*

Repayment: A National Handbook of Best Practices was developed (U.S. Department of Education, 2001).

One of the results of the symposium was the recognition that colleges and universities need to provide financial skills training to students in areas such as budgeting and financial planning, savings, debt management, and electronic banking. One symposium participant said, “It’s really important to integrate financial aid counseling into a larger context. An aid office that will only talk about your financial aid, and not your overall financial picture, isn’t doing a very good job” (U.S. Department of Education, 2001). The participants in the symposium suggested both classroom courses and online web-based courses developed by others, such as guaranty agencies. Faculty, financial aid professionals, student service professionals or others who have the knowledge to provide this type of financial counseling, can teach the courses.

The review of the literature showed that financial literacy education programs fit into one of four models: financial education/counseling centers, peer-to-peer programs, programs delivered by financial professionals, and distance learning programs (American Council on Consumer Interests, 2007). Programs certainly vary depending on the resources available including knowledgeable staff and time to develop, administer, and evaluate such programs. Activities may include integrating financial education into freshman orientations, student loan entrance or exit counseling sessions, or through student organizations. Ongoing programs include workshops and seminars, peer counseling programs, or online education offerings. Some colleges offer formal financial management education including programs that specifically teach personal finance such as programs in family and consumer sciences, economics, business, or education (American Council on Consumer Interests, 2007). Colleges may offer formal courses such as life skills, first-year experience courses, one-credit courses or workshops, weekly seminars, or financial education and counseling centers.

A review follows of the structure and content of some well-known and widely recognized financial literacy programs in the nation. As will be shown in this review, evaluation of these programs is limited. As highly acknowledged and acclaimed programs, the methods of evaluation, or the nonexistence of evaluation, are certainly representative of the entire population of financial literacy programs across the nation.

Selected Financial Education Programs at Colleges and Universities

Bowling Green State University

Bowling Green State University began a Student Money Management Services program in July 2006, with an office including one full-time financial educator and six student assistants. The program director indicates they do not offer financial advice, but give students options to consider and allow them to make the best choice for themselves (Donnelly, 2012). Students may choose from individual financial planning sessions with a trained professional Financial Services Educator, Falconomics group seminars in campus settings, or an online money management portal with local, state, and national financial education resources (Bowling Green State University, 2012).

Bowling Green State University reports the program has been well received by the students. The online website was launched January 7, 2008 and by March 13, it had received 4,130 hits (Donnelly, 2012). The Falconomics Seminars include topics such as learning how to budget and manage money, identifying and tracking expenses during and after college, planning for tuition and fee payments, preparing a plan for repaying student loan debt after graduation, identifying financial education opportunities both on- and off-campus, and becoming organized for key student money management decision points (Bowling Green State University, 2012). Student Money Management clearly states on their website that they will not provide investment advice, interact with creditors, select a financial institution, choose financial planning services,

offer tax advice, or preparations, refer to public assistance programs, or provide retirement planning. Bowling Green State University indicates its primary goal is to help the students track their expenses instead of just continually swiping their credit cards with no regard for the expenditure. The program has received national attention; however, there is no information available to indicate there is any sort of measurement or planned evaluation of the program's impact on students' responsible financial behavior (Bowling Green State University, 2012).

University of Arizona

In order to create a generation of financially informed youth in Arizona, the Credit-Wise Cats recruited a team of 12 University of Arizona students who are trained on personal finance topics. Under the direct supervision of the University of Arizona Take Charge America Institute, the Credit-Wise Cats program partners with campus organizations, Tucson-area middle and high schools, Family Economics and Financial Education curriculum and community organizations and businesses to deliver a series of interactive personal finance workshops.

The Credit-Wise Cats began in 2000 with just 5 student credit ambassadors educating their peers on the University of Arizona campus. The first accomplishment was securing a small \$6,000 grant to conduct a speaker series on campus. Since then, the CWC have grown to a team of 15 ambassadors. To date, the CWC have extended their educational outreach efforts to directly impact over 21,000 youth and adults in the Tucson community through thousands of workshops, increasing audience members' knowledge of personal finance by more than 43%.

The Credit-Wise Cats are trained to facilitate workshops that cover seven key areas in personal finance. Each member of the Credit-Wise Cats team receives training and ongoing development to ensure workshops are presented in an effective, informative, and fun manner. The presentation topics include developing a spending plan, savings, selecting a credit card,

understanding credit reports and paychecks, income vs. education, and identity theft (The University of Arizona, 2012).

Borden et al. (2007) conducted a pilot study to examine the influence the Credit-Wise Cats programs had on the attitudes, knowledge, and intended actions of college students. The pretest evaluated current financial knowledge, attitudes towards the use of credit, and financial behaviors for the past two months. The post-test questions were reworded to evaluate a change in knowledge, attitude, and intended future behaviors. The results of the post-test show that students' financial knowledge increased significantly. There were significant changes in their intended use of credit, displaying attitudes that are more responsible and the intent to reduce risky financial behaviors and engage in more effective financial behaviors (Borden et al., 2007). While the study does evaluate intended changes in responsible financial behavior, it does not take the additional step of measuring the actual changes.

In 2007, The University of Arizona launched APLUS, a landmark longitudinal study exploring how young adults develop financial knowledge, attitudes, beliefs, and behaviors and how that development impacts life success as adults. A baseline study of 2,098 freshmen enrolled at the University of Arizona culminated in the published Young Adult Model of Financial Well-Being (Shim, Barber, Card, Xiao, & Serido, 2009). Next, in the wake of the U.S. credit crisis, a follow-up examined the immediate effects of economic recession on young adults (Shim & Serido, 2010). The re-survey was conducted with 72% of the original APLUS participants (1,508) in fall 2010, three years after the baseline survey. Data analysis indicated that participants who continued to learn about personal finances over time had more responsible financial behaviors compared to other groups (Shim, S., & Serido, J. 2011).

CashCourse

CashCourse is a website provided free by the National Endowment for Financial Education (NEFE) that contains comprehensive information on financial literacy and money management. It provides information from how to budget expenses to understanding employee benefits. The following contains information from two colleges using the website for financial education for their students (NEFE, 2012).

Texas Tech University

Texas Tech University offers CashCourse as an additional financial education option (CashCourse, 2012). In addition to Red to Black counseling program, which has received national attention for its program offering free financial planning, peer-to-peer counseling, and seminars (Behnham, 2009), Texas Tech is a member of the original 20 programs which first offered the certified financial planner degree. The Red to Black program utilizes the expertise of student volunteers majoring in the Personal Financial Planning degree, who undergo extensive training and participate in continuing education courses. The program offers peer-to-peer client sessions, which include topics such as money management, debt reduction, identity theft, budgeting, house and auto buying, credit, and investments (Vaughn & O'Neal, 2008). The program also maintains outreach-based financial planners who conduct seminars and presentations to the Texas Tech community. The program offers an extensive website of financial planning information and includes profiles of all of the peer counselors. The website offers the option to set a personal appointment and allows one to submit a request for a classroom workshop (Durband & Britt, 2012). The National Student Loan Program (2008) asked Texas Tech how they evaluate the effectiveness of the counseling and the financial literacy education services they provide. They responded that all students complete an optional self- evaluation that includes measures of financial stress levels, financial satisfaction, attitudes, behaviors, and intent to

change behaviors. What cannot be determined from this type of evaluation are actual changes in behavior in terms of changes in responsible financial behavior (Brown, 2009).

Shepherd University

Legit and Financially Fit drew over 250 students to Shepherd's CashCourse site during the month of April, which marked the launch of their Be Legit and Financially Fit campaign. During the campaign, students were required to complete CashCourse Coursework from the National Endowment for Financial Education's (NEFE) website on the topic of credit, and complete the post-test with a minimum score of 80%, in order to be entered into a drawing to win an iPad 2 (Bennett & Porter, 2012).

New York Law School

New York Law School had a published study that includes an evaluation of the influence of financial literacy education on responsible financial behavior (Gross et al., 2005). The study however is quite limited in that it does not measure changes in responsible financial behavior beyond a very short period immediately following completion of the sessions. Additionally, the evaluation of the influence of the program on responsible financial behavior was only conducted with five participants. Because of the small sample size, it is difficult to generalize the results to apply to professional students as a whole, or even just this one law class.

In order to assist students in decreasing debt levels, avoiding default, and improving credit scores, New York Law School developed a one-credit pass/fail Financial Advocacy course taught over a two-day period. The law school assessed the needs of their population of students, set programmatic goals, and designed their curriculum and content to attempt to meet these goals. Assessment of the students' knowledge gains included both pre- and post-tests. Of the students enrolled in the course, 82% failed the pretest; however, 100% of the class passed the post-test (Gross et al., 2005).

Two weeks after the post-test a focus group was conducted with a random sample of five students from the total class size of 88. Gross et al., (2005) indicated the goal was to determine the students' perceptions of the course content and format. Students indicated they were much more aware of personal finance issues after participating in the course. The students were also asked if they had taken any steps because of what they had learned in the Financial Advocacy course. Most of the participants took specific action steps based on what they learned in the course such as correcting their credit reports, obtaining credit scores, and changing how they manage credit cards. Since the follow-up was so close to the conclusion of the course the study does not measure long- term actions or changes in student attitudes or behaviors (Gross et al. 2005).

After the focus group discussion, an e-mail was sent to all students who had participated in the course and they were asked if they had taken, or planned to take, any specific actions based on what they learned in the course. Of the students in the course 29% responded to this survey. Many of the students reported that they either had requested or planned to request a copy of their credit report. Others responded that they had cancelled or paid off high-interest rate credit cards, or were renegotiating the interest rate. Others called the Opt-Out Program to remove their names from credit card solicitation lists, and took measures to protect their identities by shredding sensitive documents. Finally, some shared that they had been encouraging others to review their credit report and obtain their credit scores (Gross et al. 2005).

Gross et al. (2005) believe their program did improve students' knowledge of basic consumer financial management. However, they do admit that a valuable yet unanswered question is whether this translates into long-term improvement in responsible financial behavior. The researchers believe their initial results from the study suggested that financial

literacy courses increased the retention of knowledge long-term and positive changes in students' attitudes and behaviors about money and spending.

Gaps in the Research on Evaluation of Financial Literacy Programs

The nationwide efforts on the part of colleges and universities to educate their students on issues of financial literacy, debt management, loan repayment options, and the consequences of loan default were recognized as contributing to the dramatic reduction in the nation's cohort default rate from a high in 1992 of 22.4% to the 2000 rate of 6.9% (U.S. Department of Education, 2001). So, one can deduce that these programs contributed to further reducing this rate over the following five years to the all-time low in 2005 of 4.5%, and to maintaining a low national rate in subsequent years with a 2009 rate of 6.7% (U.S. Department of Education, 2009). However, these programs are rarely measured to evaluate the impact of the teachings on subsequent responsible financial behavior. There is a general understanding in the financial aid industry that financial literacy education is important and these programs are beneficial to students, but in what ways it specifically impacted financial decisions has limited research (Brown, 2009).

What the review of the literature revealed was there is little evaluation of actual changes in students' responsible financial behavior because of participating in financial literacy education. In the review of the literature, one school was found to encourage participants' self-evaluation of attitudes, behaviors, and intent to change behaviors (National Student Loan Program, 2008). One study surveyed participants on their intended behavioral changes about the financial topics studied (Borden et al., 2007). Two studies were identified that conducted pre- and post-tests to evaluate knowledge gain (Borden et al., 2007; Gross et al., 2005). Another study of the alumni from one large university concluded through a post-test only that investment knowledge was higher among students who participated in a college level financial literacy

education program in comparison to those who participated only in a high school program or had never participated in any program (Peng et al., 2007).

Generally, the literature is almost nonexistent for studies that evaluate changes in college students' responsible financial behavior because of financial literacy education programs. Even studies that evaluate learning are quite limited. However, the majority of the information available in the literature showed that most colleges and universities report no means of measurement or evaluation of impact at all (Bowling Green State University, 2012). From this extensive review of the literature it was evident studies are limited that evaluate the influence of financial literacy education on responsible financial behavior for graduate level health professions students (Brown, 2009).

Measuring the effectiveness of financial literacy programs is not easy, as there is no standardization within the industry on what to measure, how to measure, and when to do it (Lyons et al., 2003). In a conference of the American Council on Consumer Interests to address the issue of measuring the effectiveness of financial literacy programs, there was an open discussion with expert panelists on financial literacy education and session attendees revealed several key items. First, different factors motivate different target audiences to participate in financial education programs. Secondly, assessing the effectiveness of financial education requires longitudinal data and long-run analysis. This type of assessment can be quite costly and time-consuming. Third, program evaluators may want to consider developing a tool for self-assessment by program participants. Each participant would create their own goals and projected outcomes and evaluate how they feel they are progressing. Finally, there was a consensus that the profession needs to move towards more uniform measurements and standards so that comparisons can be made across programs. Although one method for

measuring program impact is not likely to work for all programs and the evaluation measures depend on the target audience and its particular needs (Lyons et al. 2003.).

Summary

Chapter 2 includes review of literature, the history of financial aid, as well as financial education programs offered at higher education institutions. As has been shown in the review of the literature, there is a significant gap in the research on the effects of financial literacy education on students' responsible financial behavior. It is evident by review of the schools profiled in this literature review that significant effort is placed on curriculum development, training, and continuing education for presenters, and facilitating the presentations. No study was found that evaluated if the learning translated into modified decision-making as it related to financial matters for the long-term. Limited studies exist in the literature to determine if the content learned is then applied when a student is faced with real-life financial decisions (Brown, 2009).

It is critical for institutions to conduct an assessment that determines the effectiveness of their programs on subsequent responsible financial behavior if the programs are to be of true value to students. Financial literacy education programs that have been provided to groups other than colleges students, such as low-income families, immigrants, and military personnel have sought to help these populations build financial knowledge, make better financial decisions, and secure long-term financial security (Lyons et al., 2003). Lyons et al. found many of these programs have had empirical research studies conducted that support the hypothesis that financial education positively affects financial behavior and financial outcomes (Bernheim & Garrett, 2001; Bernheim, Garrett, & Maki, 2002; Braucher, 2001; Hiram & Zorn, 2001; Staten, Elliehausen & Lundquist, 2002; and Thaler & Bernatzi, 2001, as cited in Lyons et al., 2007).

Chapter 3

Methods

Introduction

The purpose of this study was to examine the extent of participation in personal finance education sessions and how the sessions influenced responsible financial behavior among graduate students in health-related fields. This study examined how the amount of personal finance education influenced student loan borrowing, how students budgeted and spent their money while in school, how it affected review of their credit reports and scores, and how participation influenced their decisions on the use of credit cards.

This study begins to fill a substantial gap in the research regarding the effects of financial literacy programs at the college level; particularly for students pursuing degrees for careers in health-related fields. This chapter overviews the research questions, research design, procedures, sample selection, instrumentation, data collection, data analysis, and trustworthiness of the data.

Research Question

The following research question was investigated in this study:

What is the relationship between the number of personal finance education sessions among graduate students in health-related fields and their responsible financial behavior?

Research Design

The research design included a questionnaire that asked the number of financial education sessions attended with questions about responsible financial behavior for graduate students pursuing degrees for careers in health-related fields. The two graduate schools selected

for the study were a medical and pharmacy school at two universities in the Southeastern United States.

The survey was administered online via a link in an e-mail. Quantitative analysis was conducted and presented in table format to describe the hypothesis testing of the data collected using a one-way Analysis of Variance (ANOVA) and a least significant difference (LSD) post-hoc test. For this study, the independent variable was participation in financial education sessions, and the dependent variable was responsible financial behavior. For each supporting research question, the dependent variables included: reviewing student loans, review of credit reports and credit scores and budgeting, and current finances.

The survey was administered to groups of current students in medical and pharmacy programs at two institutions. Assistance in securing a group of current students for survey distribution and completion was provided by academic administrators in each school. The researcher collected the completed surveys; responses were entered into SPSS software, and were then averaged to determine participants' scores. The researcher interpreted results.

A survey collects data through a process of asking people questions. This data is used to quantitatively describe the sample in a study (Creswell, 1994). Surveys are valuable tools used to gather information about people's opinions and behaviors, and they have proven to be very efficient for more than 70 years (Dillman, Smyth, & Christian, 2009).

In this study, data were collected using a web-based survey. The completion rate for web-based surveys is greater than that of paper-based surveys. In addition, web-based surveys are easier and take less time to prepare and deliver than paper-based surveys. Collecting and analyzing results are also made simpler with web-based surveys (Potvin, 2007). Internet-based surveys allow researchers to gather data efficiently. These web-based surveys do not cost as much as traditional surveys and they can be more appealing to respondents, which can encourage

them to complete the survey (Berends, 2006). Internet surveys allow results to be reported faster than traditional survey methods and with less cost to the researcher (Dillman, et al, 2009; Lazar & Preece, 1999). Additionally, when an Internet survey is used, errors due to entering data are eliminated (Lazar & Preece, 1999). E-mail has become a popular method of communication versus the telephone and postal mail. Thus, Internet surveys have become more practical for researchers (Dillman, et al, 2009).

SurveyMonkey was used for collecting the research data. SurveyMonkey is a reliable and powerful tool for collecting and analyzing data. It also produces user-friendly and attractive surveys (Potvin, 2007). For internet surveys to be effective, prospective respondents need to have access to the Internet if an Internet survey is used (Lazar & Preece, 1999). All of the respondents in this study had access to the Internet.

Population

Of the 117 participants in this study, 65 were in pharmacy school and 52 were enrolled in medical school. 51 males and 66 females participated. 16 participants indicated that they were Asian, 23 were Black, 73 White, and 5 were some other ethnicity. These students were selected since graduate students enrolled in programs leading to careers in the health related fields graduate with some of the highest student loan debt levels of any educational disciplines. By providing the survey to a select group, the accuracy of the results of the study increases because the participants were not randomly selected (Potvin, 2007).

Colleges and universities that participate in the Federal loan programs are required to educate these student borrowers during mandatory entrance and exit counseling about their repayment obligation, repayment plans and schedules, and the deferment and forbearance options, and the borrower's rights and responsibilities (U.S. Department of Education, 2008).

Instrumentation

The survey consists of participants indicating the number of financial education sessions they have experienced and 26 questions related to responsible financial behavior. There is a 5-point Likert scale ranging from (1) Strongly agree to (5) Strongly disagree with (3) Not Applicable. The respondent must click the number on the scale to represent how he or she feels about each option. There is no right or wrong answer; the participant will simply choose the response that best describes his or her behavior. Scores are then transferred onto a scoring sheet and totaled. The highest scores represent the more responsible financial behavior, with lower scores representing less responsible financial behavior.

Sample Selection

Graduate students at two universities in the Southeastern United States were selected for the study. To reflect the various types of graduate level students, the institutions selected included a medical school and a pharmacy school. School administrators were sent a letter of invitation requesting students be allowed to participate in the study along with an executive summary of the purpose of the dissertation study. For the survey, the sample population from each institution included up to 300 current students. The survey was conducted using a link to the survey via e-mail invitation and the survey data were retained. Participants were invited by department administrators via e-mail letter to participate in the research. Each student who participated in the survey was informed that participation was optional and how the information was to be used and outlined the participants' rights as a research participant (see Appendix B).

Ethical Considerations

The purpose of an Institutional Review Board (IRB) is to review research proposals to ensure the researcher intends to protect participants' autonomy, confidentiality, and privacy. The IRB also reviews the researcher's plan to minimize possible risks to the research participants and

to impartially distribute any benefits to participants selected for the study. This research study was reviewed and approved by the IRB at Auburn University (see Appendix B). Recruitment of participants and data collection did not begin until the IRB approval was secured.

This study was considered minimal risk as it had no expectation for harm or serious discomfort. The online survey was anonymous with no personal identifiers, and as a result there was little to no risk involved. Participants were informed that if they experienced any discomfort during the survey and wished to discontinue participation they should immediately do so with no ramifications or consequences.

Instrument and Data Collection

The Likert scale was developed by Rensis Likert (1932) and is a survey method where participants specify their level of agreement or disagreement on a symmetric scale for a series of statements. Through the use of a Likert scale, the range captured the strength of participants' feelings for a given item, while the results of analysis of multiple items reveal a pattern that has scaled properties.

Data Analysis

The survey instrument uses a numerical scale. Each question has a single-item score that is an "individual score assigned to each question for each participant in the study" (Creswell, 2008, p.185). The results for each individual question were combined from all respondents at each institution where the study was conducted. The data were entered into SPSS statistical software by the researcher and hypothesis testing was then conducted. The data were analyzed using descriptive statistical methods including a one-way Analysis of Variance (ANOVA) and post-hoc testing. The surveys captured numbered data using questionnaires to statistically analyze the data to test the research questions and describe trends (Creswell, 2008). The survey

design consisted of an online survey using a Likert (1932) scale. The themes are reported in a narrative discussion in Chapter 4.

For this study, the independent variable was the number of sessions of financial education and the dependent variable was responsible financial behavior. For each supporting research question, the dependent variables included: review of credit reports and credit scores, student loan borrowing and paying interest on student loans, budgeting and spending, and credit card usage. The null hypothesis was: there is no statistically significant difference in the number of personal financial education sessions attended and responsible financial behavior among graduate students in health-related fields. The alternate hypothesis was: there is a statistically significant difference in the number of personal financial education sessions attended and responsible financial behavior among graduate students in health-related fields.

Trustworthiness

Trustworthiness is how the researcher convinces those using the study that the findings of the research are authentic and valuable (Siegle, 2002). According to Siegle (2002), a quantitative study cannot be valid unless it is reliable, and a qualitative study cannot be transferable unless it is credible, and it cannot be credible unless it is dependable.

Internal Validity and Credibility

Credibility and internal validity are included in the construct of truth value (Siegle, 2002). Brown (2009) where experts who teach financial education on college campuses reviewed the instrument previously used a similar survey. These experts validated that the questions asked would accurately capture the data the study sought, and that the questions would be easily understood by the average adult. Since a similar survey was conducted Brown (2009), validity is assumed.

External Validity and Transferability

According to Siegle (2002), transferability is “the extent to which findings can be applied in other contexts or with other respondents” and one strategy for transferability is a “thick description” in which the researcher collects detailed descriptions of the data and relays them in a thorough and accurate manner so the receiver of the information can ascertain the transferability of the study (p.1). In this study, key descriptions of the participants have been precisely relayed in order for the receiver to determine the transferability of this study. Details for the population studied include: all students hold a minimum of a bachelor’s degree prior to entering their current program of study; the students were all currently enrolled in a graduate level program for employment in the health-related fields. The medical school participants attend a public university in an urban setting and the pharmacy school participants are enrolled in a land-grant university.

Reliability and Dependability

In the construct of consistency lies the necessity of reliability for quantitative research and dependability for qualitative research (Siegle, 2002). The study demonstrates that if the study were replicated with the same or similar respondents, in a similar context, that the findings would be repeated (Siegle, 2002).

Summary

Chapter 3 presented the research methods of this study. The survey instrument uses a Likert scale for measuring the research constructs.

Survey instruments were e-mailed to graduate students at a medical school and pharmacy school at two universities in the Southeast for a study on financial education and financial decision-making. 117 students responded to the survey.

The questionnaire results report the relationship, if any, between participation in financial education sessions and responsible financial behavior. The study identifies the number of financial education sessions attended and the participants' responsible financial behavior.

As has been shown in the review of the literature, there is a significant gap in the research on the effects of financial literacy education on students' responsible financial behavior. No study was found that evaluated if the learning translated into modified decision-making as it related to financial matters for the long-term. Limited studies exist in the literature to determine if the content learned is then applied when a student is faced with real-life financial decisions (Brown, 2009). Finally, the research is considered reliable and valid, due to duplication and adaptation of a reliable and valid survey.

Chapter 4

Results

The purpose of this study was to examine how the extent of participation in personal finance education sessions influenced responsible financial behavior among graduate students studying for careers in health-related fields. This study examined how financial education influenced student loan borrowing, how students budgeted and spent their money while in school, how it affected review of their credit reports and scores, and how participation influenced their decisions on the use of credit cards.

The participants for this study were graduate students enrolled in medical school or pharmacy schools, both located in the Southeast. This topic was important to determine if educating students in personal finance influenced students to make responsible financial decisions in order to minimize their student loan debt and repayment burden, ultimately ensuring the ability to repay their loans. It was also important to discover if there is a difference in financial behavior among students who participated in financial education sessions when compared to those who did not participate (Brown, 2009).

E-mails containing a link to survey on SurveyMonkey were sent to prospective participants by department heads at a medical and pharmacy school. A total of 117 participants responded to the survey. Of the completed surveys, 52 were medical students (44%) and 65 (55%) were pharmacy students.

Survey Instrument

This questionnaire study consists mainly of descriptive statistics that investigate the financial behavior of students enrolled in medical or pharmacy schools on two different

campuses of the Southeast. The mean score, standard deviation, and range were calculated for each group.

Research Question

The following research question was investigated in this study:

What is the relationship between the number of personal finance education sessions among graduate students in health-related fields and their responsible financial behavior?

Hypothesis

The participants in this study were medical and pharmacy students from two different universities in the Southeastern United States. There were two hypotheses to be tested (at the $\alpha = .05$ level). The null hypothesis was: there is no statistically significant difference in the number of personal financial education sessions attended and responsible financial behavior among graduate students in health-related fields. The alternate hypothesis was: there is a statistically significant difference in the number of personal financial education sessions attended and responsible financial behavior among graduate students in health-related fields.

H_0 : There is no statistically significant difference in the number of personal financial education sessions attended and responsible financial behavior among graduate students in health-related fields.

$H_0: \mu_1 = \mu_2$

H_A : There is a statistically significant difference in the number of personal financial education sessions attended and responsible financial behavior among graduate students in health-related fields

$H_A: \sim (\mu_1 = \mu_2)$

Demographic Results

Participants included 65 (55.5%) students enrolled in pharmacy school and 52 (44.4%) were enrolled in medical school. 15 (13%) were in the first year of their program, 28 (24%) were in their second year, 61 (52%) were third year students, and 13 (11%) were in their fourth year or higher. Ethnicity of the participants included 16 (13.6%) Asians, 23 (19.6%) were Black, 73 (62.3%) were White, and 5 (4%) indicated other. 51 (43.5%) were male and 66 (56.4%) were female. When asked the number of financial education sessions attended while at their university, 22 (18.8%) indicated they had attended no financial education sessions, 75 (64.1%) attended 1-2 sessions, and 20 (17%) attended 3-4 sessions.

Analysis

Analysis was conducted using a one-way ANOVA with three levels, where the levels represent the amount of financial education of the participants.

Test Statistic: F

Assumptions:

1. The financial decision making scores are normally distributed in the population of students who participated in the study
2. The population variances for the participants across the three levels of financial education are equal
3. Random and independent sampling took place across participants

Alpha Level: .05

A one-way analysis of variance (ANOVA) was calculated with the independent variable being the number of financial education sessions attended and participants' scores, based on answers to questions about financial behavior. The independent variable, number of financial education sessions attended, included three levels. Group 1 attended no financial education sessions while at their university, Group 2 attended 1-2 sessions, and Group 3 attended 3-4 sessions. Participants had the opportunity to indicate if they attended 5-6 or more than 7 sessions. No participants indicated that they had attended more than 4 sessions. The dependent variable is the financial behavior. For each participant, answers were averaged with a score, based on answers to the financial behavior questions.

Table 4
Analysis of Scores

ANOVA

Scores

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	19918.656	2	9959.328	44.391	.000
Within Groups	25576.489	114	224.355		
Total	45495.145	116			

The results of the ANOVA analysis yielded an F statistic of 44.39; $F(2,114) = 44.39$, $p=.000$; which shows that students who attended financial education sessions, have more responsible financial behavior (see Table 4).

Table 5

Groups and Scores with Standard Deviation and Standard Error

Descriptives

Scores

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Group1	22		
Group2	75	81.07	17.276	1.995	77.09	85.04	28	104
Group3	20	97.35	8.641	1.932	93.31	101.39	67	105
Total	117	78.91	19.804	1.831	75.29	82.54	28	105

After the survey instruments were scored, there was a range of 42 points between the means: 54.82 for Group 1 (attended no sessions) 81.07 for Group 2 (attended 1-2 sessions) and 97.35 (Group 3 attended 3-4 sessions) (see Table 5).

Follow-up tests were conducted to evaluate differences among the means. Because the variances among the three groups ranged from 54.82 to 97.35, we chose not to assume that the variances were homogenous and conducted post hoc comparisons with the use of the Dunnett's C test, a test that does not assume equal variances among the three groups.

Table 6

95% Confidence Intervals of Differences in Mean Changes between Number of Financial Education Sessions

Multiple Comparisons
Dependent Variable: Scores

Dunnett C

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Group1	Group2	-26.248*	2.909	-33.40	-19.09
	Group3	-42.532*	2.866	-49.78	-35.28
Group2	Group1	26.248*	2.909	19.09	33.40
	Group3	-16.283*	2.777	-23.13	-9.44
Group3	Group1	42.532*	2.866	35.28	49.78
	Group2	16.283*	2.777	9.44	23.13

*. The mean difference is significant at the 0.05 level.

There was a statistically significant difference in the means between the groups. The 95% confidence intervals for the differences, as well as the means and standard deviations for the three groups are reported in Table 6.

Table 7

Levene Statistic Test of Homogeneity of Variances

Test of Homogeneity of Variances
Scores

Levene Statistic	df1	df2	Sig.
12.741	2	114	.000

For the Scores variable, the F value for Levene's test is 12.741 with a Sig. (p) value of .000. Because the Sig. value is less than the alpha of .05 ($p > .05$), we reject the null hypothesis (no difference) for the assumption of homogeneity of variance and conclude that there is a statistically significant difference between the three group's variances. That is, the assumption of homogeneity of variance is not met (see Table 7).

Table 8

Welch and Brown-Forsythe Tests

Robust Tests of Equality of Means

Scores

	Statistic ^a	df1	df2	Sig.
Welch	109.464	2	52.590	.000
Brown-Forsythe	79.954	2	93.724	.000

a. Asymptotically F distributed.

The output from Table 8 is only valid if the equal variance assumption has been violated. From this example, using the Welch statistic, we find that $F(2, 52.590) = 109.46$, $p < .001$. The *a priori* alpha level is set at .05; we conclude that the adjusted *F* ratio is statistically significant. Since the *p* value is smaller than .05 the null hypothesis is rejected (see Table 8).

The number of financial education sessions was statistically significant when related to financial behavior score.

Table 9

Least Significant Difference

Dependent Variable: Scores

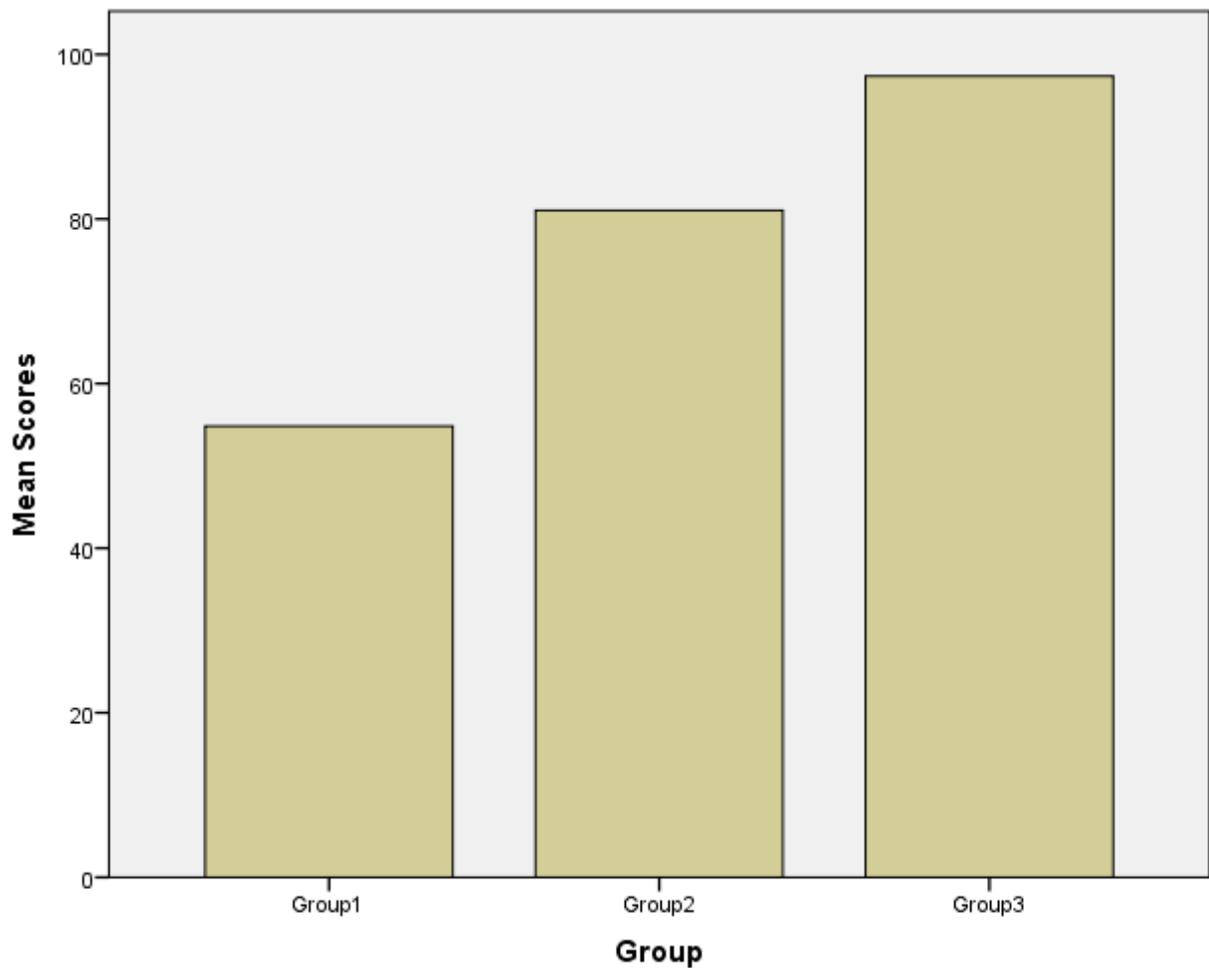
LSD

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Group1	Group2	-26.248*	3.632	.000	-33.44	-19.05
	Group3	-42.532*	4.628	.000	-51.70	-33.36
Group2	Group1	26.248*	3.632	.000	19.05	33.44
	Group3	-16.283*	3.770	.000	-23.75	-8.82
Group3	Group1	42.532*	4.628	.000	33.36	51.70
	Group2	16.283*	3.770	.000	8.82	23.75

*. The mean difference is significant at the 0.05 level.

The results of a post-hoc LSD test indicated that participants who attended financial education sessions had higher scores (see Table 9).

Figure 2 Scatterplot Group: Y Axis, Score: X Axis



The more financial education sessions a participant attended, the higher the financial behavior score. Group 1 attended no sessions, Group 2 attended 1-2 sessions and Group 3 attended 3-4 sessions. In Figure 2, the bars on the graph represent the mean scores for each of the three groups.

Table 10

Linear Regression

Model Summary and Parameter Estimates

Dependent Variable: Group

Equation	Model Summary					Parameter Estimates	
	R Square	F	df1	df2	Sig.	Constant	b1
Linear	.423	84.358	1	115	.000	.424	.020

The independent variable is Scores.

R-square indicates the amount of variance of responsible financial behavior (scores) explained by the number of financial education sessions attended. In this case, the model explains 42.3% of the variance in scores. Regression analysis using the two continuous variables predicts that the more financial education sessions a participant attends, the higher the responsible financial behavior score. Group 2 attended 1-2 sessions and Group 3 attended 3-4 sessions.

Table 11

Validity and Reliability

Reliability Statistics

Cronbach's Alpha	N of Items
.963	21

Reliability analysis of the 21 question survey instrument with a 5-point Likert scale results in Cronbach's Alpha of .963, indicating that the instrument is reliable and valid (see Table 11).

Summary

The results of this study suggest that financial education sessions do play a positive role in the general financial functioning of the participants studied. Of the 3 groups studied, Group 1 having no financial training sessions, Group 2 having 1 or 2 sessions and Group 3 having the most training with 3 or 4 sessions, there is a statistically significant difference between the number of sessions and positive responsible financial behavior.

Chapter 5

Summary, Conclusions, and Recommendations

Summary of the Study

This chapter provides the results, conclusions and recommendations for the study. This study examined the impact personal finance education had on graduate students in health related fields and responsible financial behavior as a whole. The study specifically examined decision-making as it related to student loan borrowing, credit card usage, review of credit reports and credit scores, and budgeting and spending. Two colleges with graduate schools in health related fields participated in this study, a college of medicine and school of pharmacy, both located in the Southeastern United States. Data were captured from the students in these colleges through an online survey. The results of the survey suggested a statistically significant difference in the number of personal finance education sessions and responsible financial behavior.

The results of the study are summarized in this chapter, as well as the conclusions and implications that can be made from these results. Recommendations for current practice and for future research are shared as well.

Research Problem

There is a gap in research in what ways personal finance education influenced responsible financial behavior among students who attended financial literacy education sessions. This study was significant as it explored an area that had little previous research. Personal finance education programs are prevalent in higher education, but measurement of the effectiveness of these programs is limited. Satisfaction surveys abound, and pre- and post-tests are considered extraordinary in the effort to measure success. Examples include the National

Endowment for Financial Education's CashCourse which allows participating colleges and universities to choose whether or not to evaluate, as well independently determining the design of the evaluation instrument. Bowling Green State University's financial education program asks students to identify the most valuable part of the session. The impact of these programs on students' responsible financial behavior had not been extensively explored. Brown (2009) was the first study that examined the influence these programs have had on the subsequent actions students take in the financial aspect of their lives.

Significance of the Study

This study may begin a national dialogue within the financial aid community regarding financial education program evaluation. By evaluating the impact of these programs, a nationwide standard for evaluation of the influence of financial literacy education could be created.

The following research question was investigated in this study:

What is the relationship between the number of personal finance education sessions among graduate students in health-related fields and their responsible financial behavior?

For this study, the independent variable was participation in personal finance education sessions, and the dependent variable was responsible financial behavior. For each supporting research question the dependent variables included: reviewing student loans, review of credit reports and credit scores and budgeting, and current finances.

The null hypothesis was: there is no statistically significant difference in the number of personal financial education sessions attended and responsible financial behavior among graduate students in health-related fields. The alternate hypothesis was: there is a statistically significant difference in the number of personal financial education sessions attended and responsible financial behavior among graduate students in health-related fields.

Instrument and Data Collection

The Likert scale was developed by Rensis Likert (1932) and is a survey method where participants specify their level of agreement or disagreement on a symmetric scale for a series of statements. Through the use of a Likert (1932) scale, the range captured the strength of participants' feelings for a given item, while the results of analysis of multiple items reveal a pattern that has scaled properties.

Data Analysis

The survey instrument uses a numerical scale. Each question has a single-item score, which is an "individual score assigned to each question for each participant in the study" (Creswell, 2008, p.185). The result for each individual was averaged from each respondent at each institution where the study was conducted. The data were entered into SPSS statistical software by the researcher and hypothesis testing was then conducted. The data were analyzed using descriptive statistical methods including a one-way Analysis of Variance (ANOVA) and post-hoc testing. The surveys captured numbered data using questionnaires to statistically analyze the data to test the research questions and describe trends (Creswell, 2008).

Data Collection and Analysis

Data were collected in this study from graduate students enrolled in health-related fields at two separate institutions, a college of medicine and school of pharmacy, both located in the Southeastern United States. A total of 117 online surveys were completed. Survey results were transferred into SPSS, with scores totaled and averaged, where hypothesis testing consisted of a one-way ANOVA, and Least Significant Difference post-hoc test. The results of the research are provided, along with the overarching results from the entire study.

Assumptions

One assumption is that the sample of participants in this study was representative of graduate students within the medical and pharmacy colleges and schools. The sample chosen was from a medical college and a pharmacy school, both located in the Southeastern United States. The sample chosen was from pharmacy and medical school profession disciplines, so was also not necessarily representative of high school students, undergraduate college students, or of graduate students in other disciplines. Another assumption is that due to previous use of the instrument with analysis, (Brown, 2009) it was assumed that the survey instrument is both valid and reliable.

Limitations

A limitation of the study is that the sample does not necessarily mirror the national population's demographics, educational attainment levels, or economic circumstances. Another limitation of this study is that the long-term impact of these programs is unknown. This study surveyed students who were still completing their education and not yet working full-time. It only examined the influence of the program on their decision-making while in school and their current financial circumstances. Attendance in the personal finance education sessions is an additional limitation of the study. Those who attended more personal financial education sessions may have been individuals who were more fiscally responsible than those who chose not to attend the sessions. This interest in being fiscally responsible could be the reason the students chose to attend the additional sessions and responded with more responsible financial behavior on the survey. It is assumed for this study that participants were all interested in attending personal finance education sessions and is not a limitation of this study. One more limitation of this study is that the participants were not randomly selected. Academic department heads of each participating school sent students the website link for participation in the study.

Delimitations

Due to the large number of potential participants in the study population, the population involved in the current study focused only on graduate students enrolled in medical or pharmacy schools at two universities in the Southeastern United States to participate in the study.

Conclusions

In order to determine if personal finance education influenced responsible financial behavior, the results suggested there was a statistically significant relationship between students' participation in personal finance education sessions and students' responsible financial behavior. The study evaluated one factor of influence on responsible financial behavior, personal finance education sessions. Based on the results of this study, it is unreasonable to conclude that participation in personal finance education was the sole reason students made the financial decisions they did. However, this study does suggest that personal finance education had some impact on students' decision-making, and that the impact was statistically significant.

The purpose of this study was to examine the extent of participation in personal finance education sessions and how the sessions influenced responsible financial behavior among graduate students in health-related fields. This study examined how the amount of personal finance education influenced student loan borrowing, how students budgeted and spent their money while in school, how it affected review of their credit reports and scores, and how participation influenced their decisions on the use of credit cards. This study did address the research problem and fulfilled its purpose.

The results showed that personal finance education did impact responsible financial behavior at the selected institutions. This study certainly adds to the body of literature, which was lacking in the area of evaluation of the impact of education on responsible financial

behavior. However, this study is only the beginning of what could be accomplished in evaluation of the impact of financial literacy education on students in health-related fields.

Recommendations

It is apparent that personal finance education does have some impact on responsible financial behavior among graduate students in health-related fields. The results suggested that the more personal finance education sessions a student attended, the more positive the responsible financial behavior.

Based on the results of this study, it is recommended that institutions require more mandatory financial literacy education sessions. The results of the study suggested the more personal finance education sessions students attended, the more positive their responsible financial behavior. In order to help students make better financial decisions, providing students with more personal finance education could impact their future financial decision-making.

In order to best achieve this recommendation, the second recommendation is for colleges to consider incorporating financial literacy education into the students' core curriculum. If personal finance education is optional, in an intense curriculum in schools such as medicine or pharmacy, students when choosing electives may overlook courses. Institutions educating those in health-related fields should provide their students residents with financial planning education. These graduate students have accrued significant debt and financial planning and debt management education should be part of their required education.

Recommendations for Further Research

This study does not answer all of the questions about how personal finance education influences graduate students in health-related fields' responsible financial behavior, but it does add significantly to the existing body of literature. The literature review found very little research on personal finance education and its influence on students' responsible financial behavior.

There are a very limited number of studies that examined the impact of personal finance education as it related to responsible financial behavior. One study was conducted just two weeks after the financial literacy education course ended. Five students participated in a focus group where participants were asked if they had made any changes about their finances because of the course. The participants reported they had taken specific steps based on what they had learned in the course; however, the follow-up was so close to the conclusion of the course that it did not measure long-term changes to responsible financial behavior (Gross et al., 2005).

This study sought to bridge a gap in the research. This study examined students' responsible financial behavior as a result of personal finance education that may have transpired over a period of one to four or more years, depending on the class level of the student. Students in this study had a longer period of time to apply the financial literacy education before decision-making was studied. They may have also attended multiple personal finance education sessions and that reinforcement may have further influenced their decision-making. Future research should take this investigation a step further.

The first recommendation for future research is a longitudinal study that would assess whether or not the personal finance education received at institutions of higher education influenced students' decision-making after graduation and into their professional careers. This study examined only the influence of financial literacy education as it related to students' current decision-making as a student with limited income. A longitudinal study could examine graduates' responsible financial behavior in the first few years of their careers as they continue for post-doctorate internships, residencies, or further specialized training where salaries remain low and most loans are not yet in repayment. The longitudinal study could further examine these same individuals as they take on full-time positions and begin to have larger incomes, and begin repayment of their student loans.

The second recommendation for future research is to research students who received personal finance education as undergraduates. The study would examine whether or not the education positively influenced their financial decisions during graduate school compared to those students who did not receive the personal finance education in undergraduate school. Further research could then be conducted to compare students who received additional personal finance education in graduate school with those who only received personal finance education as undergraduate students and how each group of students handles decision-making after graduation and into their professional careers.

A final recommendation is that research be administered to discover if one method of delivery of personal finance education has more impact than other methods of delivery, such as face-to-face, large or small group, online lessons, or self-study are just a few examples. Online personal finance education may supplement the face-to-face training; however, more research is suggested to determine if online delivery methods have as much impact as face-to-face training. While a variety of methods of delivery may appeal to participants, students might respond to questions on the method of delivery of personal finance education and contrast the content they learned between the various modes of delivery. This research could open a completely new area of study about the influence of personal finance education and responsible financial behavior.

Summary

This study adds to the body of literature on personal finance education and begins to fill a gap in the research on the influence of these programs on responsible financial behavior. The study was able to answer the research question posed to determine how and to what extent personal finance education programs influenced responsible financial behavior for graduate students enrolled for careers in the healthcare industry. The results suggested that personal

finance education did make an impact on graduate students enrolled for careers in the healthcare industry.

The analysis suggested that as students attended more personal finance education sessions, their responsible financial behavior became more positive and responsible. Those attending three or four sessions made the most desirable decisions of the three groups. Those attending one or two sessions made more desirable decisions when compared to those who attended no sessions.

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Appendix A
Survey Use Approval

UNIVERSITY OF SOUTH ALABAMA

COLLEGE OF MEDICINE
OFFICE OF STUDENT AFFAIRS



TELEPHONE: (251) 460-7174
MSB 1005 • MOBILE, ALABAMA 36688-0002
FAX: (251) 460-6761

January 11, 2013

Institutional Review Board
c/o Office of Human Subjects Research
307 Samford Hall
Auburn University, AL 36849

Dear IRB Members,

After reviewing the proposed study, "Examining the Influence of Financial Literacy Education on Financial Decision-Making among Graduate Level Students", presented by Ms. Brock, an AU graduate student, I have granted authorization for medical students to be *recruited* from the University of South Alabama College of Medicine.

The purpose of the study is to determine if financial education has an effect on graduate students' financial behaviors. After students complete the survey, Ms. Brock will collect and analyze the data and report her findings. It is understood that this project will end no later than October 1, 2013.

To ensure that the students are protected, Ms. Brock has agreed to provide to me a copy of any Auburn University IRB-approved, stamped consent document before *recruiting* participants in the Harrison School of Pharmacy. *Ms. Brock has agreed to provide a copy of her study results, in aggregate, to our department.*

If the IRB has any concerns about the permission being granted by this letter, please contact me at 251-460-6762.

Sincerely,

A handwritten signature in cursive script that reads "Susan P. LeDoux".

Susan P. LeDoux, Ph.D.
Associate Dean for Medical Education and Student Affairs



4036 HALEY CENTER
AUBURN, AL 36849-5221

TELEPHONE:
334-844-4460

FAX:
334-844-3072

COLLEGE OF EDUCATION
DEPARTMENT OF EDUCATIONAL FOUNDATIONS,
LEADERSHIP AND TECHNOLOGY

January 9, 2013

Institutional Review Board
c/o Office of Human Subjects Research
307 Samford Hall
Auburn University, AL 36849

Dear IRB Members,

After reviewing the proposed study, "Examining the Influence of Financial Literacy Education on Financial Decision-Making among Graduate Level Students", presented by Ms. Brock, an AU graduate student, I have granted authorization for graduate students to be *recruited* from the Harrison School of Pharmacy.

The purpose of the study is to determine if financial education has an effect on graduate students' financial behaviors. After students complete the survey, Ms. Brock will collect and analyze the data and report her findings. It is understood that this project will end no later than October 1, 2013.

To ensure that the students are protected, Ms. Brock has agreed to provide to me a copy of any Auburn University IRB-approved, stamped consent document before *recruiting* participants in the Harrison School of Pharmacy. *Ms. Brock has agreed to provide a copy of her study results, in aggregate, to our department.*

If the IRB has any concerns about the permission being granted by this letter, please contact me at 334-844-8348.

Sincerely,

Dr. Lee Evans, Dean, Harrison School of Pharmacy

Appendix B

Research Approval by Institutional Review Board

AUBURN UNIVERSITY INSTITUTIONAL REVIEW BOARD for RESEARCH INVOLVING HUMAN SUBJECTS
RESEARCH PROTOCOL REVIEW FORM

For Information or help contact **THE OFFICE OF RESEARCH COMPLIANCE**, 115 Ramsay Hall, Auburn University
Phone: 334-844-5966 **e-mail:** hsubjec@auburn.edu **Web Address:** <http://www.auburn.edu/research/vpr/ohs/>

Revised 03.26.11 – **DO NOT STAPLE, CLIP TOGETHER ONLY.**

Save a Copy

1. **PROPOSED START DATE of STUDY:** Jan 7, 2013

PROPOSED REVIEW CATEGORY (Check one): FULL BOARD EXPEDITED EXEMPT

2. **PROJECT TITLE:** Examining the Influence of Financial Literacy Education on Financial Decision-Making among Graduate Level Students

3. Ruth Brock Doctoral Candidate Educational FLT 205-612-4066 brockru@auburn.edu
PRINCIPAL INVESTIGATOR **TITLE** **DEPT** **PHONE** **AU E-MAIL**

550 Davis Drive Ashville, AL 35953 205-594-5730 FAX **ALTERNATE E-MAIL**
MAILING ADDRESS

4. **SOURCE OF FUNDING SUPPORT:** Not Applicable Internal External Agency: _____ Pending Received

5. **LIST ANY CONTRACTORS, SUB-CONTRACTORS, OTHER ENTITIES OR IRBs ASSOCIATED WITH THIS PROJECT:**
 None

6. **GENERAL RESEARCH PROJECT CHARACTERISTICS**

6A. Mandatory CITI Training	6B. Research Methodology
<p>Names of key personnel who have completed CITI: Ruth Brock James E. Witte / _____ Professor</p> <p>CITI group completed for this study: <input checked="" type="checkbox"/> Social/Behavioral <input type="checkbox"/> Biomedical</p> <p style="text-align: center; color: red; font-weight: bold; font-size: 1.2em;">PLEASE ATTACH TO HARD COPY ALL CITI CERTIFICATES FOR EACH KEY PERSONNEL</p>	<p>Please check all descriptors that best apply to the research methodology.</p> <p>Data Source(s): <input checked="" type="checkbox"/> New Data <input type="checkbox"/> Existing Data</p> <p>Will recorded data directly or indirectly identify participants? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>Data collection will involve the use of: <input type="checkbox"/> Educational Tests (cognitive diagnostic, aptitude, etc.) <input type="checkbox"/> Interview / Observation <input type="checkbox"/> Physical / Physiological Measures or Specimens (see Section 6C) <input checked="" type="checkbox"/> Surveys / Questionnaires <input checked="" type="checkbox"/> Internet / Electronic <input type="checkbox"/> Audio / Video / Photos <input type="checkbox"/> Private records or files</p>

6C. Participant Information	6D. Risks to Participants
<p>Please check all descriptors that apply to the participant population. <input checked="" type="checkbox"/> Males <input checked="" type="checkbox"/> Females <input checked="" type="checkbox"/> AU students Vulnerable Populations <input checked="" type="checkbox"/> Pregnant Women/Fetuses <input type="checkbox"/> Prisoners Children and/or Adolescents (under age 19 in AL)</p> <p>Persons with: <input type="checkbox"/> Economic Disadvantages <input type="checkbox"/> Physical Disabilities <input type="checkbox"/> Educational Disadvantages <input type="checkbox"/> Intellectual Disabilities</p> <p>Do you plan to compensate your participants? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Please identify all risks that participants might encounter in this research.</p> <p><input checked="" type="checkbox"/> Breach of Confidentiality* <input type="checkbox"/> Coercion <input type="checkbox"/> Deception <input type="checkbox"/> Physical <input type="checkbox"/> Psychological <input type="checkbox"/> Social <input type="checkbox"/> None <input type="checkbox"/> Other: <u>Received</u></p> <p style="text-align: center; color: red; font-weight: bold; font-size: 1.2em;">DEC 19 2012</p> <p style="font-size: 0.8em;">*Note that if the investigator is using or accessing confidential or identifiable data, breach of confidentiality is always a risk.</p>

Do you need IBC Approval for this study? No Yes - BUA # _____ Expiration date _____

FOR OHSR OFFICE USE ONLY

<p>DATE RECEIVED IN OHSR: <u>12/19/12</u> by <u>UB</u></p> <p>DATE OF IRB REVIEW: <u>1/14/13</u> by <u>CC</u></p> <p>DATE OF IRB APPROVAL: _____ by _____</p> <p>COMMENTS: <u>final revisions in 1/14/12</u></p>	<p>PROTOCOL # <u>12.414 EX 1301</u></p> <p>APPROVAL CATEGORY: <u>45CFR 46.101(b)(2)</u></p> <p>INTERVAL FOR CONTINUING REVIEW: <u>3 years</u></p>
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Appendix C

E-mail Invitation for Online Survey

Dear Harrison School of Pharmacy Students,

I am a Ph.D. candidate in the Department of Educational Foundations, Leadership, and Technology at Auburn University. I would like to invite you to participate in my research study to *determine the effectiveness of financial education in graduate students' financial decision-making*. You may participate (*or may not participate*) if you are over age 19 and enrolled in graduate school at Auburn University or UAB.

Participants will be asked to complete an online survey. Your total time commitment will be approximately 20 minutes.

The risks associated with participating in this study are minimal, but include breach of confidentiality, which is always a risk. To minimize these risks, we will use secure computer networks, with no identification of participants.

If you would like to know more information about this study, an information letter can be obtained by sending me an e-mail at brockru@auburn.edu. If you decide to participate after reading the letter, you can access the survey from a link in the letter.

If you have any questions, please contact me at brockru@auburn.edu or my advisor, Dr. James Witte, at witteje@auburn.edu.

The Auburn University Institutional Review Board has approved this document for use from January 14, 2013 to January 13, 2016. Protocol # 12-414 EX 1301.

Thank you for your consideration,



Dear University of South Alabama School of Medicine Students,

I am a Ph.D. candidate in the Department of Educational Foundations, Leadership, and Technology at Auburn University. I would like to invite you to participate in my research study to *determine the effectiveness of financial education in graduate students' financial decision-making*. You may participate (*or may not participate*) if you are over age 19 and enrolled in graduate school at Auburn University or UAB.

Participants will be asked to complete an online survey. Your total time commitment will be approximately 20 minutes.

The risks associated with participating in this study are minimal, but include breach of confidentiality, which is always a risk. To minimize these risks, we will use secure computer networks, with no identification of participants.

If you would like to know more information about this study, an information letter can be obtained by sending me an e-mail at brockru@auburn.edu. If you decide to participate after reading the letter, you can access the survey from a link in the letter.

If you have any questions, please contact me at brockru@auburn.edu or my advisor, Dr. James Witte, at witteje@auburn.edu.

Thank you for your consideration,

A handwritten signature in cursive script that reads "Ruth Brock".

Appendix D

Survey Instrument

[SURVEY PREVIEW MODE] Examining the Influence of Financial Literacy Education on Financial Decision-Making Survey

Examining the Influence of Financial Literacy Education on Financial Decision-Making

[SURVEY PREVIEW MODE] Examining the Influence of Financial Literacy Education on Financial Decision-Making Survey

Female

5. How many financial literacy sessions have you participated in while attending this university?

- 0
- 1-2
- 3-4
- 5-7
- more than 7

6. Student Loans: How often do you do the following?

	Always	Sometimes	N/A	Rarely	Never
Pay the interest currently accumulating on my loans	<input type="radio"/>				
Reduce the amount I borrow by returning funds or cancelling a portion of the loan awarded	<input type="radio"/>				
Periodically review my loan indebtedness level	<input type="radio"/>				
Annually review what my monthly payments will be upon graduation	<input type="radio"/>				
Annually calculate or review the total interest I will pay over the life of my loans	<input type="radio"/>				
Returning student loan money I do not need	<input type="radio"/>				

7. Credit/Budgeting: How often do you do the following?

	Always	Sometimes	N/A	Rarely	Never
Check my credit scores	<input type="radio"/>				
Annually review my credit report	<input type="radio"/>				
Canceled/canceling credit cards	<input type="radio"/>				
Paying off/paid off credit cards	<input type="radio"/>				

Stopped charging entirely	<input type="radio"/>				
Budget my spending	<input type="radio"/>				
Spending only on things I need	<input type="radio"/>				
Tracking my daily expenditures	<input type="radio"/>				

8. Financial decision-making: How strongly do you agree or disagree with these statements?

	Strongly agree	Agree	N/A	Disagree	Strongly disagree
I have car that is paid in full	<input type="radio"/>				
I have car payments over \$300 per month	<input type="radio"/>				
I have a roommate and share living expenses	<input type="radio"/>				
I live with family	<input type="radio"/>				
I have a high cost apartment and live alone	<input type="radio"/>				

9. The content I have learned in my university's financial literacy program has influenced my decision-making as it relates to:

	Strongly agree	Agree	N/A	Disagree	Strongly disagree
Student loan borrowing	<input type="radio"/>				
Credit cards	<input type="radio"/>				
My credit reports and credit scores	<input type="radio"/>				
Budgeting my money	<input type="radio"/>				
Spending my money	<input type="radio"/>				
My lifestyle choices, such as housing and transportation	<input type="radio"/>				
There are factors that are independent of my university's financial literacy program that have more strongly influenced my financial decision-making.	<input type="radio"/>				

10. Please list any individuals, media, businesses, or others who have influenced your financial habits.

Done

Powered by **SurveyMonkey**
Check out our [sample surveys](#) and create your own now!