

THREE ESSAYS ON THE FINANCIAL BEHAVIORS OF SOLDIERS BEFORE AND
AFTER DEPLOYMENT

by

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B.A., Brigham Young University, 2001
M.S., Texas Tech University, 2005

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

School of Family Studies & Human Services
College of Human Ecology

KANSAS STATE UNIVERSITY

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Abstract

The current three essay dissertation researched the financial behaviors of military service members before and after deployment using primary data collected at a Midwestern U.S. Army installation. The introduction (Chapter 1) reviewed the two financial surveys administered to Soldiers before ($N = 701$) and after ($N = 670$) they left for a yearlong deployment to a war zone. The first essay (Chapter 2) explored the financial behaviors, financial knowledge, and financial anxiety as they relate to rank and deployment. The results suggested that financial behaviors after deployment (Time 2) were significantly better than financial behaviors before deployment (Time 1). Rank had a positive effect on increased subjective financial knowledge where all ranks above privates (E1 to E2) had greater financial knowledge. Privates first class, specialists, and corporals (E3 to E4) had significantly lower financial knowledge than their direct supervisors, sergeants and staff sergeants (E5 to E6). Finally, Soldiers reported more financial anxiety before deployment (Time 1) than after deployment (Time 2).

Using the framework of social learning theory, the second essay (Chapter 3) expanded the research of military financial behaviors before deployment to more fully understand stress and other factors that influence financial behavior outcomes. Results suggested that past behaviors and some personal factors played a significant role in Soldiers' financial behaviors. Higher levels of subjective financial knowledge, more internal locus of control, and lower levels of financial anxiety all had a positive effect on financial behavior outcomes. The past behaviors variable had the most explanatory value in Soldiers' financial behaviors before deployment. Soldiers with any amount of credit card debt had worse financial behaviors compared to Soldiers with no credit card debt, while Soldiers with greater amounts of emergency financial savings

were more likely to have better financial behaviors than those who did not have any emergency financial savings.

The final essay (Chapter 4) studied the factors that influenced financial behavior outcomes of both Soldiers and college students. This essay used primary data from a college student sample to compare to the before deployment (Time 1) survey data of Soldiers. Findings reported that past behaviors and some personal factors played a significant role in the financial behavior outcomes. Soldiers and college students with higher levels of subjective financial knowledge, more internal locus of control, and lower financial anxiety reported positive financial behaviors. The most explanatory concept was that of past behaviors, which revealed that participants with no credit card debt had better financial behaviors compared to respondents who had any level of credit card debt.

The conclusion (Chapter 5) highlights the findings of all three essays, which contribute both to the financial behavior literature. These papers also contribute to the research on the personal financial matters of service members. The research has direct implications for policy makers, military leaders, service providers, and financial planners and counselors.

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Dedication

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Chapter 1 - The Financial Behaviors of Soldiers Before and After Deployment

Introduction

The military offers a variety of challenges and demands for service members due to multiple roles and missions, which range from combat to peacekeeping and humanitarian situations. It is one of few professions today where injury and death are constant companions (Harris, 2011). In addition to the stressors of the job, service members have rated financial pressure as more stressful than deployments and personal relationships (U.S. Department of Defense [DoD], Office of the Assistant Secretary of Defense, 2012). As acknowledged by military leaders and the President of the United States, financial readiness is a key component of the well-being and psychological health of military service members and military families (United States, Executive Office of the President, 2011). The research in the current three essay dissertation seeks to analyze the personal financial matters, specifically financial behaviors, of service members in an attempt to gain greater insight into the personal readiness of military members and their families. If financial health directly impacts psychological health, which in turn impacts mission readiness, then the financial behavior outcomes of military personnel have potential national security implications.

Military Demographics. Today's U.S. military is the largest all-volunteer force in our nation's history, consisting of ground forces (Army and Marine Corps), air fighters (Air Force), and water forces (Navy) (Harris, 2011). In total, the military consists of 3.6 million people of whom 40% are active-duty service members, 30% are Ready Reserve (National Guard and Reserve), and 25% are Department of Defense (DoD) civilians (U.S. DoD, Office of the Deputy

Under Secretary of Defense for Military Community and Family Policy, 2012). The Army is the largest branch (and the focus of this dissertation) with 561,000 active duty Soldiers who compromise 39% of the active duty fighting force (U.S. DoD, Office of the Deputy Under Secretary of Defense for Military Community and Family Policy, 2012). Air Force is the next largest Service branch (23%) of the active-duty force, followed by the Navy (22%), the Marine Corps (14%), and the Coast Guard (3%) (U.S. DoD, Office of the Deputy Under Secretary of Defense for Military Community and Family Policy, 2012).

The rank structure of the military serves as both a hierarchical structure used for promotion and classification purposes (see Appendix A). Rank, along with years of service, is directly correlated with income (Defense Finance and Accounting Service, 2010; see Appendix B). It can be classified in two main categories: officers and enlisted. Officers usually give the orders and can be both commissioned and noncommissioned. The enlisted ranks typically execute the given orders. In the Army active-duty force, there is one officer for every five enlisted personnel (U.S. DoD, Office of the Deputy Under Secretary of Defense for Military Community and Family Policy, 2012). The average age for Army officers is 35, while the average age of an enlisted Soldier is 28 years old (U.S. DoD, Office of the Deputy Under Secretary of Defense for Military Community and Family Policy, 2012). The majority of officers (83%) hold a bachelor's degree or higher while only 5% of enlisted personnel hold a bachelor's degree or higher (U.S. DoD, Office of the Deputy Under Secretary of Defense for Military Community and Family Policy, 2012).

In terms of gender and ethnicity, females constitute approximately 15% of active-duty Soldiers and over 30% of Soldiers identify themselves as a minority (U.S. DoD, Office of the Deputy Under Secretary of Defense for Military Community and Family Policy, 2012). The

military is also a highly married force. Over 57% of military members are married, including 70% of officers and 54% of enlisted personnel. In the Army, almost 7% of the population is in a dual military marriage relationship (U.S. DoD, Office of the Deputy Under Secretary of Defense for Military Community and Family Policy, 2012). These demographics provide an overview of the military population and specifically offer insight to the demographics of the Army population.

Military Life Stressors. A unique aspect of military life is deployment. The last decade has been a time of unprecedented deployments in the history of the all-volunteer force. There have been almost 2.5 million service members deployed to Operations Enduring Freedom, Iraqi Freedom, and New Dawn (Defense Manpower Data Center, 2012). These deployments have been longer than prior deployments. Reoccurring deployments to combat are common, and breaks between deployments are infrequent (Tanielian & Jaycox, 2008). As of October 2012, the Army had deployed 70% of its active-duty force at some point in the recent conflicts (Defense Manpower Data Center, 2012). The Army supported 52% of all DoD active-duty deployments, despite only making up 39% of the force strength (Bonds, Baiocchi, & McDonald, 2010). As of October 2012, the Army had over 108,000 Soldiers in their second deployment, 65,000 Soldiers in their third deployment, 28,000 Soldiers in their fourth deployment, and over 17,000 Soldiers in their fifth or more deployment (Defense Manpower Data Center, 2012). Deployment has been cited to have the strongest effect on work-related stress for Soldiers (Bray, Camlin, Fairbank, Dunteman, & Wheelless, 2001; Hosek & Martorell, 2009).

Along with deployment, personal financial concerns have been one of the most serious challenges military leadership has faced in recent years. In fact, according to the Acting Deputy Assistant Secretary of Military Community and Family Policy, Chuck Milam, a recent

Department of Defense survey showed that service members rated finances as one of the most significant stressors they face, rating it higher than deployments or personal relationships (U.S. DoD, Office of the Assistant Secretary of Defense, 2012). Recent research has indicated that service members are not likely to save, have substantial credit card debt, and have difficulty making ends meet financially (Financial Industry Regulators Authority [FINRA], 2010). Other research has also shown that relocation, deployments, and cost of living do not determine who has financial problems (Tiemeyer, Wardynski, & Buddin, 1999). Findings have revealed that the Navy has lost between \$172 million to \$258 million in overall productivity costs due to personal financial problems (Luther, Garman, Leech, Griffitt, & Gilroy, 1997). Furthermore, financial preparation is a key part of deployment preparation, and there can be significant stress surrounding this financial preparation (Castaneda, Harrell, Varda, Hall, Beckett, & Stern, 2008; Hosek, Kavanagh, & Miller, 2006; Rotter & Boveja, 1999). Both deployment and personal financial matters have been shown to be a source of stress for military members (Bray et al., 2001; Drummet, Coleman, & Cable, 2003; Hosek et al., 2006; Hosek & Martorell, 2009). Therefore, it is imperative to improve the mission readiness of our military men and women by improving the financial resilience of military members and their families.

Personal Financial Counseling Programs for the Army. In order to help service members and their families with personal financial problems, the DoD and the Department of the Army have funded several financial assistance and counseling programs to enhance the personal readiness of service members. As a part of the larger family readiness system (FRS), DoD has given specific instruction to support DoD-operated programs and community-based family readiness services that are available through a large variety of access points (U.S. Department of Defense [DoD] Instruction, 2012). Both DoD and Army personal financial counseling programs

include: Army Community Service's financial readiness programs (U.S. DoD Instruction, 2012), Army Emergency Relief program (Army Emergency Relief, 2011), Personal Financial Counselors (part of the Military Family Life Counseling program) (MHN Government Services, 2013), and a variety of web-based resources, such as MilitaryOneSource.com, ArmyOneSource.com, and MyArmyBenefits.us.army.mil.

Each military branch operates installation based Military and Family Support Centers (MFSCs) (U.S. DoD Instruction, 2012). In the Army, the MFSC is called the Army Community Service (ACS) center. These centers are located on installations all over the world and can be accessed by any service member or family member. These centers provide a large variety of services, which include relocation assistance, child and youth programs, financial readiness programs, and many other programs (U.S. DoD Instruction, 2012). The Personal Financial Management (PFM) services are "proactive personal life cycle financial management services that provide service members and their families with the tools and information they need to develop individual strategies to achieve financial goals and address financial challenges" (U.S. DoD Instruction, 2012, p. 15).

This program has instituted financial education offerings, training programs, and financial counseling programs to help service members and their families with consumer financial information and education. At a minimum, the financial education program gives basic financial training to service members within three months of arriving at their first permanent duty station (U.S. DoD Instruction, 2012). The instruction explicitly states that service members with a leadership role, primarily officers and noncommissioned officers, should be informed about the "policies and practices designed to protect junior military members" (U.S. DoD Instruction, 2012, p. 15). The counseling program is designed to provide individual assistance to

service members and their families concerning their individual or family budgets in order to help them achieve their short-term and long-term goals. This prepares them to “contribute to individual and operational readiness” (U.S. DoD Instruction, 2012, p. 15). The instruction specifically states that the counseling should be provided prior to deployment in order to help develop a financial plan for use during the time of the service member’s absence (U.S. DoD Instruction, 2012).

Referrals may be made if needed, but the PFM services are to incorporate the DoD Financial Readiness Campaign pillars, which are: (a) maintain good credit, (b) achieve financial stability, (c) establish routine savings, (d) participate in the Thrift Savings Plan and Savings Deposit Program, (e) sustain the Service member’s Group Life Insurance (SGLI) and other insurance, (f) encourage low-cost loan products as an alternative to payday lending and predatory loans, (g) use low-cost Moral, Welfare, and Recreation (MWR) programs, and (h) preserve security clearances (U.S. DoD Instruction, 2012). The PFM program is led by a Personal Financial Manager who serves as a primary expert on personal finances and holds a bachelor’s degree as well as a nationally recognized financial counselor certification (U.S. DoD Instruction, 2012). It is estimated that the Department of Defense spends \$38 million dollars annually (FY 2010) on the Personal Financial Management program alone (U.S. Government Accountability Office [GAO], 2012).

Under the Garrison Commander of an installation, many of the PFM programs also serve as the lead for handling and controlling the emergency relief loans provided through the various Service Branch relief societies. The Army Emergency Relief (AER) program provides funds to Soldiers, retirees, and their families on the basis of financial need (Army Emergency Relief, 2011). AER loans are interest-free loans, grants, or a combination of a loan and a grant that are

based on valid financial need and are available through military commanders to help meet the needs of their Soldiers and dependents. Since the program's inception in 1942, AER has provided \$1.4 billion of relief aid to 3.4 million Soldiers and their families (Army Emergency Relief, 2011). In 2011, AER provided \$69.4 million in interest-free loans and grants for almost 59,800 Soldiers and their families (Army Emergency Relief, 2011). AER has invested over \$1 million to teach a personal financial management course to over 111,000 at Soldiers' Advanced Individual Training (AIT) sites throughout the Army (Army Emergency Relief, 2011).

Approximately 10 years ago, DoD initiated the Military Family Life Consultant (MFLC) program to support service members and their families who were struggling with the effects of extended and repeated deployments due to the conflicts in Iraq and Afghanistan (MHN Government Services, 2013). The MFLC program was set up to augment the existing support services available to active-duty military and their families by providing non-medical counseling services which focused on a short-term problem resolution. In 2007, this program was extended to include additional support services for the National Guard and Reserve, child and youth services, and other military programs (MHN Government Services, 2013). In 2008, the program was expanded to include financial counseling support through the Personal Financial Counselors (PFC) program (MHN Government Services, 2013). These PFCs are Certified Financial Planners (CFP®), Accredited Financial Counselors (AFC), or Chartered Financial Consultants (ChFC) and provide education, support, and assistance on personal financial matters. These financial experts provide individual and family financial counseling and planning sessions as well as live workshops on financial education topics. Sessions provide "professional, individualized financial planning and consultation services, which includes assistance with money management, credit and debt liquidation, analysis of assets and liabilities, and establishing and building savings

plans” (MHN Government Services, 2013). These PFCs also serve as a referral network for additional assistance or counseling when necessary.

Finally, there are also several DoD and Army internet-based resources specifically targeted for military and Army audiences. A few of these include: MilitaryOneSource.mil, ArmyOneSource.com, and MyArmyBenefits.us.army.mil. MilitaryOneSource (MOS) is a DoD funded program that provides comprehensive information and services to service members and their families (MOS, 2013). MOS offers a 24/7 call center to support a variety of issues ranging from managing grief, strengthening relationships, and better parenting and childcare practices and opportunities (MOS, 2013). The financial planning resources include financial counseling services free of charge to any service member, including National Guard and Reserve, and their family members and can be administered by telephone or in person if location sites are available (MOS, 2013). MOS also offers a wide array of information, resources, tax preparation, and articles on financial topics of interest to military families online. MOS also will send free information, including CDs and books, to service members and families regardless of location (MOS, 2013).

ArmyOneSource.com is a web-based resource that offers a variety of financial educational articles and tools targeted to help Soldiers and their families with questions surrounding personal financial issues (ArmyOneSource, 2013). They offer financial calculators, retirement planning courses, and a financial literacy game to teach Soldiers and Army families about important personal financial topics (ArmyOneSource, 2013).

In addition to these resources, MyArmyBenefits.us.army.mil provides useful information on federal and state benefits for Soldiers and their dependents (MyArmyBenefits, 2013). The website also has deployment and redeployment calculators to help Soldiers determine the

changes to their paychecks before and after deployment. A number of other benefit calculators exist on the website for retirement, survivor benefits, and disability benefits and can be accessed with the Soldier's Common Access Card (CAC) or Army Knowledge Online (AKO) access (MyArmyBenefits, 2013). All of these financial planning and counseling services are offered to military members and their families free of charge. There is breadth and depth in the variety of services, resources, and information offered through these programs to help service members and their families make smart financial decisions.

Statement of the Problem

Given the severity and pervasiveness of the recent economic recession and the last decade of war deployments for U.S. service members, it is no surprise that service members and their families are experiencing financial challenges. When considering military personnel, personal financial problems can have significant negative effects that impact their military career. Service members who experience serious financial problems can lose security clearances, face criminal sanctions, and/or are discharged from the military (FINRA, 2010). In 2012, then acting Secretary of Defense, Leon Panetta, stated, "The number one reason people in the service lose their security clearance is because of financial problems. And that's something that we absolutely have to address" (U.S. DoD, Office of the Assistant Secretary of Defense, 2012). Ultimately, the Department of Defense strives to maintain a fighting force that is mission ready and prepared to fulfill its duty.

In order to build resilience and enhance performance, the Army has outlined a comprehensive Soldier and family fitness resource that contains five dimensions of strength: physical, emotional, social, family, and spiritual readiness (U.S. Army, n.d.). These pillars encompass what the Army defines as personal readiness, which then ultimately plays a direct

role in mission readiness. Mission readiness is what the fighting force must maintain in order to perform its primary duty.

Currently, the comprehensive Soldier and family fitness pillars do not include personal financial readiness. This dissertation lays forth compelling reasons to include financial readiness as a sixth pillar (see Figure 1.1). The theme of finances is underlying all of the other five pillars, and therefore, has a direct implication on personal readiness. Ultimately, financial readiness impacts mission readiness via personal readiness.



Figure 1.1 How financial readiness impacts mission readiness using the five dimensions of strength (U.S. Army, n.d.)

Summary and Connection to Current Research. The lack of military financial behavior information combined with the continuing stress of ongoing deployments and separations indicate the need for further research. The Acting Deputy Assistant Secretary of Military Community and Family Policy, Chuck Milam, stated, “[t]he Department of Defense considers debt from any source a concern and a potential threat to readiness, especially if not managed properly, as it could spiral out of control and cause undue hardship. . .the financial health of our force is absolutely critical to our overall military readiness” (U.S. DoD, Office of the Assistant Secretary of Defense, 2012). The gulf between the numerous financial counseling resources and the high rate of financial problems (FINRA, 2010) gave incentive for further clarification of why personal financial behaviors in a military setting are so rampant. The

previous Director of the Office of Personal Finance within DoD, David Julian, affirmed, “DoD firmly believes that the financial readiness of their troops and families equates to mission readiness” (U.S. Department of the Treasury, 2010). There is a need for empirical and quantitative research to understand the financial behaviors of Soldiers before and after deployment. The following sections detail the financial resilience surveys that sought to provide this needed research. This data served as the primary data for the following chapters of the current dissertation.

Methodology

The financial resiliency surveys used in the current study are unique surveys that were a cooperative effort between researchers at a Midwestern university and an Army installation. Discussions began in August 2010 to work cooperatively to address the financial issues stemming from Soldiers’ habits and behaviors, especially in relation to pre- and post-deployment periods. The discussion led to a joint agreement to administer a financial survey to a unit of deploying Soldiers in order to more fully understand and gain greater insight into the financial behavior of Soldiers before and after deployment. The surveys were conducted within a single command and approval was given by the unit commander. Approval was also obtained by the university Institutional Review Board (IRB) to administer the survey. Respondents were assured that: (a) participation was voluntary, (b) responses would remain strictly confidential, (c) only members of the university research team would have access to the raw data, (d) respondents were free to not answer any question and stop at any time with no penalty or loss of benefit, and (e) no risks were anticipated from participating in this research study. All respondents who completed the survey acknowledged their voluntary agreement to participate in this study and gave consent for their results to be used in the data analysis. The Army installation received command

approval from the Division's leadership as well as the unit's leadership to administer the survey to the Soldiers before and after deployment given the above directed criteria. After the data was analyzed, the installation and unit received the information for feedback on their Soldiers.

With the support and approval of both the Army installation and the university, the survey was administered to a unit of Soldiers in November 2010, prior to their deployment to a war zone. The Time 1 survey covered topic areas such as demographic characteristics, pay and special pays, use of financial products, financial anxiety¹, help-seeking behavior, subjective financial knowledge², financial behaviors³, and locus of control⁴ (see Appendix C). The quantitative survey was administered using a pencil and scantron to 825 Soldiers before they left for their overseas mission. After deleting missing data and invalid surveys⁵, the final sample size for the Time 1 survey was reduced to 701 (85% response rate).

Within weeks of the unit returning home, the Time 2 survey was administered in late November and early December 2011. It also contained 50 questions and was administered using a pencil and scantron. The Time 2 survey covered similar topics as the Time 1 survey with only a few changes (see Appendix D). Some of the demographic questions were deleted since the information had already been gathered on the Time 1 survey. Some of the wording was changed to reflect the Soldiers' post-deployment status. A few questions were consolidated and a few new

¹ These questions originated from the Financial Anxiety Scale, $\alpha = 0.94$ (Archuleta, Dale, & Spann, in press). Measurement of these items was based on the DSM-IV-TR diagnostic criteria for General Anxiety Disorders. This study only used four of the seven questions in the original scale due to space constraints and applicability to the sample.

² Based on the Financial Knowledge scale by Perry and Morris (2005), $\alpha = 0.91$. This study included four additional variables in the financial scale in order to cover more comprehensive financial planning topics, including life insurance, estate planning, retirement accounts, and taxes.

³ Based on the Financial Behavior scale used by Grable and Joo (2001), $\alpha = 0.74$.

⁴ Studied using the Pearlin Mastery scale (Pearlin & Schooler, 1978). The Cronbach's alpha for this scale varied among different financial research studies: $\alpha = .74$ (Whitbeck, Simons, Conger, Wickrama, Ackley, & Elder, 1997), $\alpha = .84$ (Kim & Moen, 2002), and $\alpha = .88$ (Donaldson, Earl, & Muratore, 2010).

⁵ Some respondents randomly bubbled in their responses marking responses on the answer sheet that were not a possible option on the survey, and therefore, these responses were not included in the final analysis.

questions were added to replace the deleted and consolidated questions. The final Time 2 survey was administered to 932 Soldiers with 670 usable responses (72% response rate) after deleting missing data and invalid surveys.

The research design called for a collection of data from the same group of Soldiers pre- and post-deployment, but in reality only one-third of the Soldiers completed both the Time 1 and Time 2 surveys. All Soldiers came from the same brigade in both surveys, but less than 1,000 Soldiers were actually surveyed out of a potential 1,500 to 3,200 (depending on the actual size of the brigade at the time). All efforts were made to survey the same units within the brigade before and after deployment. Those who completed both surveys were matched by using the last four digits of the Soldier's social security number and their birth year, which were collected on both surveys. The data with Soldiers who took both Time 1 and Time 2 surveys were analyzed more fully in Chapter 2 of this dissertation.

Descriptive Statistics for Time 1 and Time 2 Surveys. Given the unique nature of these surveys, the descriptive statistics for both the Time 1 ($N = 701$) and Time 2 ($N = 670$) surveys were analyzed. This review provides insight into some of the major descriptive findings of the surveys, including a reflection of the sample characteristics, such as age, rank, education, marital status, number of dependents, number of deployments, and job type (Military Occupational Service [MOS]) among other variables. All statistical analyses were completed by using SAS version 9.3 statistical software.

Descriptive Variables. Six primary demographic variables were asked in these surveys (see Table 1.1). Respondent age ranged from 18 to 47 years old on both surveys, where 26 ($SD = 5.74$) was the mean age for Time 1 survey and 27 ($SD = 5.82$) was the mean age for Time 2 survey. In the Time 1 survey, 39% ($n = 274$) were single and in the Time 2 survey, 43% ($n =$

290) were single. Since many of the descriptive variables were not expected to change during the deployment period, some questions were asked only in the Time 1 survey. The variables only asked on the Time 1 survey were gender, ethnicity, number of dependents, and education level. More than 97% ($n = 682$) of the sample was male with over 67% ($n = 468$) of the sample reporting Caucasian as their ethnicity. In this sample, almost 55% ($n = 384$) reported caring for one or more dependents. Education level in the Time 1 survey revealed less than 1% ($n = 5$) had less than a high school education, 51% ($n = 354$) had a high school diploma or GED, 38% ($n = 269$) had completed some college, 9% ($n = 63$) held a bachelor's degree, and slightly more than 1% ($n = 10$) had a graduate degree or higher.

Table 1.1

Descriptive Statistics of Time 1 and Time 2 Surveys

Descriptive Variables	Range	Time 1	Time 1	Time 2	Time 2
		Frequency ($N = 701$) %	M (SD)	Frequency ($N = 670$) %	M (SD)
Age	18 to 47		26.00 (5.74)		26.90 (5.82)
Caucasian ^a		66.76 ($n = 468$)			
Male ^a		97.29 ($n = 682$)			
Single		39.09 ($n = 274$)		43.28 ($n = 290$)	
One or more dependents ^a		54.78 ($n = 384$)			
Education level ^a					
Less than high school		0.71 ($n = 5$)			
High school/GED		50.50 ($n = 354$)			
Some college		38.37 ($n = 269$)			
Bachelor's degree		8.99 ($n = 63$)			
Graduate degree		1.43 ($n = 10$)			

Note. ^a Not all questions were asked in the Time 2 survey since the information would not have changed during deployment.

Military Specific Variables. Several military specific variables were included in order to best assess detailed implications of the sample (see Table 1.2). Two questions, specifically branch of service and job or military occupational specialty (MOS), were asked only on the Time

1 survey since these data points were not expected to change during the deployment period. The entire sample, 100% ($n = 699$), reported their branch as Army active-duty. The unit surveyed was an infantry unit, and therefore, 66% ($n = 464$) of the sample had the job or MOS of combat arms, followed by 14% ($n = 97$) who worked as support (including intelligence and signal), 19% ($n = 131$) who worked as service and support for the unit, none were aviation, and slightly over 1% ($n = 9$) reported “other” for their MOS.

The variable of rank was included on both Time 1 and Time 2 surveys since promotions can occur during a deployment. Privates (E1 to E2) made up 11% ($n = 75$) of the Time 1 sample and 2% ($n = 19$) of the Time 2 sample. This was expected since a Soldier does not stay a private for a long period of time if they are fulfilling their job appropriately. Private first class, specialist, or corporal (E3 to E4) comprised 56% of both the Time 1 ($n = 390$) and Time 2 ($n = 372$) samples. Sergeants and staff sergeants (E5 to E6) comprised 26% ($n = 183$) of the Time 1 sample and 32% ($n = 216$) of the Time 2 sample. In the Time 1 survey, 6% ($n = 43$) of the sample held a rank from sergeant first class to first lieutenant, including warrant officers (E7 to O2). This group made up 9% ($n = 58$) of the Time 2 survey data. A limitation of the data was that these ranks were banded together, and therefore, it is not possible to ungroup these ranks for data analysis. Finally, captains and higher (O3 and above) comprised a little over 1% ($n = 10$) of the Time 1 sample and just under 1% ($n = 5$) of the Time 2 sample.

The final military specific variable was whether Soldiers had any prior deployments. In the Time 1 survey, 51% ($n = 359$) of the sample had deployed prior to their upcoming deployment. In the Time 2 survey, this question was not included given that it was expected that all Soldiers who were participating had just returned home from a deployment.

Table 1.2

Military Specific Variables of the Descriptive Statistics of Time 1 and Time 2 Surveys

Military Specific Variables	Time 1 Frequency % (N = 701)	Time 2 Frequency % (N = 670)
Active-duty Army ^a	99.71 (n = 699)	
Job (MOS) ^a		
Combat arms	66.19 (n = 464)	
Support (intel, signal)	13.84 (n = 97)	
Service & support	18.69 (n = 131)	
Aviation	0.00 (n = 0)	
Other	1.28 (n = 9)	
Rank		
E1 to E2	10.70 (n = 75)	2.84 (n = 19)
E3 to E4	55.63 (n = 390)	55.52 (n = 372)
E5 to E6	26.11 (n = 183)	32.24 (n = 216)
E7 to O2	6.13 (n = 43)	8.66 (n = 58)
O3 and above	1.43 (n = 10)	0.75 (n = 5)
Previous deployment ^a	51.21 (n = 359)	

Note: ^a Not all questions were asked in the Time 2 survey since the information would not have changed during deployment.

Financial Variables. A number of financial variables were assessed in both Time 1 and Time 2 surveys (see Table 1.3). Financial anxiety was assessed by asking four questions with a total range of 4 to 20, with higher scores indicating a higher level of financial anxiety. The average score for the Time 1 survey was 8 ($SD = 3.19$), indicating a fairly low level of financial anxiety among the sample. For the Time 2 data, the average score was 7 ($SD = 3.01$), indicating a slightly lower level of financial anxiety among the sample. Subjective financial knowledge, meaning the Soldier's self-assessment of their own understanding of financial matters, was included in both surveys. The variable was assessed by asking eight subjective financial related questions assessing knowledge levels. The range was from 8 to 40, with higher scores indicating greater subjective financial knowledge. In the Time 1 data, the mean was 27 ($SD = 6.59$), and in

the Time 2 data, the mean was 26 ($SD = 6.93$). Both means indicate a moderate subjective financial knowledge score.

Financial behaviors were assessed by six questions with a total range of 9 to 30, with higher scores indicating a higher level of positive financial behaviors. The average score for the Time 1 survey was 22 ($SD = 4.49$) and 23 ($SD = 4.26$) for the Time 2 survey, indicating a fairly high level of positive financial behaviors among both samples.

Both credit card debt and emergency savings fund amounts were asked on the Time 1 and Time 2 surveys. In the Time 1 survey, 42% ($n = 295$) of the sample reported no credit card debt, which also includes those without credit cards. For the Time 2 survey, this number was 54% ($n = 365$) of the sample. Those who reported having \$1 to 1,000 in credit card debt in the Time 1 survey made up 23% ($n = 160$) of the sample and 20% ($n = 134$) reported this amount on the Time 2 survey. Soldiers reporting having \$1,001 to \$2,500 in credit card debt made up 13% ($n = 92$) of the Time 1 sample and 10% ($n = 64$) of the Time 2 sample. Those with credit card debt that ranged from \$2,501 to \$5,000 comprised 10% ($n = 72$) of the Time 1 sample and 9% ($n = 58$) of the Time 2 sample. Finally, those who reported having \$5,001 or more in credit card debt made up 12% ($n = 82$) of the Time 1 data and 7% ($n = 49$) of the Time 2 data.

Soldiers also reported their savings level for a financial emergency before and after deployment. In the Time 1 sample, 22% ($n = 152$) reported having \$0 in an emergency savings fund, 25% ($n = 176$) with less than \$500, 24% ($n = 166$) with \$501 to \$1,000, 9% ($n = 65$) with \$1,001 to \$2,000, and 20% ($n = 142$) with \$2,001 or more. For the Time 2 data, 9% ($n = 63$) reported having \$0 in an emergency savings fund, 14% ($n = 94$) with less than \$500, 19% ($n = 124$) with \$501 to \$1,000, 13% ($n = 89$) with \$1,001 to \$2,000, and 45% ($n = 300$) with \$2,001 or more. The substantial increase in savings from Time 1 to Time 2 can be due to the fact that

service members receive special pays and incentives in addition to their base pay when deployed. The survey was taken within a few weeks of the Soldiers returning from deployment and before they were able to leave for their rest and recuperation leave period. Future studies should survey service members after returning from this rest and recuperation leave period to see if the same amount of emergency savings is similar. See Table 1.3 for a summary of all financial variables data.

Table 1.3

Financial Variables of the Descriptive Statistics of Time 1 and Time 2 Surveys

Financial Variables	Range	Time 1 Frequency % (N = 701)	Time1 M (SD)	Time 2 Frequency % (N = 670)	Time 2 M (SD)
Financial anxiety	4 to 20		7.79 (3.19)		6.77 (3.01)
Subjective financial knowledge	8 to 40		26.55 (6.59)		25.96 (6.93)
Financial behaviors	9 to 30		21.83 (4.49)		22.98 (4.26)
Credit card debt					
\$0		42.08 (n = 295)		54.48 (n = 365)	
\$1 to \$1,000		22.82 (n = 160)		20.00 (n = 134)	
\$1,001 to \$2,500		13.12 (n = 92)		9.55 (n = 64)	
\$2,501 to \$5,000		10.27 (n = 72)		8.66 (n = 58)	
\$5,001 and above		11.70 (n = 82)		7.31 (n = 49)	
Emergency savings funds					
\$0		21.68 (n = 152)		9.40 (n = 63)	
Less than \$500		25.11 (n = 176)		14.03 (n = 94)	
\$501 to \$1,000		23.68 (n = 166)		18.51 (n = 124)	
\$1,001 to \$2,000		9.27 (n = 65)		13.28 (n = 89)	
\$2,001 or more		20.26 (n = 142)		44.78 (n = 300)	

Communication Source Variables. Two questions were asked on both the Time 1 and Time 2 surveys regarding the number of communication sources that the service members used in both a military and non-military setting (See Table 1.4). The Time 1 survey questions asked, “Have you talked to any of the following military/service providers in the last 12 months about your personal financial situation?” The Soldiers indicated all answers that applied to their

situation. The responses for the Time 1 survey with the associated frequencies were: (a) ACS/Financial readiness program (14%) ($n = 101$), (b) military chain of command (13%) ($n = 89$), (c) Military OneSource (2%) ($n = 15$), (d) PFC (part of the Military Family Life Consultant (MFLC) program) (2%) ($n = 14$), (e) other military personnel (16%) ($n = 113$). Almost 50% ($n = 350$) of the sample had no communication with a military source regarding their personal finances according to the Time 1 survey.

The next question asked, “Have you talked to any of the non-military sources about your personal financial situation in the past 12 months?” They were also able to mark all answers that applied. The responses for the Time 1 survey ($N = 701$) with the associated frequencies were: (a) family member/spouse (39%) ($n = 272$), (b) friend (11%) ($n = 77$), (c) financial advisor/planner (6%) ($n = 44$), (d) internet (3%) ($n = 22$), and (e) other (7%) ($n = 51$). Over 25% ($n = 180$) of Soldiers in the Time 1 survey did not speak with any non-military sources about their personal financial situation in the last 12 months.

On the Time 2 survey, the question asked, “In the last 12 months, have you communicated with any of the following service providers about your personal financial situation?” The responses for the Time 2 survey ($N = 670$) with the associated frequencies were: (a) chain of command (4%) ($n = 30$), (b) family member/spouse (28%) ($n = 190$), (c) Military OneSource or other military service provider (i.e., Personal Financial Counselor (PFC)/Financial MFLC) (3%) ($n = 20$), (d) friend (5%) ($n = 39$), (e) none of the above (58%) (383). The other question on the Time 2 survey read, “Which of the following will you most likely use in the next 12 months to improve your personal financial situation?” The answers for the Time 2 survey ($N = 670$) with the associated frequencies were: (a) attend a financial briefing (13%) ($n = 86$), (b)

phone consultation (2%) ($n = 16$), (c) financial planner/advisor (23%) ($n = 159$), (d) internet research (28%) ($n = 186$), and (e) none (33%) ($n = 221$).

Table 1.4

Communication Sources of the Descriptive Statistics of Time 1 and Time 2 Surveys

Communication Source Variables	Time 1 Frequency % ($N = 701$)	Time 2 Frequency % ($N = 670$)
Military sources		
ACS/Financial Readiness program ^a	14.41 ($n = 101$)	
Military OneSource	2.14 ($n = 15$)	2.99 ($n = 20$)
PFC (part of MFLC program) ^a	2.00 ($n = 14$)	
Chain of command	12.70 ($n = 89$)	4.48 ($n = 30$)
Other military personnel ^a	16.12 ($n = 113$)	
No military communication source	49.93 ($n = 350$)	57.85 ($n = 383$)
Non-military sources		
Family member/spouse	38.80 ($n = 272$)	28.36 ($n = 190$)
Friend	10.98 ($n = 77$)	5.82 ($n = 39$)
Financial advisor/planner	6.28 ($n = 44$)	23.73 ($n = 159$)
Internet	3.14 ($n = 22$)	27.76 ($n = 186$)
Other ^a	7.28 ($n = 51$)	
None	25.68 ($n = 180$)	33.08 ($n = 221$)

Note. ^a Given the variation in deployment status and changes to the questionnaire, not all questions were asked verbatim in the Time 1 and Time 2 surveys.

Outline of Chapters

Given the importance of financial readiness, the following chapters gather and analyze the data on the financial behaviors of Soldiers, using the Time 1 and Time 2 financial readiness studies. The first paper, Chapter 2, looks at the relationship between financial behaviors, financial knowledge, and financial anxiety in relation to deployment status and rank. It gives a historical review of relevant military personal financial literature available on these variables, and it outlines the need for further quantitative analysis of the financial behavior of military personnel. The study analyzes the two primary research questions: (a) What are the differences in financial behaviors, financial knowledge, and financial anxiety between junior Soldiers and

command leaders? and (b) How do a Soldier's financial behaviors, financial knowledge, and financial anxiety compare pre-and post-deployment status? The intended journal for this paper is the *Journal of Financial Counseling and Planning*. This journal is focused on financial education and a large portion of its membership is comprised of military service providers.

The second paper, Chapter 3, provides further analysis of the financial behaviors of Soldiers using the lens of social learning theory (Bandura, 1977; Rotter, 1954). This theory postulates that personal factors, past behaviors, and environmental factors all influence current attitudes and behavior. These three factors were analyzed to predict the financial behavior of Soldiers before deployment. In this study, financial behavior is defined as the attitudes and cognitive thoughts regarding the use of money, including spending and saving (Perry & Morris, 2005). It is anticipated that a number of personal factors, including Caucasian ethnicity, internal locus of control, more financial knowledge, and less financial anxiety correlate positively with positive financial behaviors, based on previous research (Fisher, 2010; Grable & Joo, 2006; Joo, Grable, & Bagwell, 2003; Perry & Morris, 2005; Yuh & Hanna, 2010). Age is expected to have a mixed effect on financial behaviors (Henry, Weber, & Yarbrough, 2001; Rha, Montalto, & Hanna, 2006; Yuh & Hanna, 2010). Past behavior, specifically having more credit card debt, is expected to have a negative effect on positive future financial behaviors (Grable & Joo, 2006; Joireman, Kees, & Sprott, 2010; Rutherford & DeVaney, 2009; Worthy, Jonkman, & Blinn-Pike, 2010). Also, having an emergency savings account is expected to have a positive effect on better financial behaviors (Bhargava & Lown, 2006; Brand, Hogarth, Peranzi, & Vlietstra, 2011; Gunay & Demirel, 2011; Loibl, Grinstein-Weiss, Zhan, & Red Bird, 2010; Orthner & Rose, 2003; Rha et al., 2006). Finally, environmental factors are expected to have a positive effect on better financial behaviors and were tested through two variables: (a) having deployed

(U.S. GAO, 2005; Hosek et al., 2006; Orthner & Rose, 2003), and (b) more communication sources (Garrison & Gutter, 2010; Shim, Xiao, Barber, & Lyons, 2009; Worthy et al., 2010). The intended journal for this paper is the *Journal of Financial Counseling and Planning*, given that this audience is focused both on the military as well as financial counseling and planning.

The final paper, Chapter 4, conceptualizes the financial behavior of Soldiers and compares it to a college student population, allowing for a comparison between young adult populations. This paper also builds its framework on social learning theory, utilizing personal and environmental factors with past behaviors to determine future behaviors. Similar to Chapter 3, hypotheses in this analysis are that personal factors, including being male, Caucasian, possessing an internal locus of control, having increased financial knowledge, and decreased financial anxiety, will correlate with better financial behaviors (Archuleta, Spann, & Dale, in press; Bell, Gorin, & Hogarth, 2009; Bhargava & Lown, 2006; Danes, Huddleston-Casas, & Boyce, 1999; Hilgert, Hogarth, & Beverly, 2003; Grable & Joo, 2006; Joo et al., 2003; Legge & Heynes, 2009; Loibl et al., 2010; Mewse, Lea, & Wrapson, 2010; Norvilitis & MacLean, 2003; Wang, Lu, & Malhotra, 2011). Age is expected to have a mixed effect on financial behaviors (Henry, Weber, & Yarbrough, 2001; Rha, Montalto, & Hanna, 2006; Yuh & Hanna, 2010). Because social learning theory maintains that future behavior is influenced by past behavior, poor past behaviors, such as carrying high credit card debt, are expected to be negatively associated with positive future financial behaviors (Grable & Joo, 2006; Joo et al., 2003; Joireman et al., 2010; Rutherford & DeVaney, 2009; Worthy et al., 2010; Xiao & Wu, 2008). The environmental factor of communication with family and peers is expected to have a positive association with financial behaviors (Garrison & Gutter, 2010; Hancock, Jorgesen, & Swanson, 2012; Norvilitis & MacLean, 2010; Shim et al., 2009; Worthy et al., 2010). The

intended journal for this paper is the *Journal of Personal Finance*. This journal is specifically interested in research concerning personal financial matters. It is expected that this research will be of particular interest given that the study compares young adult populations.

Given the constant deployment cycle and the heavy toll of the longest running war in American history, service members and their families have felt the stress of both deployment and personal financial strains. These papers seek to quantify the financial behaviors of Soldiers in order to better predict future financial behaviors and provide the support needed so they can focus on their military and family obligations. As a result, this research will give military service providers and leaders accurate information on military financial behavior in order to provide appropriate financial education, planning, and counseling services.

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Chapter 2 - Game Changers: How Soldiers' Rank and Deployment Status Affect their Financial Behaviors, Knowledge, and Anxiety

Introduction

Finances can be stressful for anyone, but financial matters can be especially stressful for military personnel. Military life has unique stressors with one of the most significant work stressors being deployment (Bray, Camlin, Fairbank, Dunteman, & Wheelless, 2001; Hosek & Martorell, 2009). Other stressors surrounding deployment include separation from family, anxiety about the deployment, and the threat of serious injury or death (Hosek, 2011; Orthner & Rose, 2003; Sheppard, Malatras, & Israel, 2010; Thomas, Wilk, Riviere, McGurk, Castro, & Hoge, 2010). But the Acting Deputy Assistant Secretary of Military Community and Family Policy, Chuck Milam, has stated that in a recent Department of Defense (DoD) survey, service members rated finances as one of the most significant stressors they face, rating it higher than deployments and personal relationships (U.S. DoD, Office of the Assistant Secretary of Defense, 2012). Given the stress surrounding personal financial matters, the current research explored the financial behaviors, financial knowledge, and financial anxiety as they relate to rank and deployment. The purpose of the current research was to determine the key differences of better financial behaviors, more financial knowledge, and greater financial anxiety among rank and deployment status. The analysis focused on two primary research questions: (a) What are the differences in financial behaviors, financial knowledge, and financial anxiety between junior Soldiers and senior command leaders? and (b) How do Soldiers' financial behaviors, financial knowledge, and financial anxiety compare before and after deployment? The current research was exploratory in nature, and therefore, it did not utilize a theoretical framework.

Literature Review

There are many studies that address the military community, military children, and the effect of deployments on children, spouses, and Soldiers (Cozza, Chun, & Polo, 2005; Huebner, Mancini, Bowen, & Orthner, 2009; Lester et al., 2010). Previous studies have analyzed financial behaviors of non-military individuals and families (Mandell & Klein, 2009; National Endowment for Financial Education [NEFE], 2006; Sumarwan, & Hira, 1993; Worthy, Jonkman, & Blinn-Pike, 2010). However, there is a dearth in the literature that combines the military community and stressors with financial behaviors.

Scholarly research on the financial readiness of military personnel and their families is still in its infancy. The first formal studies addressing military financial readiness began in the late 1990s (Luther, Garman, Leech, Griffitt, & Gilroy, 1997; Rotter & Boveja, 1999; Tiemeyer, Wardynski, & Buddin, 1999). Results highlighted the need to monitor the financial health and well-being of service and family members more closely in recurring and longitudinal studies conducted by the Department of Defense (DoD). For example, every other year, the Defense Manpower Data Center [DMDC] (2009) administers a “Status of Forces” survey to service members. Some versions of the survey include financial questions which address current financial condition, payment of bills, and housing issues. Surveys administered to active-duty spouses and Reserve Component spouses are more comprehensive in their personal finance related questions. However, these surveys and findings are used for DoD internal policy and program development and are difficult to access. Additionally, because of DoD survey restrictions, few external researchers have conducted their own studies with military populations. The current research study provides a comprehensive review of the relevant military literature as

it relates to the key themes of financial behaviors, financial knowledge, and financial stress or anxiety, which will be directly applied to the military variables of rank and deployment.

Financial Behaviors. Prior research outside of military studies has shown the ability to set financial goals, budget, save money, pay bills on time, control spending, and form savings habits are good indicators of positive financial behaviors (Koonce, Mimura, Mauldin, Rupured, & Jordan, 2008; Mandell & Klein, 2009; Perry & Morris, 2005). Research with military populations has shown that financial management issues have had great costs and losses in productivity (Luther et al., 1997), failure to re-enlist, and security clearance revocations (Luther, Leech, & Garman, 1998). As an essential part of mission readiness, service members are required to obtain security clearances, which allows access to classified and sensitive information. In fact, a past study found that of all security clearances revoked, an average of 60% of these involved financial reasons (Luther et al., 1997). More recently, then acting Secretary of Defense, Leon Panetta, stated, “The number one reason people in the service lose their security clearance is because of financial problems” (U.S. DoD, Office of the Assistant Secretary of Defense, 2012). Financial problems can be a hindrance to most individuals, but within the military, having one’s personal finances in order is a necessary part of their everyday job in order to maintain their security clearance.

Other research has shown that over one-third of military respondents had difficulty paying their monthly bills and expenses (Financial Industry Regulatory Authority [FINRA], 2010). In terms of deployment, research has compared the financial conditions of deployed and non-deployed service members and has found little difference between the two groups (U.S. Government Accountability Office [GAO], 2005). Personal financial concerns remain one of the most serious challenges military leadership has faced in recent years. The Acting Deputy

Assistant Secretary of Military Community and Family Policy, Chuck Milam, stated, “[t]he Department of Defense considers debt from any source a concern and a potential threat to readiness, especially if not managed properly, as it could spiral out of control and cause undue hardship” (U.S. DoD, Office of the Assistant Secretary of Defense, 2012). Therefore, financial matters and behaviors are an integral part of military mission readiness.

Financial Knowledge. With some of the military research in the late 1990s on the loss of productivity and security revocations due to financial matters (Luther et al., 1997), the Military Services (i.e., Navy, Army, Air Force, and Marine Corps) developed the Personal Financial Management (PFM) services to provide financial management and education services to help service members and their families with the tools and information they need to achieve their financial goals and address their financial challenges (U. S. Department of Defense [DoD] Instruction, 2012). In a U.S. Government Accountability Office [GAO] (2004) report that studied the pay of Army Reserve Soldiers called up to active duty deployment, researchers found that Soldiers were not receiving family separation pay allowances due to a lack of understanding by pay technicians and Soldiers. This led to a call for a clarification and simplification of the procedures and policies surrounding certain deployment pays (U.S. GAO, 2004). In response to problems related to predatory lending targeted to military families (Graves & Peterson, 2005) and deployment related financial problems, financial education courses tailored to Soldiers and their spouses has been utilized to help combat many of the financial difficulties they face.

Research has shown that Soldiers who took a financial education course were more likely to make better financial choices, including making a spending plan, comparison shopping for major purchases, and saving for retirement (Bell, Gorin, & Hogarth, 2009). They were also less likely to make risky financial decisions, such as taking out car title loans, carrying high credit

card balances, and over-drafting their accounts (Bell et al., 2009). Other recent research focused on the savings of young, enlisted Soldiers found several predictors of savings funds (Brand, Hogarth, Peranzi, & Vlietstra, 2011). Specifically, education and money management experiences, both in the military and pre-military, were most closely associated with having an emergency savings fund and other savings funds, including retirement plans or other savings accounts (Brand et al., 2011). The DoD and military Service branches have developed many resources toward financial education of service members and financial knowledge has been shown to improve a Soldier's financial behavior.

Financial Anxiety. Finally, stress surrounding financial matters is also a theme in the literature. Research has shown that there are many stressors before deployment, one of which is making the necessary financial arrangements while the service member is deployed (Rotter & Boveja, 1999). Prior research has shown that having to make financial arrangements before deployment is a potential stressor before leaving (Hosek, Kavanagh, & Miller, 2006). Research has also shown that due to the uncertain and unexpected nature of deployments and frequent separations, many military families were unprepared emotionally and financially (Drummet, Coleman, & Cable, 2003). Financial anxiety or stress related to financial matters is an important theme in the literature, especially in relation to deployment status.

Relationship Between Rank and Financial Matters. The question of which service members have financial problems is an important one to explore when talking about personal financial behaviors. Prior research has shown that junior enlisted service members have been identified as having the most serious financial problems (Tiemeyer et al., 1999). This research also revealed that service members in their first enlisted term with children were even more susceptible to financial problems than those without financial problems (Tiemeyer et al., 1999).

Other research found that enlisted and junior NCOs were also the ones paying the most in fees and interest on their credit cards (FINRA, 2010). Over half of enlisted personnel and almost one-third of officers did not have enough money set aside to cover three months of living expenses (FINRA, 2010). Even though officers typically make more money than junior enlisted personnel (see Appendix B - Military Basic Bi-Monthly Pay Charts), the research is unclear and understudied as to whether financial problems are strictly a junior enlisted problem or affect all ranks.

Junior enlisted service members are an easy group to target given their lack of political acumen and longevity within the bureaucratic system. In military culture, there is a tendency for older individuals to downplay or negate the impact of their problems (Mitchell, Angelone, & Cox, 2007). Substance abuse research has shown that higher ranking individuals are able to downplay their problems, while younger, lower ranking counterparts are constantly reminded of the impact of their negative behaviors, especially in relation to career development (Mitchell et al., 2007). The current research seeks to further evaluate the population within the military that are having financial problems.

Relationship Between Deployment and Financial Matters. Most of the personal financial behavior research has been focused around deployments. Ongoing conflicts, specifically conflicts in Iraq and Afghanistan, in the last 10 years have required almost 2.5 million service members to deploy (DMDC, 2012) and therefore, deployments play a crucial role when discussing any military issue. The relationship between stress and duty performance becomes a complicating factor in military missions (Bray et al., 2001). Research has found that Soldiers, Sailors, and Marines who were deployed to hostile environments have high levels of work and personal stress (Hosek & Martorell, 2009). The Acting Deputy Assistant Secretary of

Military Community and Family Policy, Chuck Milam, stated, “The Department of Defense . . . understand[s] that financial fitness is part of the overall readiness of our force and financial hardship can affect that performance” (U.S. DoD, Office of the Assistant Secretary of Defense, 2012). Therefore, it is imperative to study the relationship between deployments and personal financial problems.

Prior research has shown that financial preparation before deployment is important (Rotter & Boveja, 1999). Some research has claimed that financial problems during deployment arise due to the spouse’s lack of experience in dealing with financial matters (Aldridge, Sturdivant, Smith, Lago, & Maxfield, 1997). Other research has also shown that relocation, deployments, and cost of living do not define who has financial problems and who does not (Tiemeyer et al., 1999). A U.S. GAO (2005) report found that the financial conditions of deployed and non-deployed service members were similar, but service members who were deployed were more likely to experience additional financial problems in receiving family separation allowance and in communicating with creditors.

Some studies have shown that service members and families find financial benefits from extra deployment pays (Castaneda, Harrell, Varda, Hall, Beckett, & Stern, 2008; Hosek et al., 2006) even though this increase in financial benefit can lead to financial problems as well (Varcoe, Lees, Wright, & Emper, 2003). In fact, some service members have been found to prefer deployment because of financial gains since some financial incentives helped offset the negative aspects of deployment (Hosek et al., 2006). Very little research has been done on the financial behaviors once a service member returns home from deployment. Thus, the current research seeks to determine if there is a difference in financial behaviors, financial knowledge, or financial anxiety before or after deployment.

Research Questions. The following research questions were developed to understand more completely the relationship between rank and deployment status with financial behaviors, knowledge, and anxiety, based on the current research in the field.

RQ₁: What are the significant differences in the mean financial behavior scores based on rank?

RQ₂: What are the significant differences in the mean financial behavior scores based on time (before and after deployment)?

RQ₃: What are the significant differences in the mean financial knowledge scores based on rank?

RQ₄: What are the significant differences in the mean financial knowledge scores based on time (before and after deployment)?

RQ₅: What are the significant differences in the mean financial anxiety scores based on rank?

RQ₆: What are the significant differences in the mean financial anxiety scores based on time (before and after deployment)?

Methods

The financial resiliency surveys used in the current study are unique surveys that were a cooperative effort between researchers at a mid-western university and an Army installation. The financial-based surveys, Time 1 and Time 2, were administered to three units within a brigade of deploying Soldiers to more fully understand and gain greater insight into the financial behavior of Soldiers before and after deployment. The surveys were conducted within a single command and approval was given by the unit commander. Approval was also obtained by the university Institutional Review Board (IRB) to administer the survey. Respondents were assured that: (a)

participation was voluntary, (b) responses would remain strictly confidential, (c) only members of the university research team would have access to the raw data, (d) respondents were free to not answer any question and stop at any time with no penalty or loss of benefit, and (e) no risks were anticipated from participating in this research study. All respondents who completed the survey acknowledged their voluntary agreement to participate in this study and gave consent for their results to be used in the data analysis. The Army installation received command approval from the Division's leadership as well as the unit's leadership to administer the survey to the Soldiers before and after deployment given the above directed criteria.

With the support and approval of both the Army installation and the university, the Time 1 survey was administered to a unit of Soldiers in November 2010, prior to their deployment to a war zone (see Appendix C). Within weeks of the unit returning home from the war zone, the Time 2 survey was administered in late November and early December 2011 (see Appendix D). The research design called for a collection of data from the same group of Soldiers pre- and post-deployment (Time 1 and Time 2), and therefore, the surveys were matched by using the last four digits of the Soldier's social security number and their birth year, which were collected on both surveys. Data were gathered and compared on 257 Soldiers who completed both surveys and used 208 after deleting missing data and invalid surveys. The sample retention of Soldiers who took both the Time 1 and Time 2 surveys were approximately 30%⁶.

Dependent Variables. Three dependent variables were used in the analyses. The first, financial behavior outcomes of Soldiers, consisted of six questions (see Table 2.1). This scale

⁶ The reason for only one-third of the overlap of Soldiers who took the pre- and post-deployment surveys was due to the variation in Soldiers that were sent to take the two different surveys before and after deployment. All Soldiers came from the same brigade in both surveys, but there were less than 1,000 Soldiers surveyed out of a potential 1,500 to 3,200 (depending on the actual size of the brigade at the time). All efforts were made to survey the same units within the brigade before and after deployment.

was based on the Financial Behavior Scale (Grable & Joo, 2001, $\alpha = 0.74$) with only six questions instead of the original nine questions due to survey space constraints. The Likert-type scaled questions had a possibility of five answers that ranged from “almost never” (coded 1) to “almost always” (coded 5). Three of the questions were reverse coded so that all items reflected positive financial behaviors. The items were summed together for a single financial behavior score. In order to substantiate good reliability, a principal axis factor analysis was conducted on the six items with all items loading onto one factor. The Cronbach’s alpha was 0.67, which is above the acceptable limit of 0.5 (Field, 2009).

Table 2.1

Financial Behavior Scale

1. I have a weekly or monthly budget that I follow. ^a
2. I have specific short-term, mid-term, or long-term written financial goals. ^b
3. I pay my credit card bills in full and avoid finance charges. ^a
4. I reach the maximum limit on my credit cards. (reverse coded) ^a
5. I spend more money than I earn. (reverse coded) ^a
6. I have difficulty paying bills because of not enough income. (reverse coded) ^c

(Responses: 1=almost never, 2=seldom, 3=sometimes, 4=often, 5=almost always)

Note: ^a Original question from the Financial Behavior Scale (Grable & Joo, 2001). ^b Edited question from the Financial Behavior Scale. ^c Additional question.

Subjective financial knowledge was also used as a dependent variable in the analysis. It was measured as a series of eight self-reported questions, including questions on interest rates, credit reports, budgeting, investing, insurance, wills, retirement accounts, and taxes (see Table 2.2). This scale was based on the Financial Knowledge Scale (Perry & Morris, 2005, $\alpha = 0.91$), but this study included an additional four variables in the scale to include a more comprehensive list of financial planning topics. These questions were measured on a Likert-type scale with five responses allowed from “nothing” (coded 1) to “a lot” (coded 5). The Cronbach’s alpha for these eight items was 0.92, indicating good reliability. A principal components analysis was conducted

with all variables loading onto one score, and then the items were summed for a single financial knowledge variable score.

Table 2.2

Financial Knowledge Scale

How much do you know about the following?

1. Interest rates, finance charges, and credit terms.^a
2. Credit ratings and credit reports.^b
3. Managing finances/budgeting.^a
4. Investing money.^a
5. Life insurance/SGLI/TSGLI^c
6. Will^c
7. Retirement accounts (i.e., TSP, IRA, 401k)^c
8. Taxes^c

(Responses: 1=nothing, 2=very little, 3=some, 4=a fair amount, 5=a lot)

Note. ^a Question from the original Financial Knowledge Scale (Perry & Morris, 2005). ^b Combined question from the Financial Knowledge Scale. ^c Additional questions.

Finally, financial anxiety was measured using a five-point Likert-type scale with responses ranging from “never” (coded 1) to “always” (coded 5) (see Table 2.3). These questions originated from the Financial Anxiety Scale (Archuleta, Spann, & Dale, in press, $\alpha = .94$). Measurement of these items was based on the DSM-IV-TR diagnostic criteria for General Anxiety Disorders. The current study only used four of the seven questions from the original scale due to space constraints and applicability to the sample. The Cronbach’s alpha for these four items was 0.85, indicating good reliability. A factor analysis score was created using components analysis and all variables loaded onto one factor. Those with higher scores reported greater financial anxiety.

Table 2.3

Financial Anxiety Scale

Question: “How often do you feel the following ways when thinking about your financial situation?” (Responses: 1=never, 2=almost never, 3=sometimes, 4=almost always, 5=always)

1. I feel anxious about my financial situation.
 2. I have difficulty sleeping because of my financial situation.
 3. I have difficulty concentrating because of my financial situation.
 4. I worry about my financial situation.
-

Independent Variables. Two variables—rank and time—were used as independent variables in the multivariate analyses. Rank was measured categorically and can be used as a proxy for an individual’s socioeconomic status since each rank has a narrow pay range that is achievable (Green, 1970) (see Appendices A and B). Military basic pay scales are directly correlated with rank and years of service allowing the use of rank as a proxy for income (Defense Finance and Accounting Service, 2010) (see Table 2.4). Respondents’ Army ranks and pay grades were segmented into five categories, where each rank was associated with its yearly salary range. Age and rank were significantly correlated ($r = 0.46, p < .001$); therefore, age was not used in further analysis.

Table 2.4

Army Basic Pay Scales

<i>Army Rank Classification</i>	<i>Army Rank</i>	<i>2010 Yearly Salary Ranges</i>
Private	E-1 to E-2	\$17,400 - \$19,400
Private First Class to Specialist or Corporal	E-3 to E-4	\$20,500 - \$27,500
Sergeant to Staff Sergeant	E-5 to E-6	\$24,700 - \$41,800
Sergeant First Class to First Lieutenant	E-7 to O-2	\$31,200 - \$52,500
Captain or higher officer	O-3 or above	\$43,900 - \$145,500

Note. Based on the military basic bi-monthly pay charts (Defense Finance and Accounting Service, 2010). The survey banded the ranks together in the manner described above. Given the restrictions of the survey, these ranks are not able to be separated into individual ranks or grouped in any other order.

Time was used to quantify any changes that took place before the Soldier deployed and/or after he/she returned home from deployment to see if there was a relationship with certain behaviors and a Soldier's deployment status. It was measured dichotomously, where Time 1 was before deployment and Time 2 was after deployment.

Data Analyses. The data analyses included running ANOVA analyses to compare the mean differences in scores based on rank and time (before or after deployment). Each analysis was run separately with one dependent variable: financial behavior score, financial knowledge score, or financial anxiety score. All statistical analyses utilized the comparison data of Soldiers who took the pre- and post-deployment surveys ($N=208$) and was analyzed using SAS version 9.3 statistical software.

Results

The comparison data were comprised of Soldiers who took both the Time 1 and Time 2 ($N=208$) surveys where data were matched to the Soldiers through a unique identifier. The descriptive data reported that 97% ($n=404$) of the sample was male. The average age for the comparison data was 26 years old ($SD = 5.67$; range = 19 to 46). Over 36% ($n=150$) of the sample was single. The number of Soldiers with one or more dependents was 55% ($n=230$). Only 1% ($n=6$) had less than a high school diploma, followed by 50% ($n=210$) with a high school degree or GED, 41% ($n=170$) with some college, 6% ($n=26$) who hold a bachelor's degree, and less than 1% ($n=4$) with a graduate degree.

Descriptive Statistics for Dependent Variables. Three separate ANOVA analyses were computed with three different dependent variables. The first was financial behavior, which was assessed by asking six questions from the Financial Behavior Scale (Grable & Joo, 2001). Higher scores indicated a higher level of positive financial behaviors where the average score was 22

($SD = 4.45$, range 9 to 30), indicating a fairly high level of positive financial behaviors among the sample. The second dependent variable was subjective financial knowledge, assessed using the eight questions regarding knowledge level of financial matters. The average score was 27 ($SD = 6.16$, range 8 to 40), indicating a fairly average level of subjective financial knowledge reported. The final dependent variable was financial anxiety using four of the seven questions from the Financial Anxiety Scale (Archuleta et al., in press) with the mean being 7.52 ($SD = 3.34$, range 4 to 20), indicating a lower than average financial anxiety score.

Descriptive Statistics for Independent Variables. Rank was restricted to five categories given the survey method used. Because the sample population of command leader ranks (E7 and above) were limited, sergeant first class to first lieutenant (E7 to O2) ranks, including warrant officers, were combined with captains and above (O3 and above). Therefore, for purposes of this study, only four rank categories were used. In this sample, 12% ($n=50$) were classified as privates (E1 to E2), 56% ($n=232$) as privates first class, specialists, or corporals (E3 to E4), 27% ($n=114$) were at the sergeant or staff sergeant (E5 to E6) level, and 5% ($n=20$) were command leaders (E7 and above) who held a rank from sergeant first class to all officer ranks, including warrant officers. Since over half of the sample consisted of private first class, specialists, or corporals (E3 to E4), then over half of the sample was making \$20,500 to \$27,500 per year of basic pay (see Table 2.4 for pay information).

The other independent variable used in this analysis was time where the pre-deployment survey was Time 1 and the post-deployment survey was Time 2. As expected, half of the sample came from the pre-deployment (Time 1) survey and half of the sample came from the post-deployment (Time 2) survey. Table 2.5 reports the full descriptive statistics for the comparison sample.

Table 2.5

Descriptive Statistics for Soldiers who took both Time 1 and Time 2 Surveys (N=208)

Variables	Frequency	<i>M</i> (<i>SD</i>)	Range
<i>Dependent Variables</i>			
Positive financial behaviors		22.25 (4.45)	9 to 30
Subjective financial knowledge		26.55 (6.16)	8 to 40
Financial anxiety		7.52 (3.34)	4 to 20
<i>Independent Variables</i>			
Rank			
E1 to E2	12.02% (<i>n</i> =50)		
E3 to E4	55.77% (<i>n</i> =232)		
E5 to E6	27.40% (<i>n</i> =114)		
E7 & above (including warrant officers and officers)	4.81% (<i>n</i> =20)		
Deployment status			
Time 1	50.00% (<i>n</i> =208)		
Time 2	50.00% (<i>n</i> =208)		

ANOVA Results for Financial Behaviors. In order to compare the effect of rank and time on the financial behaviors for Soldiers who took both the Time 1 and Time 2 surveys, a two-way ANOVA was utilized using SAS 9.3. A main effect of financial behavior was found for time $F(1, 194) = 25.86, p < .001$. Financial behaviors reported in Time 1 ($M = 21.19, SD = 0.44$) were significantly worse than those in Time 2 ($M = 23.28, SD = 0.44$), $t(1) = -5.09, p < .001$. These results suggest that financial behaviors after deployment (Time 2) were significantly better than financial behaviors before deployment (Time 1). However, there were no significant differences related to rank and financial behaviors. There was also no interaction of time and rank with positive financial behaviors.

ANOVA Results for Financial Knowledge. A separate two-way ANOVA was conducted to compare the effect of increased subjective financial knowledge between ranks and time both before and after deployment. A main effect of increased subjective financial knowledge was found with rank $F(3, 214) = 6.08, p < .001$. The results suggested that rank does

have an effect on increased subjective financial knowledge. Specifically, the results showed there were significant differences between Soldiers who were privates (E1 to E2) ($M=23.73$, $SD=0.99$) with those who were privates first class, specialists, or corporals (E3 to E4) ($M=26.13$, $SD = 0.47$), $t(1) = -2.19$, $p < .05$. There was also a significant difference between privates (E1 to E2) ($M=23.73$, $SD=0.99$) and sergeants and staff sergeants (E5 to E6) ($M=28.23$; $SD = 0.66$), $t(1) = -3.77$, $p < .001$. Privates (E1 to E2) ($M=23.73$, $SD=0.99$) reported lower financial knowledge from those command leaders (E7 and above) ($M = 29.21$; $SD = 1.56$), $t(1) = -2.69$, $p < .01$. Finally, privates first class, specialists, and corporals (E3 to E4) ($M=26.13$, $SD = 0.47$) were significantly lower than their direct supervisors, sergeants and staff sergeants (E5 to E6) ($M = 28.23$; $SD = 0.66$), $t(1) = -2.59$, $p < .05$. There were no statistical differences between increased subjective financial knowledge in Time 1 or Time 2, nor were there significant differences in the interaction of rank and time with increased subjective financial knowledge.

ANOVA Results for Financial Anxiety. The two-way ANOVA final analysis compared the effect of rank and time on financial anxiety. A main effect of time (Time 1 and Time 2) was found for financial anxiety, $F(1, 194) = 13.83$, $p < .001$. Soldiers reported more financial anxiety before deployment (Time 1) ($M=7.67$, $SD = 0.33$) than after deployment (Time 2) ($M = 6.53$, $SD = 0.33$), $t(1) = 3.72$, $p < .001$. These results suggest that financial anxiety was lower after deployment (Time 2) as compared to before deployment (Time 1). No significant differences related to rank and financial anxiety were found, nor was the interaction of time and rank with financial anxiety found.

Discussion

The current study conceptualized rank and deployment to the key literature themes of financial behaviors, financial knowledge, and financial anxiety. The discussion that follows

focuses on the main findings from the ANOVA statistical analyses and the implications from each.

One of the most significant findings included the fact that there were no significant differences in the mean financial behavior scores based on rank (RQ₁). These results dispel much anecdotal and some of the previous research stating that most of the personal financial mismanagement in the military was the junior enlisted (Tiemeyer et al., 1999). The current research found no difference in good or poor financial behaviors among various ranks. Since rank and basic pay income are directly correlated (Green, 1970), this also means that a service member with a higher rank makes more income (see Table 2.4). The current research shows that despite increased income for higher ranks, there was no significant difference on their financial behaviors between command leaders (E7 and above) and the lower paid, junior enlisted personnel (E6 and below).

Another significant finding was that there were significant differences in financial anxiety based on deployment status (Time 1 and Time 2) (RQ₆). Findings from the current research reported that Soldiers actually had reduced financial anxiety after deployment as opposed to before deployment. Prior research has shown there is stress surrounding financial preparation for deployment and during deployment (Drummet et al., 2006; Rotter & Boveja, 1999). This reduced financial anxiety could be due to the fact that Soldiers have more money after deployment, and therefore, they are not as stressed with financial matters after deployment as before they left. Interestingly, there were not significant differences in the mean financial anxiety scores based on rank (RQ₅). This means that Soldiers who were experiencing financial anxiety were not necessarily older, nor did more income make a significant difference in reduced financial anxiety.

The current research did show there were significant differences in the mean financial behavior scores based on deployment status (Time 1 or Time 2) (RQ₂). The findings indicated there were improved financial behaviors after deployment (Time 2) than before deployment (Time 1). This analysis is in keeping with prior research that has shown service members have a positive benefit from deployment pays (Hosek et al., 2006). Part of the outcome from the current study can be explained in that Soldiers had more money after deployment (Time 2) than before deployment (Time 1). Also, some of the questions used in the summed score for financial behaviors asked questions that would be directly impacted by an increase in finances. For example, during or after deployment because of special pays, Soldiers might be able to pay their credit cards in full and have more ability to pay their bills. Given the time during deployment, Soldiers are working long hours and have less access to retail options. Most will not be spending the amount they typically or potentially could spend if they were back on their home installation and community. Without this ability to spend, Soldiers are more likely to follow budgets and/or spend less than they earn.

Finally, the variable of subjective financial knowledge indicated that rank did make a difference according to the ANOVA analysis. There were significant differences between the financial knowledge scores based on rank (RQ₃), but there were not significant differences in the mean financial knowledge scores based on deployment status (Time 1 or Time 2) (RQ₄). As can be expected, older and more experienced Soldiers were more likely to report higher levels of subjective financial knowledge. Prior research has shown that Soldiers who took a financial education course were more likely to make better financial choices and less risky financial decisions (Bell et al., 2009; Brand et al., 2011). Although objective financial knowledge was not used in this study, the results do make a compelling argument to have targeted financial

education for younger, enlisted Soldiers in order to at least increase their levels of subjective financial knowledge in relation to their peers. These results help to shape a clearer picture surrounding the relationship that rank and deployment have with financial behaviors, financial knowledge, and financial anxiety. Although some results were surprising and contradicted prior research, all of these results continue to enrich the financial literature regarding military and their personal financial matters.

Implications. The current study analyzed the financial behaviors, financial knowledge, and financial anxiety surrounding the deployment status of Soldiers in more depth than previous surveys. Military leadership and service providers can use this information to better understand what financial factors may affect service members before and after deployment. For example, this study showed that financial anxiety is reduced and financial behaviors are improved after deployment. This could be a direct relationship with the increase in special pays service members receive while deployed. As prior research has suggested, service members have found a positive benefit from deployment pays despite some of the negative aspects of deployment (Hosek et al., 2006). This could imply that there should continue to be an increase in special pays to continue to encourage better financial behaviors and lower financial anxiety, but it is important to remember that financial behaviors did not necessarily improve due to an increase in pay (i.e., there were no significant differences on financial behaviors and rank). This finding suggests that instead of increasing pay alone, there is a need to increase savings behavior to reduce financial anxiety and produce better long-term financial behaviors. There is a need to reduce one's financial anxiety in order to improve their financial behaviors. Income perception in relationship to actual income should also be considered in future research as the relationship between financial behaviors and financial anxiety relationship continues to be explored.

Another factor that should be considered with the decrease in financial anxiety after deployment as opposed to before deployment is the possibility of a honeymoon effect. This temporary effect on reduced financial anxiety may be that the service member returns home from deployment with a lot of cash, but then quickly returns back to their spending habits before deployment, thereby increasing anxiety again. The Time 2 survey was administered within weeks of the Soldiers returning home and many of the Soldiers had not taken their leave time yet. Therefore, future longitudinal research should be done in order to see if these patterns of lower financial anxiety are sustained after deployment or if past spending behaviors increase financial anxiety due to returning to poor financial behaviors.

Service providers and military leaders should encourage service members to seek and receive the help they need to better their financial lives without penalty. This could include fewer restrictions and stigmas from receiving counseling, including financial counseling, services or help. It is important that command leaders do not penalize or single out service members who are seeking help to deal with their financial struggles, and instead, these command leaders should take an active and engaged role in encouraging the service member to take responsibility for their own financial well-being.

The findings should also be used to target financial education to specific junior enlisted populations to increase financial knowledge of these Soldiers. Since prior research has shown that financial education leads to better financial choices and behaviors (Bell et al., 2009; Brand et al., 2011), it is important that the Personal Financial Management education programs and services give military personnel the tools and information they need to achieve their financial goals and address their financial challenges (U. S. DoD Instruction, 2012). It is important to recognize that poor financial behaviors and high financial anxiety are not only junior enlisted

problems; therefore, increased and targeted financial education should not be a one source solution to these issues. Within the proper context though, financial education has a proper place and function if the goal is to increase the financial knowledge of those who feel they have less financial experience or education. Another important concept of the current Personal Financial Management programs is that they should be measured for overall effectiveness to include return on investment and outcome measures of the program in order to make sure that these programs are meeting the needs of the intended audience.

For researchers, the current study adds to the military personal financial literature, while also highlighting the need for further empirical evidence and quantitative data for this community. One of the major findings was that military rank did not have a significant relationship with financial behaviors, meaning that rank does not determine who has better or worse financial behaviors. This also indicated that income does not have a significant relationship with financial behaviors since rank and basic pay income are directly correlated (Green, 1970). Military leaders can use this information to dispel much of the anecdotal comments that financial problems only reside with the junior enlisted. Financial knowledge was also shown to have a significant relationship with financial behaviors based on rank. Further research should look into the causes of why this is, but there should continue to be a persistent effort to educate all service members on financial matters. For financial planners, counselors, and service providers who work with military, this research also gave insight into how time can affect financial anxiety. This study begins to lay out a broad framework for better understanding service members and their personal financial matters.

Limitations. The current study was not without its limitations. First of all, limited officer data was collected with no high ranking officers participating. The highest officer sampled in this

survey was at the captain (O-3) level. Also, the way the higher ranks were banded together led to a limitation when analyzing the data. Since sergeants first class to first lieutenant (E7 to O2), including warrant officers, were linked together in the survey, it did not allow for separately analyzing enlisted with officers or with warrant officers. Since the higher officer (O-3 and above) sampling was limited, these ranks were combined with those in the sergeants first class to first lieutenant (E7 to O2) band. This command leader group comprised all senior enlisted officers (E7 and above), warrant officers, and all other higher ranking officers (O1 and above) (see Appendix A).

Another limitation is that the data gathered were only comprised of Army infantry Soldiers and were limited to one brigade at one installation in the Midwestern United States. Although attempted, there was not the ability to gather the large number of comparable spouse surveys to use in a comparison of both spouses and Soldiers for more of a family impact. The surveys were given only a few weeks before the Soldiers deployed (Time 1 survey) and shortly after the Soldiers returned home from deployment (Time 2 survey). It is expected that there were other pre- and post-deployment distractions besides financial matters. Finally, the surveys were leadership directed, and therefore, the Soldiers were expected to take the surveys. Most Soldiers complied since leadership was present during the data collection. All surveys did contain verbiage in accordance with the IRB that they had the ability to not take the survey if they so choose.

Future Research. The current results call for further investigation and research into the predicting factors of financial behaviors, knowledge, and anxiety for Soldiers. There needs to be more detailed research for further investigation on these topics and the variables surrounding them. Future research should further develop some of the findings in this study in order to more

fully understand the financial decision making process of Soldiers. It should be used to further analyze and enhance current financial education and counseling programs offered to service members and military families. Empirical evidence analyzing the relationship between financial behaviors, knowledge, and anxiety will help analyze financial educational programs to assess whether the financial education needs of service members are being met. It is important that similar surveys and research is done in other branches of Service and with military spouses to more fully develop the picture of financial behaviors, knowledge, and anxieties of all military members and their families. Future research will continue to offer insights, inform, and educate key decision makers, including policy makers, senior military leaders, and service providers, on empirically based research and tools of how to best assist service members and their family's financial needs and pressures.

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Chapter 3 - Got Cash? Predicting the Financial Behaviors of Soldiers Using Social Learning Theory

Introduction

Financial behaviors have been broadly defined in the literature to include such behaviors as basic money management (Xiao, 2008), budgeting and spending habits (Britt, Grable, Goff, & White, 2008; Henry, Weber, & Yarborough, 2001; Hira & Mugenda, 2000), credit use (Grable & Joo, 2006; Joo, Grable, & Bagwell, 2003; Rutherford & DeVaney, 2009), and savings behavior (Bhargava & Lown, 2006; Fisher, 2010; Yuh & Hanna, 2010). These financial behaviors have been well researched for the general population (e.g., Fisher, 2010; Yuh & Hanna, 2010). Early studies with college students showed that many students were living on the edge of financial crisis and did not have the knowledge needed to manage their money (Henry et al., 2001). Follow-up studies have shown that ethnic background, education level, credit card ownership, parents' credit card use, and locus of control were associated with college students' credit card attitudes and confirmed the early fact that students are subject to a financial crisis (Joo et al., 2003). Little research has been conducted regarding the financial behaviors of military personnel. There are unique factors and stressors that military are subject to, such as wartime deployments, that can affect a service member's personal financial behavior.

Stress seems to play an important role in financial behavior outcomes. Research has linked financial behaviors, such as accumulation of credit card debt and student loan debt, to be related to increased financial stress (Grable & Joo, 2006; Joo et al., 2003). In a military study, researchers found that perceived financial stress was a significant mediator between community functioning and hazardous drinking for Airmen and women (Foran, Heyman, & Smith Slep,

2011). However, little research has been conducted regarding the financial behaviors of military personnel, a population which is subject to unique factors and stressors, such as wartime deployments, that can affect a service member's personal financial behavior.

The current study expands the research of military financial behaviors using a social learning theory framework to more fully understand stress and other factors that influence financial behavior outcomes. Data from over 700 Soldiers was collected to determine how their military experiences, along with other personal, behavioral, and environmental factors, are related to their financial behaviors. The current study sought to more fully understand the financial behavior of service members and produce more quantitative, evidence-based research to provide new information on the ways that service members behave with their money. These financial issues must be addressed to reduce strain on the military force and increase job performance (Luther, Leech, & Garman, 1998).

Literature Review

Social learning theory was developed out of earlier learning theories that were rooted in the broad frameworks of stimulus response theory and cognitive theory (Rosenstock, Strecher, & Becker, 1988). Learning theories are used to explain and modify behavior (Rosenstock et al., 1988), while social learning theory has the guiding belief that personality is learned and new behaviors are acquired by watching another where the behavior is reinforced (Bandura & Walters, 1963). Over time, two prominent theorists emerged in the field of social learning theory: Rotter (1954) and Bandura (1977). Both theorists hypothesized that behavioral outcomes are determined by expectancies and incentives (Bandura, 1977; Rotter, 1954). Expectancies can be divided into three primary groups: (a) expectancies of the individual's competence to perform the behavior needed to influence outcomes (i.e., locus of control), (b) expectancies about the

consequences of one's own actions (i.e., how individual behavior influences outcomes), and (c) expectancies about environmental clues (i.e., beliefs about how events are connected) (Rosenstock et al., 1988). Incentives, also known as reinforcement, are the value of the specific outcome (e.g., health status, physical appearance, economic gain) (Rosenstock et al., 1988). Put simply, social learning theory operates within a framework of personal factors, environmental factors, and past behaviors that drive outcomes. The three factor expectancies operate on the concept of reciprocal determinism meaning that there is continual interaction between all three factors, and the interplay of these three variables produces an outcome (Bandura, 1977) (see Figure 3.1).

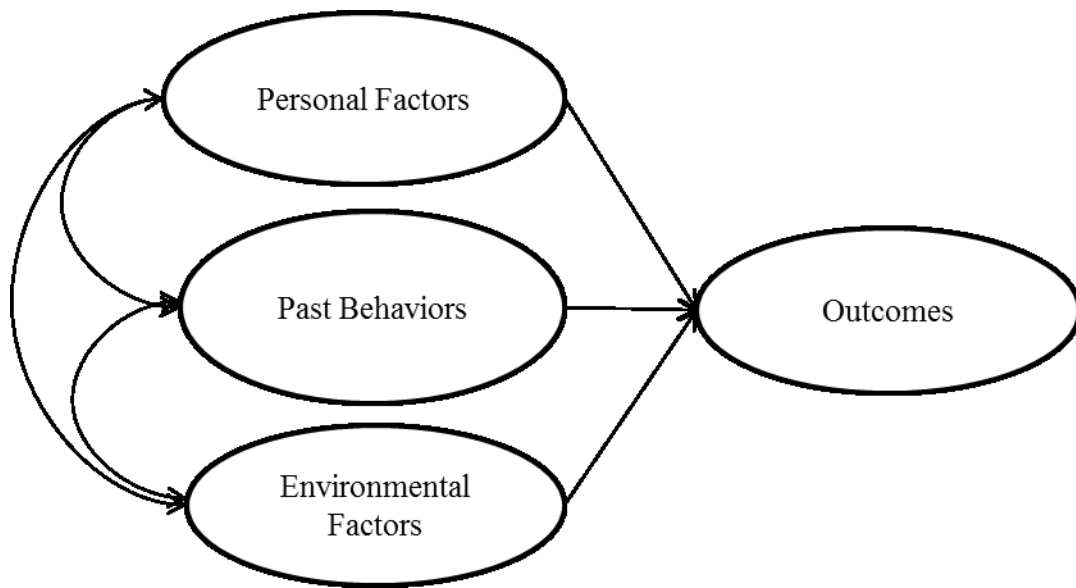


Figure 3.1 Conceptual framework

Using the framework of social learning theory, personal factors include the biological properties of the individual (Bandura, 1986) and include what an individual thinks, believes, and feels (Wood & Bandura, 1989). Since knowledge plays a key role in the cognitive and complex role of behaviors (Bandura, 1997), it is also considered that knowledge is needed as a precondition to change (Bandura, 2004). In fact, Bandura's (1986) idea of cognition in social

learning theory became so prominent that he renamed his theory “social cognitive theory”. As a part of the incentive to change, a person must believe that they are personally capable of making the change for the new behavior (Bandura, 1997).

Rotter’s primary contribution to social learning theory came through the concept of “locus of control” (Rotter, 1966). Locus of control is known as perceived control—the control a person feels like she or he has over the situation (Rotter, 1966). Physiological state—specifically anxiety—plays a role in the ability of individuals to feel in control of their life since it “informs the individual, correctly or not, that he or she is not capable of performing or maintaining a given action—or success in eliminating negative affect” (Rosenstock et al., 1988, p. 180).

Past experiences play an integral role in the actual behavior (Lefcourt, 1976; Rotter, 1954). A person’s motivation to engage in a certain behavior is directly correlated with the perceived outcome of that behavior (Lefcourt, 1976). Therefore, it can be said that behaviors are an antecedent to the experiences one has in their lifetime. Behaviors consist of actions, habits, skills, and practice, which affect the environment and influence personal factors that are developed or activated (Bandura, 1977).

Finally, a driving factor of social learning theory is the concept of “socialization”—i.e., how children are taught to behave like the adults of that society (Miller, 2009). Bandura and Walters (1963) expanded the process of learning to include imitation wherein new behaviors are acquired by simply watching another where the behavior is reinforced. It provides opportunities and social support from relationships with family, friends, peers, and co-workers (Bandura, 1997). Environment is multifaceted, and humans adapt to aspects of the environment they like and change the ones they do not like (Bandura, 1997). People create and select their environment through their actions (Wood & Bandura, 1989). This powerful socialization concept expanded

learning to something that can be shaped by the environment, which entails both the physical and sociocultural environments surrounding the individual (Bandura, 1997).

This paper uses a combination of both Rotter's (1954) and Bandura's (1977) social learning theories due to Rotter's (1966) unique use of the concept of locus of control and Bandura's (1986) use of cognition within the learning theory framework. These three factors, individually and through their interaction, play an integral role in the actual outcomes. The following sections further explain how the financial literature has applied personal, past behavioral, and environmental factors to financial behavior outcomes.

Personal Factors. Personal factors influence behavior through individual thoughts, beliefs, and feelings. These factors include knowledge, expectations, and attitudes as well as biological properties, such as physical state, sensory, and neural systems (Bandura, 1986). For purposes of this paper, biological properties included are age and ethnicity. Other personal factors that were included are financial knowledge, locus of control, and financial anxiety.

Age. From a financial behavior perspective, literature shows that age has been found to play a significant role in money management and financial behaviors, although the results have been mixed. For instance, Henry et al. (2001) found that non-traditional college students (ages 36 to 40) were more likely to have and follow a budget than students in other age categories. Other college student research has found that age was not significantly related to financial behaviors (Grable & Joo, 2006; Joo et al., 2003). Another study revealed that older students, students over the age of 25, had more problematic financial behaviors (Worthy et al., 2010).

When looking at other populations, Yuh and Hanna (2010) used the standard life cycle model to show that financial savings follows a bell-shaped curve: starting off slow, gaining momentum over the years, peaking mid-range, and then trailing off in the older years. In

determining households who are more likely to be savers, they found younger households (under 30) are more likely to report financial savings than older households (Yuh & Hanna, 2010). Another study showed individuals likely to be saving were between the ages of 45 to 54 when compared to households under the age of 35 (Rha et al., 2006). This might suggest that households begin saving early, and as they near or exceed their saving target, they may discontinue new contributions to savings (Rha et al., 2006). Even though the research has been mixed when determining the effect of age on financial behaviors, research clearly shows that when viewing savings in a life cycle model, savings peaks well before retirement and during the heaviest earning years.

Ethnicity. Ethnicity has also been shown to have an impact on financial behaviors. Previous research shows that Caucasian populations generally have better financial behaviors than other ethnic groups, including better savings habits (Rha et al., 2006; Yuh & Hanna, 2010). Caucasian populations have shown to have more positive attitudes towards credit (Joo et al., 2003), while African-American college students exhibited poorer financial behaviors and held larger credit card debt balances than non-Hispanic white students (Grable & Joo, 2006). However, not all research has found a relationship between ethnicity and financial behaviors (Worthy et al., 2010). Since ethnicity has mixed relationships, the variable of ethnicity was included in the current study.

Financial Knowledge. The role of financial knowledge in relation to financial behaviors is important and complex. Some research has shown that higher levels of financial knowledge lead to better financial behaviors (Danes, Huddleston-Casas, & Boyce, 1999; Hilgert, Hogarth, & Beverly, 2003; Perry & Morris, 2005), while other research has shown financial knowledge does not always guarantee better financial behaviors (Mandell & Klein, 2009). Robb and Sharpe

(2009) found that respondents who had more financial knowledge actually had more credit card debt. Researchers found individuals with an external locus of control had less financial knowledge and were less likely to have responsible financial management behaviors (Perry & Morris, 2005). Research specific to military populations found financial education to have a positive effect on Soldiers who reported fewer negative and more positive financial management behaviors (Bell, Gorin, & Hogarth, 2009). As can be seen from the literature, the effect of financial knowledge on financial behaviors is complex.

Locus of Control. Locus of control is how much control a person feels that he or she has over a given situation (Rotter, 1966). People with an internal locus of control will see an event take place or a result because of their own behavior or action, and therefore, they believe they are in control of their own destiny; people with an external locus of control see the event as a result of luck, fate, chance, unpredictability, or the actions of others (Rotter, 1966).

Since Furnham's (1986) initial study of economic locus of control, other researchers have extensively studied locus of control in economic and financial planning research (McKenna & Nickols, 1986; Noone, Stephens, & Alpass, 2010). Research has found a positive relationship between external locus of control and the accumulation of credit card debt (Tokunaga, 1993). Other research has shown that those with debt problems have more of an external economic locus of control (Legge & Heynes, 2009; Mewse, Lea, & Wrapson, 2010). Individuals with an external locus of control have less financial knowledge and are less likely to have responsible financial management behaviors (Perry & Morris, 2005). Internal locus of control has been found to be significantly correlated with revolving credit use, such as credit card debt (Wang, Lu, & Malhotra, 2011). Research has also shown that those with a higher external locus of control have more of a positive attitude toward credit (Joo et al., 2003). Other research has shown that

participants with an internal locus of control report better financial behaviors, better perceived financial well-being, and better psychological well-being (e.g., more satisfaction with life and lower stress) (Norvilitis, Szablicki, & Wilson, 2003).

Financial Anxiety. A person's physiological state has been shown to either enhance or decrease the feeling of individual responsibility, especially when relating to anxiety (Rosenstock et al., 1988). Perceived behavioral control has been linked to overall psychological health (Shim, Xiao, Barber, & Lyons, 2009). Therefore, psychological states, and in particular, anxiety, is an important component when studying personal factors and their influence on financial behaviors.

Research has shown that financial stress and anxiety has been linked to college student debt (Archuleta, Spann, & Dale, in press ; Grable & Joo, 2006; Joo et al., 2003). Research has also shown that individuals with debt have greater anxiety (Tokunaga, 1993) and individuals with less financial strain had more positive financial behaviors (Loibl, Grinstein-Weiss, Zhan, & Red Bird, 2010). Specifically, individuals who have the ability to cope with financial strain and to envision the future are more likely to build savings (Loibl et al., 2010).

Past Behaviors. According to Rotter (1954), past experiences play an integral role in behavior. Past behavior has also been found to be a predictor of variance in future behavior (Conner & Armitage, 1998). Other studies have shown that past experiences influence future behaviors (Akers, 2009; Felson & Lane, 2009; Kernsmith, 2006; Pratt et al., 2009; Ward & Gryczynski, 2009). Therefore, this paper reviewed how past financial behaviors, specifically credit card debt and emergency savings, have relationships with future behavioral outcomes.

Credit Card Debt. Financial behavior research has shown that past experiences, specifically credit card behaviors, influence future financial behaviors (Joo et al., 2003; Xiao & Wu, 2008). For example, poor credit card management, such as making late payments,

determines that a person is more likely to have a revolving balance on a credit card (Rutherford & DeVaney, 2009). Similar research has found that future financial problems are created by past problematic financial behaviors (Worthy et al., 2010), such as credit card debt (Grable & Joo, 2006) and compulsive buying leading to credit card debt (Joireman, Kees, & Sprott, 2010). Military service members have been found to carry significantly higher amounts of credit card debt than civilians (Financial Industry Regulatory Authority [FINRA], 2010). Almost 41% of service members had at least \$5,000 on their credit cards and 10% had \$20,000 or more; nearly half of the military respondents with credit cards indicated they paid sizeable interest payments, fees, or both (FINRA, 2010).

Emergency Savings. Fortunately, positive behavior is also self-reinforcing. Literature has shown that good savings behavior increases positive financial behaviors (Loibl et al., 2010; Rha et al., 2006). Bhargava and Lown (2006) found that spending behavior was a significant determinant of the likelihood of meeting future savings goals. Of particular interest to the current study, research in a military setting found that people with financial assets were more likely to have an emergency savings fund and were more likely to be satisfied with Army pay and allowances (Orthner & Rose, 2003). Brand, Hogarth, Peranzi, and Vlietstra (2011) found education and money management experiences, both in the military and pre-military, were most closely associated with having an emergency savings fund for young, enlisted Soldiers. In a recent survey, only half of military respondents had enough funds set aside to cover three months of living expenses (FINRA, 2010), which is similar to the percentage of Americans overall that have saved three months' worth of living expenses (FINRA, 2009). Over 52% of enlisted personnel (including non-commissioned officers) and 32% of officers were not saving any income (FINRA, 2010). Credit card debt and emergency savings funds are of particular

importance to a military audience given the past debt and lack of savings that have existed as a whole within this community (FINRA, 2010). For this study, credit card debt and emergency savings funds were chosen to represent past financial behaviors.

Environmental Factors. Social learning theory (Bandura, 1977) also suggests that environmental factors are a key determinant to behavioral outcomes in addition to the personal factors and past behaviors discussed above. According to Wood and Bandura (1989), the environment is not a fixed entity since “people are both products and producers of their environment” (p. 4). People are not automatically shaped and controlled by their environment, but “most aspects of environment do not operate as an influence until they are activated by appropriate behavior” (Wood & Bandura, 1989, p. 4). Human expectations, beliefs, emotional tendencies, and cognitive competencies are developed and modified by social influences (Bandura, 1986). There are various social influences and environmental factors, including the actual physical environment, family, peers, media influences, and life events, such as career changes, divorce, relocation, accidents, and illness (Bandura, 1989). Using these definitions, the following environmental factors were used in this study: communication sources and deployments. Communication sources include the social environment service members experience, including communication with family, peers, media, and other social influences. Deployments are considered both a life event and a physical environment that surrounds them and impacts the environmental factors affecting their financial behavior outcomes.

Communication Sources. From the behavioral perspective, one’s environment changes the form and frequency of behavior (Miller, 2009). Financial behavior literature has shown that parents’ behaviors, attitudes, and expectations are significantly related to children’s attitudes, behaviors, and expectations (Worthy et al., 2010). Financial education, both at home and at

school, plays an important role in the way that young adults gain financial knowledge (Shim et al., 2009). Discussions of money with parents and peers have a significant effect on willingness to take on financial risk, while simply observing financial behaviors did not (Garrison & Gutter, 2010). These studies show an important link between observing parental and peer behaviors and the effects on personal financial behaviors.

Military Deployments. In a military environment, an individual is shaped by the community in which they participate (Mancini, Bowen, & Martin, 2005). Deployments are unique to the military environment. Many studies have researched the effects of military deployments on service members and their families (Cozza, Chun, & Polo, 2005; Huebner, Mancini, Bowen, & Orthner, 2009; Lester et al., 2010) but have not addressed the impact of deployment on their financial behaviors.

In the financial behavior literature, having financial assets was found to be a valuable resource in coping with deployments (Orthner & Rose, 2003). In fact, some researchers have found that deployment pay was seen as a benefit of deployment and helped offset some of the negative aspects of deployment (Hosek, Kavanagh, & Miller, 2006). Other studies have found that the financial behaviors and conditions of deployed service members were similar to service members who have not deployed (U. S. Government Accountability Office [GAO], 2005). Research has shown that deployment stress has been associated with both the mental and physical well-being of service members (Padden, Connors, & Agazio, 2010). Thus, a unique aspect of the military environment is deployment, and according to social learning theory (Bandura, 1977), environmental factors are also shaped and influenced by both personal factors and past behaviors.

Financial Behavior Outcomes. As previously mentioned, financial behavior has been broadly defined to include many different types of behaviors related to personal finances. Xiao (2008) defined financial behavior as “any human behavior that is relevant to money management” (p. 70). Some have defined financial behaviors to include budgeting and spending habits (Britt et al., 2008; Henry et al., 2001; Hira & Mugenda, 2000; O’Neill, Sorhaindo, Xiao, & Garman, 2005; Xiao & Wu, 2008). Others have used financial behaviors in terms of credit (Grable & Joo, 2006; Joo et al., 2003; Rutherford & DeVaney, 2009) or savings behavior (Bhargava & Lown, 2006; Fisher, 2010; Loibl et al., 2010; Rha et al., 2006; Yuh & Hanna, 2010). Financial behavior has also been described in terms of investment behavior and decisions, including risk tolerance (Bailey & Kinerson, 2005; Gunay & Demirel, 2011). Although each of these behaviors can be individually defined as financial behaviors, other studies have utilized a combination of these topics to relate financial behavior as a whole instead of a single individual behavior (Garman, Leech, & Grable, 1996; Hilgert, Hogarth, & Beverly, 2003; Perry & Morris, 2005; Worthy et al., 2010). Given the broad range of financial behavior definitions and for purposes of this paper, financial behavior outcomes are defined primarily as money management behaviors. This definition is broad enough to cover multiple financial behaviors, while also limiting the scope to behaviors that deal specifically with how individual manage their money.

Summary. Although the research of military financial behaviors in the literature has been limited, there has been a compelling discussion that personal factors, past behaviors, and environmental factors all affect financial behavior outcomes. In summary, research has shown that age has a mixed effect on financial behaviors (Henry et al., 2001; Rha et al., 2006; Yuh & Hanna, 2010), while Caucasian (Grable & Joo, 2006; Joo et al., 2003; Rha et al., 2006; Yuh & Hanna, 2010) respondents are more likely to have better financial behaviors. Participants with

more financial knowledge (Bell et al., 2009; Danes et al., 1999; Hilgert et al., 2003; Perry & Morris, 2005) and an internal locus of control are also expected to have better financial behaviors (Joo et al., 2003; Legge & Heynes, 2009; Norvilitis et al., 2003; Perry & Morris, 2005; Wang et al., 2011). Financial anxiety, as a proxy for psychological state, should be addressed to determine the effect on financial behavior outcomes. Lower financial anxiety has also been found to have a positive relationship with financial behaviors (Archuleta et al., in press; Foran et al., 2011; Loibl et al., 2010; Tokunaga, 1993). Personal factors play a vital role in behavioral outcomes, but they do not operate alone. Past behaviors and environmental factors are also important to more fully understanding behavioral outcomes (Bandura, 1986).

Past behaviors, specifically lower credit card debt (Grable & Joo, 2006; Joireman et al., 2010; Rutherford & DeVaney, 2009; Worthy et al., 2010) and having emergency financial savings (Bhargava & Lown, 2006; Brand et al., 2011; Gunay & Demirel, 2011; Loibl et al., 2010; Orthner & Rose, 2003; Rha et al., 2006), are expected to be positively related to financial behavior outcomes. Finally, environmental factors, in particular more communication sources (Garrison & Gutter, 2010; Shim et al., 2009; Worthy et al., 2010) and experiencing a military deployment (U.S. GAO, 2005; Hosek et al., 2006; Orthner & Rose, 2003) are expected to have a positive relationship with financial behavior outcomes.

Hypotheses. To address the research question of what factors impact financial behavior outcomes in a sample of military personnel, several hypotheses were developed. Each hypothesis was developed using the three concepts of social learning theory (i.e., personal factors, environment factors, and past behaviors) and were supported from the financial behavior literature (see Table 3.1). The hypotheses were as follows:

(1) Personal Factors

H₁: Age is expected to have a mixed effect on financial behavior outcomes.

H₂: Respondents who are Caucasian are more likely to report positive financial behavior outcomes than respondents who are from other ethnic groups.

H₃: Respondents with higher levels of subjective financial knowledge are more likely to report positive financial behavior outcomes than respondents with lower levels of subjective financial knowledge.

H₄: Respondents with an internal locus of control are more likely to report positive financial behavior outcomes than respondents with an external locus of control.

H₅: Respondents with low levels of financial anxiety are more likely to report positive financial behavior outcomes than respondents with high levels of financial anxiety.

(2) Past Behaviors

H₆: Respondents with less credit card debt are more likely to report positive financial behavior outcomes than respondents with high levels of credit card debt.

H₇: Respondents with more emergency financial savings are more likely to report positive financial behavior outcomes than respondents with little or no emergency financial savings.

(3) Environmental Factors

H₈: Respondents who discuss their financial matters with other sources (i.e., parents, peers, colleagues, resources) are more likely to report positive financial behavior outcomes than respondents who do not discuss their financial matters with others.

H₉: Respondents who have deployed are more likely to report positive financial behavior outcomes than respondents who have not deployed.

Table 3.1

Hypothesized Effect of Independent Variables on Financial Behaviors

Variable	Hypothesized Effect on Financial Behavior Outcomes
<i>Personal Factors</i>	
Older	+/-
Caucasian	+
More subjective financial knowledge	+
Internal locus of control	+
Lower financial anxiety	+
<i>Past Behavior</i>	
Less credit card debt	+
More in emergency savings	+
<i>Environmental Factors</i>	
More communication sources	+
Previous deployment	+

Methods

Data. In November 2010, a scantron survey was distributed to three infantry combat units from a large Army post shortly before their yearlong deployment to a war zone. The survey was conducted within a single command and approval was given by the unit commander. The survey contained 50 questions that included demographic characteristics, pay rate and special pays, use of financial products, financial anxiety, help-seeking behavior, subjective financial knowledge, financial behavior, and locus of control questions (see Appendix C). Approximately 825 soldiers completed the survey; 701 surveys were returned and deemed usable⁷ with a response rate of 85%. Surveys with missing data were deleted for purposes of the analysis.

⁷ Some respondents randomly bubbled in their responses marking responses on the answer sheet that were not a possible option on the survey, and therefore, these responses were not included in the final analysis.

Gender was not used as a variable in this study given that 97% of the sample was male. All surveys were conducted using the proper protocol and approval from the primary investigator's university Institutional Review Board (IRB). Command approval was given from the Division and unit leadership for the survey as outlined in the IRB.

Dependent Variable. The dependent variable—financial behavior outcomes of Soldiers—consisted of six questions (see Table 3.2). This scale was modified from the Financial Behavior Scale (Grable & Joo, 2001), which had nine questions, with an original alpha of 0.74. For purposes of the current study, the Likert-type scale only used five of the original items and added an additional question in order to test specific behaviors based on cash flow, goals, and budgets for a total of six items. The responses had a possibility of five answers that ranged from “almost never” (coded 1) to “almost always” (coded 5). Three of the questions were reverse coded so that all items reflected positive financial behaviors. In order to substantiate good reliability, a principal axis factor analysis was conducted on the six items, $\alpha = 0.67$. This is above the acceptable limit of 0.5 (Field, 2009). Any one single item dropped from this scale did not improve the Cronbach alpha for this scale, and therefore, all six items remained in the financial behavior scale. Total scores ranged from 6 to 30, with higher scores indicating positive financial behaviors. Instead of summing the items for one financial behavior score, a factor score was used to allow for greater variability in the respondents' scores (Field, 2009).

Table 3.2

Financial Behavior Scale

1. I have a weekly or monthly budget that I follow. ^a
2. I have specific short-term, mid-term, or long-term written financial goals. ^b
3. I pay my credit card bills in full and avoid finance charges. ^a
4. I reach the maximum limit on my credit cards. (reverse coded) ^a
5. I spend more money than I earn. (reverse coded) ^a
6. I have difficulty paying bills because of not enough income. (reverse coded) ^c

(Responses: 1=almost never, 2=seldom, 3=sometimes, 4=often, 5=almost always)

Note: ^a Original question from the Financial Behavior Scale (Grable & Joo, 2001). ^b Edited question from the Financial Behavior Scale. ^c Additional question.

Independent Variables. The three concepts of personal factors, environmental factors, and past behavior drove the selection of the variables and proxies used to measure the following concepts.

Personal Factors. There were multiple personal factors measured in this study including age, ethnicity, financial knowledge, locus of control, and financial anxiety. Two personal factors measured were age and ethnicity. Age was measured as a continuous variable, with total ages ranging from 19 to 46. Age and rank were significantly correlated ($r = 0.46, p < .001$); therefore, rank was not used in further analysis. Ethnicity was measured as a dichotomous variable, which was coded “1” for Caucasians and “0” for all other races.

Subjective financial knowledge was measured as a series of self-assessed questions, including questions on interest rates, credit reports, budgeting, and investing (see Table 3.3). This scale was modified from the Financial Knowledge Scale (Perry & Morris, 2005), where the original scale had five questions with an alpha of 0.91. The scale used in the current study condensed two of the original items on credit and credit reports and then included an additional four items. The intent of the four additional items of life insurance, estate planning, retirement accounts, and taxes was to more comprehensively cover additional financial planning topics.

These questions were measured on a Likert-type scale with five responses allowed from “nothing” (coded 1) to “a lot” (coded 5). The Cronbach’s alpha for these eight items was 0.92, indicating good reliability. Total scores ranged from 8 to 40, with higher scores indicating more financial knowledge. A principal component factor analysis was conducted with all variables loading onto one score. The factor score was used instead of a summation of the items to allow for greater variability in the respondents’ scores (Field, 2009).

Table 3.3

Financial Knowledge Scale

How much do you know about the following?

1. Interest rates, finance charges, and credit terms.^a
2. Credit ratings and credit reports.^b
3. Managing finances/budgeting.^a
4. Investing money.^a
5. Life insurance/SGLI/TSGLI^c
6. Will^c
7. Retirement accounts (i.e., TSP, IRA, 401k)^c
8. Taxes^c

(Responses: 1=nothing, 2=very little, 3=some, 4=a fair amount, 5=a lot)

Note. ^a Question from the original Financial Knowledge Scale (Perry & Morris, 2005). ^b Combined question from the Financial Knowledge Scale. ^c Additional questions.

Locus of control was addressed using the complete Pearlin Mastery Scale (Pearlin & Schooler, 1978). The full scale consists of seven questions with five focused on external locus of control and two focused on internal locus of control (see Table 3.4). The external locus of control items were reverse-coded so all variables expressed to reflect an internal locus of control. These questions were posed on a 5-point Likert-type scale, ranging from “almost never” (coded 1) to “almost always” (coded 5). The Cronbach’s alpha for the Pearlin Mastery Scale has varied among different financial research studies: $\alpha = .74$ (Whitbeck, Simons, Conger, Wickrama, Ackley, & Elder, 1997), $\alpha = .84$ (Kim & Moen, 2002), and $\alpha = .88$ (Donaldson, Earl, & Muratore, 2010). The Cronbach’s alpha for the current study was 0.79, indicating good reliability for these

seven items. Total scores ranged from 7 to 35, with higher scores indicating more of an internal locus of control. A principal components analysis was conducted with all variables loading onto one score. Instead of summing the items for a single external locus of control score, a factor score was used to allow for greater variability in the respondents' scores (Field, 2009).

Table 3.4

Locus of Control Questions

External Locus of Control

1. There is really no way I can solve some of my problems. (reverse coded)
2. I am being pushed around in my life. (reverse coded)
3. I am helpless in dealing with the problems of life. (reverse coded)
4. There is little that I can do to change the important things in my life. (reverse coded)
5. I have little control over the things that happen to me. (reverse coded)

Internal Locus of Control

1. I can do anything I set my mind to.
2. What happens to me in the future depends on me.

(Responses: 1=almost never, 2=seldom, 3=sometimes, 4=often, 5=almost always)

The final personal factor tested was financial anxiety, which was tested using the Financial Anxiety Scale (Archuleta, Spann, & Dale, in press). The original Financial Anxiety Scale had seven questions and an alpha of 0.94 (Archuleta et al., in press). Measurement of these items was based on the DSM-IV-TR diagnostic criteria for General Anxiety Disorders. The current study used a modification of the Financial Anxiety Scale using four items of the seven testing how often the Soldier felt anxious, worried, or had difficulty sleeping or concentrating when thinking about his or her financial situation (see Table 3.5). The five point Likert-type scale had responses ranging from “never” (coded 1) to “always” (coded 5). In the current study, only four of the seven questions from the original scale were used due to space constraints and applicability to the sample. The Cronbach's alpha for these four items was 0.85, indicating good reliability. Total scores ranged from 4 to 20, with higher scores indicating lower financial anxiety. The factor analysis score was created using principal components analysis and all

variables loaded onto one score. A factor score was used instead of a summation of the items to allow for greater variability in the respondents' scores measuring overall financial anxiety (Field, 2009).

Table 3.5

Financial Anxiety Scale

Question: "How often do you feel the following ways when thinking about your financial situation?"

1. I feel anxious about my financial situation.
2. I have difficulty sleeping because of my financial situation.
3. I have difficulty concentrating because of my financial situation.
4. I worry about my financial situation.

(Responses: 1=never, 2=almost never, 3=sometimes, 4=almost always, 5=always)

Past Behaviors. Past behaviors were measured using two variables: amount of credit card debt and emergency savings funds. Soldiers were asked "How much credit card debt do you have?" Answers ranged on a five point categorical scale: (a) \$0; (b) \$1 to \$1,000; (c) \$1,001 to \$2,500; (d) \$2,501 to \$5,000; and (e) \$5,001 or more. For the variable of emergency savings funds, Soldiers were asked, "How much money do you have set aside in a savings account for emergencies?" The five point categorical scale answer options were: (a) \$0; (b) less than \$500; (c) \$501 to \$1,000; (d) \$1,001 to \$2,000; and (e) \$2,001 or more.

Environmental Factors. In this study, two environmental factors were tested. The first factor, entitled communication sources, asked whether the Soldiers had talked with various sources about their personal financial situation in the last 12 months. The military help sources included: (a) Army Community Service/Family Readiness programs, (b) chain of command, (c) Military OneSource, (d) Personal Financial Counselors (part of the Military Family Life Consultant program), or (e) other military personnel. Other help sources included: (a) family member/spouse, (b) friend, (c) financial advisor/planner, (d) internet, or (e) other. The variable

was measured on a continuous scale with each communication source being coded as “1” for Soldiers who sought help from a communication source or “0” for Soldiers who did not seek any financial help. These items were then summed together to give an overall score for communication sources, ranging from 0 to 10. The final analysis categorized the information into three categories: (a) zero communication sources, (b) one communication source, or (c) two or more communication sources.

The second factor addressed Soldiers’ deployment history. This was measured as a continuous variable by asking how many months the Soldier had been deployed to an area that qualified for hazardous duty pay in the last seven years. This variable was then coded as a dichotomous variable, with “1” for Soldiers who have deployed and “0” for Soldiers who have never deployed.

Control Variables. Several variables were used in the analysis in order to control for specific demographic variables that were not tested in the model. Marital status was used as a dichotomous variable where respondents who were single were coded “1” and “0” was used for all other marital situations, including married, divorced, remarried, and separated. A question asking how many financial dependents, excluding the Soldier’s spouse, was included with five options from “0” to “4 or more”. The data were re-categorized into a dichotomous variable coded “0” for Soldiers with no dependents and “1” for Soldiers with one or more dependents.

Income was also used as a control variable and was assessed via rank classification. Rank has been used as a proxy for an individual’s socioeconomic status since each rank has a narrow pay range that is achievable (Green, 1970). Military basic pay scales are directly correlated with rank and years of service, allowing the use of rank as a proxy for income (Defense Finance and Accounting Service, 2010) (see Appendices A and B). Respondents’ Army ranks and pay grades

were segmented into five categories, where each rank was associated with its yearly salary range (see Table 3.6).

Table 3.6

Army Basic Pay Scales

<i>Army Rank Classification</i>	<i>Army Rank</i>	<i>2010 Yearly Salary Ranges</i>
Private	E-1 to E-2	\$17,400 - \$19,400
Private First Class to Specialist or Corporal	E-3 to E-4	\$20,500 - \$27,500
Sergeant to Staff Sergeant	E-5 to E-6	\$24,700 - \$41,800
Sergeant First Class to First Lieutenant	E-7 to O-2	\$31,200 - \$52,500
Captain or higher officer	O-3 or above	\$43,900 - \$145,500

Note. Based on the military basic bi-monthly pay charts (Defense Finance and Accounting Service, 2010). The survey banded the ranks together in the manner described above. Given the restrictions of the survey, these ranks are not able to be separated into individual ranks or grouped in any other order.

Data Analysis. The data analysis was completed using SAS version 9.3 statistical software. Ordinary least squares (OLS) regression analysis was used to predict the relationship between the nine independent variables with the financial behavior outcome score (see Figure 3.2). There were no signs of multicollinearity among the variables used.

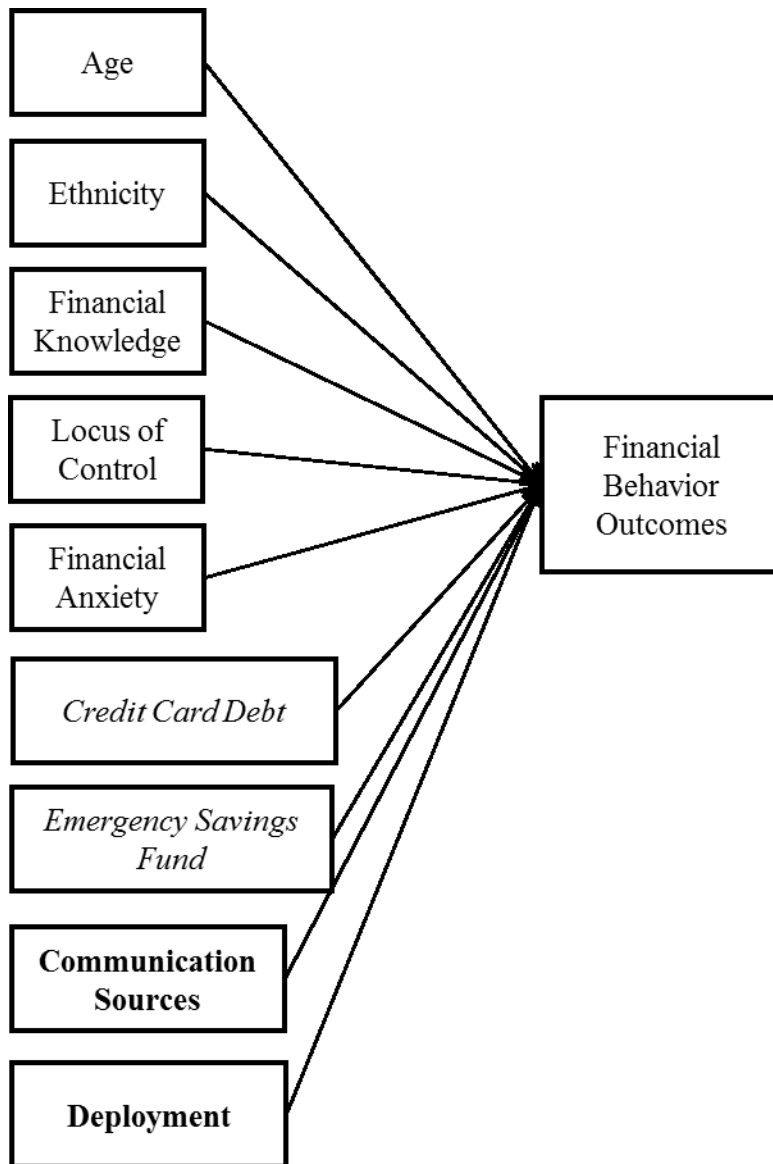


Figure 3.2 Empirical framework

Results

Descriptive Statistics. Table 3.7 contains the descriptive statistics of all of the variables used in the multivariate analysis.

Financial Behaviors. Prior to being reduced to a factor score, financial behaviors were assessed by six questions with higher scores indicating a higher level of subjective psychological

well-being. The average financial behavior factor score was 22 (SD = 4.49; range = 9 to 30), indicating a fairly high level of positive financial behaviors among the sample.

Personal Factors. The average age of respondents was 26 (SD = 5.74; range = 19 to 46), and 67% ($n = 468$) of the sample reported their ethnicity as Caucasian. Subjective financial knowledge was determined using eight variables with higher scores indicating higher levels of subjective financial knowledge. The mean for this variable was 27 (SD = 6.59; range = 8 to 40). Locus of control was assessed by asking seven questions where higher scores indicate more of an internal locus of control. The average internal locus of control score for this sample was 30 (SD = 4.69; range = 7 to 35) indicating a stronger preference toward an internal locus of control. The last personal factor variable was financial anxiety, where a higher score indicates lower levels of financial anxiety. The average score for financial anxiety was 16 (SD = 3.19; range = 4 to 20).

Past Behaviors. Forty-two percent ($n = 295$) of the sample reported no credit card debt. Another 23% ($n = 160$) carried a balance of \$1 to \$1,000, 13% ($n = 92$) carried a balance of \$1,001 to \$2,500, 10% ($n = 72$) carried a balance of \$2,501 to \$5,000, and 12% ($n = 82$) of the sample carried a balance of more than \$5,000 on their credit card. Regarding savings, Soldiers who had saved no money in an emergency savings fund comprised 20% ($n = 152$) of the sample. Nine percent ($n = 176$) of the sample reported having less than \$500 followed by 24% ($n = 166$) reporting \$501 to \$1,000; 25% ($n = 65$) reported saving \$1,001 to \$2,000; and 22% ($n = 142$) of the sample reported saving more than \$2,001.

Environmental Factors. Twenty-eight percent ($n = 202$) of the sample reported assessing no external sources regarding their financial matters. Another 29% ($n = 200$) spoke to at least one source and 43% ($n = 299$) spoke with two or more sources. The second proxy for

environmental factors was deployment. Over 51% ($n = 359$) of the sample had deployed prior to their anticipated deployment.

Control Variables. Several control variables were included in this analysis. Over 39% ($n = 274$) of the respondents were single, and 55% ($n = 384$) of the sample had one or more dependents. Privates (E1 to E2) made up 11% ($n = 75$) of the sample with privates first class, specialists, or corporals (E3 to E4) comprising 56% ($n = 390$). Sergeants and staff sergeants (E5 to E6) made up 26% ($n = 183$) of the sample and 6% ($n = 43$) held a rank from sergeant first class to first lieutenant, including warrant officers (E-7 to O-2). Finally, captains and higher (O-3 and above) comprised a little over 1% ($n = 10$) of the sample.

Table 3.7

Descriptive Statistics for the Financial Behaviors of Soldiers (N=701)

Variables	Frequency	<i>M</i> (<i>SD</i>)	Range
<i>Dependent Variable</i>			
Financial Behaviors		21.83 (4.49)	9 to 30
<i>Personal Factors</i>			
Age		26.00 (5.74)	19 to 46
Caucasian	66.76% (<i>n</i> =468)		
Subjective financial knowledge		26.55 (6.59)	8 to 40
Internal locus of control		29.70 (4.69)	7 to 35
Lower financial anxiety		16.21 (3.19)	4 to 20
<i>Past Behaviors</i>			
Credit card debt			
\$0	42.08% (<i>n</i> =295)		
\$1 to \$1,000	22.82% (<i>n</i> =160)		
\$1,001 to \$2,500	13.12% (<i>n</i> =92)		
\$2,501 to \$5,000	10.27% (<i>n</i> =72)		
\$5,001 and above	11.70% (<i>n</i> =82)		
Emergency savings funds			
\$0	20.26% (<i>n</i> =152)		
Less than \$500	9.27% (<i>n</i> =176)		
\$501 to \$1,000	23.68% (<i>n</i> =166)		
\$1,001 to \$2,000	25.11% (<i>n</i> =65)		
\$2,001 or more	21.68% (<i>n</i> =142)		
<i>Environmental Factors</i>			
Communication Sources			
Talked to no sources	28.82% (<i>n</i> =202)		
Talked to one source	28.53% (<i>n</i> =200)		
Talked to multiple sources	42.65% (<i>n</i> =299)		
Previous deployment	51.21% (<i>n</i> =359)		
<i>Control Variables</i>			
Single	39.09% (<i>n</i> =274)		
One or more dependents	54.78% (<i>n</i> =384)		
Rank			
E1 to E2	10.70% (<i>n</i> =75)		
E3 to E4	55.63% (<i>n</i> =390)		
E5 to E6	26.11% (<i>n</i> =183)		
E7 to O-2	6.13% (<i>n</i> =43)		
O3 and above	1.43% (<i>n</i> =10)		

Note. The mean and standard deviation for financial behaviors, financial knowledge, locus of control, and financial anxiety factor scores are 0 and 1, respectively.

Regression Results. An ordinary least squares regression was conducted to assess the influence of personal factors, prior behaviors, and environmental factors on financial behaviors of Soldiers. Results indicated that past behaviors and some personal factors influence positive financial behaviors explaining 54% of the variation in Soldiers' financial behaviors (F value = 36.48, $p < .001$). A positive coefficient indicated an increase in more positive financial behaviors, whereas a negative coefficient indicated less positive financial behaviors.

Personal Factors. Some personal factors played a significant role in Soldiers' financial behaviors. Age and ethnicity did not have a statistically significant association with Soldiers' financial behaviors, and thereby, neither Hypotheses 1 nor 2 were supported. Results also indicated that Soldiers with higher levels of subjective financial knowledge reported more positive financial behaviors ($b = 0.15$, $p < .001$), while Soldiers with an internal locus of control reported more positive financial behaviors ($b = 0.17$, $p < .001$). Therefore, Hypothesis 3 was supported since respondents with higher levels of subjective financial knowledge were more likely to report positive financial behavior outcomes than respondents with lower levels of subjective financial knowledge. The results also confirmed Hypothesis 4 since Soldiers with an internal locus of control were more likely to report more positive financial behavior outcomes than respondents with an external locus of control. Finally, results also indicated Soldiers with lower financial anxiety reported more positive financial behaviors ($b = 0.29$, $p < .001$); therefore, Hypothesis 5 was supported, as respondents with lower levels of financial anxiety were more likely to report more positive financial behavior outcomes than respondents with low levels of financial anxiety.

Past Behaviors. The past behaviors variable had the most explanatory value in Soldiers' financial behaviors before deployment as shown by the standardized estimates. In discussing

credit card debt, Soldiers with any amount of credit card debt had worse financial behaviors compared to Soldiers with no credit card debt. Respondents with credit card debt from \$1 to \$1,000 ($b = -0.16, p < .01$), \$1,001 to \$2,500 ($b = -0.41, p < .001$), \$2,501 to \$5,000 ($b = -0.49, p < .001$), and \$5,001 and above ($b = -0.71, p < .001$) reported greater negative financial behaviors than Soldiers without credit card debt. Therefore, Hypothesis 6 was supported since respondents with less credit card debt were more likely to report positive financial behavior outcomes than respondents with high credit card debt. In fact, Soldiers with any credit card debt had significantly worse financial behaviors than Soldiers with no credit card debt.

Having a greater amount of emergency savings had a statistically positive association with better financial behaviors, thereby confirming Hypothesis 5. Soldiers with less than \$500 in an emergency savings fund were not statistically any different than Soldiers who had no emergency savings funds ($b = 0.07$). Respondents with emergency savings funds from \$501 to \$1,000 ($b = 0.18, p < .05$), \$1,001 to \$2,000 ($b = 0.39, p < .001$), and \$2,001 or more ($b = 0.39, p < .001$) reported more positive financial behaviors than Soldiers with less than \$500 of emergency savings funds. An interesting distinction in these results, though, is that Soldiers who had less than \$500 in an emergency savings fund were not statistically different from Soldiers who had no money saved in an emergency savings fund. Soldiers with \$501 to \$1,000 in an emergency fund had somewhat better financial behaviors than Soldiers with no money saved, but Soldiers with \$1,001 or more saved had significantly better financial behaviors than Soldiers with no money saved.

Environmental Factors. No environmental factors, including having prior deployments, were statistically significant predictors in this model. Therefore, Hypotheses 8 and 9 were not supported given the lack of statistical significance. This indicates that utilizing communication

sources to speak about one's personal financial matters did not have an impact on financial behavior outcomes in the current study using the methods indicated. Also, the results indicated that there was not a significant relationship with financial behavior outcomes based on deployment history.

Control Variables. Only two control variables in this research had statistical significance with the financial behaviors of Soldiers. Single Soldiers, including divorced and separated, reported more negative financial behaviors than married Soldiers ($b = -0.12, p < .05$). Having dependents was not significantly associated with Soldiers' financial behaviors in this model. Rank, as a proxy for income, was not statistically associated with financial behaviors, except for sergeants and staff sergeants (E5 to E6). This group reported more positive financial behaviors ($b = 0.20, p < .05$) than privates (E1 to E2). No other rank had a significant relationship with financial behaviors. The full results are displayed in Table 3.8.

Table 3.8

Regression Results Predicting Positive Financial Behaviors of Soldiers (N=701)

Predictor Variables	<i>b</i>	SE β
<i>Personal Factors</i>		
Age	-0.002	-0.01
Caucasian	-0.07	-0.04
Higher subjective financial knowledge	0.15***	0.18
Internal locus of control	0.17***	0.21
Lower financial anxiety	0.29***	0.35
<i>Past Behaviors</i>		
Credit card debt (reference = \$0)		
\$1 to \$1,000	-0.17**	-0.08
\$1,001 to \$2,500	-0.41***	-0.17
\$2,501 to \$5,000	-0.49***	-0.18
\$5,001 and above	-0.71***	-0.27
Emergency savings funds (reference = \$0)		
Less than \$500	0.07	0.04
\$501 to \$1,000	0.18*	0.09
\$1,001 to \$2,000	0.39***	0.14
\$2,001 or more	0.38***	0.18
<i>Environmental Factors</i>		
Sources (reference = talked to no sources)		
Talked to one source	-0.003	-0.002
Talked to multiple sources	-0.02	-0.01
Previous deployments	-0.08	-0.05
<i>Control Variables</i>		
Single	-0.12*	-0.07
One or more dependents	-0.04	-0.02
Rank (reference E1 to E2)		
E3 to E4	0.07	0.04
E5 to E6	0.20*	0.11
E7 to O-2	0.14	0.04
O3 and above	0.07	0.01

Note. Model *F* value = 36.48***; $R^2 = 0.54$; * $p < .05$, ** $p < .01$, *** $p < .001$

Discussion

In summary, the results of this study have shown several important relationships. Some of the most significant findings from this study included the connection between past behaviors and future financial behavior outcomes. Age and ethnicity were not found to have a significant relationship with financial behaviors in this model. This is in keeping with the previous financial behavior literature, which has shown mixed results for these variables (Grable & Joo, 2006; Joo et al., 2003; Worthy et al., 2010).

Three of the five personal factors did have a significant relationship with financial behavior outcomes, including financial knowledge, locus of control, and financial anxiety. The current study found that Soldiers who reported greater financial knowledge also reported better financial behaviors outcomes, which has also been shown in other research (Danes et al., 1999; Hilgert et al., 2003; Perry & Morris, 2005). This finding supports increasing financial education for Soldiers as has been done with previous military research (Bell et al., 2009) in order to increase their financial knowledge and ultimately improve their financial behaviors. Soldiers who had more of an internal locus of control were also more likely to report better financial behavior outcomes than Soldiers with an external locus of control. Other research has shown that those with an internal locus of control are more likely to report better financial behaviors (Legge & Heynes, 2009; Norvilitis et al., 2003; Perry & Morris, 2005; Wang et al., 2011). Also in keeping with prior research (Loibl et al., 2010), the current study found Soldiers with high levels of financial anxiety were more likely to report worse financial behaviors than Soldiers with lower levels of financial anxiety.

When looking at past behaviors, the current study found that Soldiers who had credit card debt, regardless of the amount, were more likely to report more negative financial behavior

outcomes in the future. This finding is in keeping with prior research that has shown that poor credit card management and debt is more likely to create future financial problems (Grable & Joo, 2006; Rutherford & DeVaney, 2009). Also, Soldiers who had some financial emergency savings, at least \$500 or more, were more likely to report better financial outcomes in the future. This too is in keeping with past research, which has shown that good savings behaviors increase positive financial behaviors (Bhargava & Lown, 2006; Loibl et al., 2010; Rha et al., 2006). This underscores the importance of starting positive financial behavior habits in order to avoid poor future financial behaviors.

None of the environmental factors, including having a financial discussion with close acquaintances, were statistically significant predictors in this model. Previous research has shown that financial discussions did not have a significant effect on financial behaviors (Garrison & Gutter, 2010), but it does have effect on financial knowledge (Shim et al., 2009). Part of the lack of significance for this variable could be due to the wording of the question instead of the actual environmental influences. The environmental factor of having prior deployments was also not significant in the current study. This finding further supported previous research (U.S. GAO, 2005), which showed that the financial behaviors of deployed service members were similar to service members who have not deployed. Even though environmental factors were not significant in the current study, this construct should not be eliminated from the model.

Only two control variables in the current research had statistical significance with financial behavior outcomes and should be considered. Soldiers who were married reported better financial behavior outcomes than Soldiers who were single. This could be due to the fact that service members who are married feel greater responsibility to be more responsible with

their money since they have a spouse that relies on the service member's financial resources. It was interesting that having dependents was not statistically significant with financial behaviors. Future research should further investigate the interaction of both marital status and having financial dependents with financial behaviors since the lack of significance could be data specific. As far as rank is concerned, the only statistically significant interaction with financial behavior outcomes was between sergeants and staff sergeants (E5 to E6) who reported more positive financial behavior outcomes than privates (E1 to E2). This finding could be due to the fact that usually sergeants and staff sergeants (E5 to E6) are the direct supervisors of privates (E1 to E2). Sergeants and staff sergeants (E5 to E6) also earn more pay than privates who have a more limited monthly discretionary income. Using social learning theory as a framework, the results from the current study conclude that both personal factors and past behaviors play an important role in financial behavior outcomes with a potential influence from environmental factors if the variable is accessed well.

The current study adds to the current body of knowledge on military financial behavior. According to this research, the most important factors to consider when looking at the financial behaviors of service members are past behaviors and personal factors. The research clearly shows that Soldiers with better past behaviors (i.e., less credit card debt and more emergency financial savings) were more likely to have better future financial behaviors. Also, Soldiers with more financial knowledge, less financial anxiety, and more of an internal locus of control are likely to have better financial behaviors. Researchers will find this is in keeping with other financial behavior literature using other demographic samples. Other interesting findings included the fact that neither age nor rank had a significant relationship with financial behaviors. This also means that income does not have a significant relationship with financial behaviors

since rank and basic pay income are directly correlated (Green, 1970). For military leaders and service providers, this underscores the importance of changing the current stigma that financial problems are only within the young enlisted ranks. It also emphasizes the importance of teaching financial principles to all ranks at all stages of the military life cycle. Financial planners, counselors, and service providers who work with military can use this research to specifically target service members who are more likely to need specific financial help, such as those with poor past financial behaviors and who have more of an external locus of control or higher financial anxiety. The current study helps address several factors that have been shown to impact personal financial behaviors in order to better identify service members who are in the most need of financial help.

Implications. The current study has implications for both the Army and the field of personal finance. The results indicated that Soldiers with more financial knowledge were more likely to have better future financial behaviors. This result supports the need to educate service members on personal finance topics in order to improve financial behaviors. Financial education programs should emphasize preventative instead of remedial services. Preventative education programs can be a key factor in helping improve future financial behaviors or even avoid poor financial behaviors before the choice is made. It is important that the education has a very specific focus, including detailed goals, matrices, and empirical data to monitor the quality of education and individual improvement over time.

The importance of locus of control in the current study emphasized the need for personal responsibility and accountability of personal financial choices of the service member. Soldiers who had a higher internal locus of control were more likely to have more positive financial behavior outcomes. Although locus of control is not necessarily manipulated or controlled by the

individual, it is important that a financial planner or counselor is aware of the pre-deposition of the service member, whether he or is more externally or internally driven. This will allow the financial planner or counselor give appropriate recommendations to the service member based on his or her locus of control. This will increase the possibility that the advice or recommendations will be adhered and ultimately, the behavior altered.

The results also suggest that higher financial anxiety leads to worse financial behaviors. Therefore, it is important that a financial counselor or planner recognize the anxiety a service member may experience surrounding financial matters. The financial counselor or planner should then incorporate stress reduction techniques or other skills into the meetings when a financial plan or recommendations are being discussed. One might even consider incorporating a licensed therapist to assist with the financial planning or counseling meetings in order to help reduce anxiety individuals may experience surrounding money. Military leaders and service providers can also help in improving financial anxiety by providing access without penalty. These leaders should encourage service members to seek and receive the help that is needed in order to minimize their financial anxiety and have better financial behaviors.

Past financial behaviors have also been found to be a predictor for future financial behaviors. This finding implies that service members should have more positive past financial behaviors in order to have better future financial behavior outcomes. This implication can be tied to understanding good financial practices early on in order to avoid negative habits later. In order to improve future behavior, a service member must learn how to improve past financial behavior or avoid negative financial behaviors. Implications also include that future research should also look at the influences that environmental factors may have on financial behaviors even though in the current study, these factors were not statistically significant.

Limitations. This study was not without limitations. In this study, only infantry Soldiers were surveyed. Therefore, the applicability is limited to only this category of service members. Also, data with military spouses was not obtained, and therefore, a more holistic view of financial management, preparation, and behaviors of military families was not studied. As indicated earlier, the number of higher ranking officers was very limited in this data collection and the ability to distinguish between ranks was limited.

Several questions elicited a subjective response instead of an actual numerical data point of the Soldier's financial picture. Specifically, financial knowledge and financial behavior questions were asked subjectively. The data only contains what the Soldiers reported they know or how they behave with money instead of an actual financial number or score. Finally, this survey was distributed shortly before the Soldiers deployed. Given the short time range before deployment, it could be that some Soldiers were not focused on their personal finances and were instead preparing for heading into a war zone and saying goodbye to family.

Future Research. Future studies should survey a military audience across Service branches to include: Air Force, Navy, and Marine Corps samples. Careful consideration of surveying all ranks, including higher ranking officers, should be made in order to provide a more generalized comparison across the military rank system. Rank should be carefully measured in order to ensure the data is comparable across ranks and income brackets. For example, it would be important to separate out warrant officers from higher enlisted Soldiers or from the other officers. Future studies should also consider surveying other job functions (military occupational specialty [MOS]) within the Army or other Service branch for comparable data across MOS and branch. Finally, future studies could consider also collecting data on military spouses in order to gain a more holistic view of a military family's personal financial matters. An emphasis on

improved financial behaviors to reduce strain and increase job performance should be continued in future research.

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Chapter 4 - In Charge or Discharged? Comparing the Financial Behavior Outcomes between College Students and Soldiers

Introduction

College students and military populations share similar characteristics relating to their financial lives. College students have been found to be at particularly high risk for financial problems and are particularly vulnerable to financial crises (Henry, Weber, & Yarborough, 2001; Joo, Grable & Bagwell, 2003; Worthy, Jonkman, & Blinn-Pike, 2010). Studies have also shown that military personnel are also susceptible to financial problems (Bell, Gorin, & Hogarth, 2009; Tiemeyer, Wardynski, & Buddin, 1999; Varcoe, Lees, Wright, & Emper, 2003). In the Financial Industry Regulatory Authority's [FINRA] (2009) national financial capability study, almost half of Americans reported they have saved enough funds in an emergency account to cover three months of sickness, job loss, or other emergencies. However, only 31% of respondents in the 18 to 29 age group reported saving money for an emergency (FINRA, 2009). According to the FINRA (2010) military study, over a third of military respondents had trouble keeping up with their monthly expenses and bills and less than half had saved enough funds set aside to cover three months of living expenses.

The financial behaviors of these two susceptible groups are of particular interest because of the overlapping characteristics, such as being young, single, and having fewer dependents. Military members exhibiting poor financial behaviors can find these behaviors limit their future career (FINRA, 2010). Similarly, college students who incur high levels of debt are less likely to complete college (Dwyer, McCloud, & Hodson, 2012), thus impacting their career prospects as

well. Financial behaviors of college students, particularly credit card debt, has shown that early interventions and mentoring from parents can be impactful in a student's future financial behavior (Hancock, Jorgensen, & Swanson, 2012; Norvilitis & MacLean, 2010).

There are also important differences between the two groups, including professional desires and the day-to-day environment inherent to both populations. For example, the environment surrounding military members may include exposure to combative life threatening situations, while college students are usually not exposed to such physical danger. College students also have more human capital, such as knowledge, competencies, and personal attributes, and social capital, or economic benefit, than respondents who did not attend college (Smith, Beaulieu, & Seraphine, 1995). Both the similarities and differences in these two groups offer an intriguing research group to compare and contrast the financial behavior outcomes between these groups. The purpose of this study is to better understand the factors that influence financial behavior outcomes in these two young adult groups. Once the financial behavior outcomes for each population are understood, the research will seek to expand this understanding and compare these two populations.

Literature Review

Social learning theory (Bandura, 1977; Rotter, 1954) is one type of many learning theories, which are used to explain and modify behavior (Rosenstock, Strecher, & Becker, 1988). Social learning theory is unique due to the guiding belief that personality is learned and new behaviors are acquired by watching another where the behavior is reinforced (Bandura & Walters, 1963).

Within the framework of social learning theories, Rotter (1954) and Bandura (1977) are two primary architects. Both theorists believed behavioral outcomes are determined by

expectancies and incentives (Bandura, 1977; Rotter, 1954). Expectancies can be divided into three primary groups: (a) expectancies of the individual's competence to perform the behavior needed to influence outcomes (i.e., locus of control), (b) expectancies about the consequences of one's own actions (how individual behavior influences outcomes), and (c) expectancies about environmental clues (beliefs about how events are connected) (Rosenstock et al., 1988). Social learning theory utilizes three primary factors that drive future outcomes, which are: (a) personal factors, (b) past behaviors, and (c) environmental factors (Bandura, 1977). These three factors are interdependent with each factor influencing the others, whereby the interplay of these factors produce an outcome (Bandura, 1977) (see Figure 4.1). The other determination is incentives, or reinforcement, which is recognized in the value of the specific outcome (e.g., health status, physical appearance, economic gain) (Rosenstock et al., 1988). Outcome expectations are the expected positive or negative outcomes that an individual's actions will produce (Bandura, 2004). This paper uses a combination of both Rotter's (1954) and Bandura's (1977) social learning theories due to Rotter's (1966) unique use of the concept of locus of control and Bandura's (1986) use of cognition within the learning theory framework.

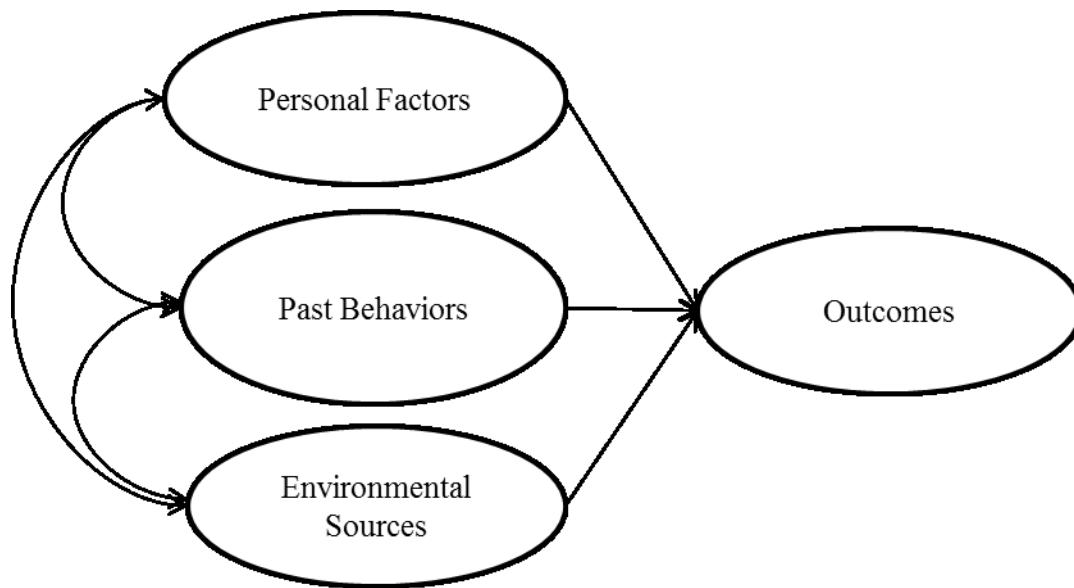


Figure 4.1 Conceptual framework

The following sections outline the three concepts of social learning theory as they relate to the financial behavior outcomes of college students and military personnel.

Personal Factors. Personal factors include demographic factors, wherein these factors influence thoughts, feelings, and beliefs (Bandura, 1986). These factors also include cognitive processes which are acquired, such as knowledge, expectations, and attitudes, as well as innate biological properties, including physical state, sensory, and neural systems (Bandura, 1986). More specifically, personal factors influence how a person recognizes experiences (Bandura, 1977). Bandura and Rotter believed that in order to change, individuals must believe that they are personally capable of making the change (Bandura, 1997; Rotter 1954). Bandura’s (1986) idea of knowledge as a precondition to change (Bandura, 2004) became so prominent that he renamed his theory to “social cognitive theory.”

Personal control is another complex concept that may exert influence over financial behaviors. Personal control is central to the cognitive process of behavior change, and it plays a pivotal role in social learning theory. Bandura (1997) stated, “People have always striven to

control the events that affect their lives. By exerting influence in spheres over which they can command some control, they are better able to realize desired futures and to forestall undesired ones” (p. 1-2). Personal control motivates aspirations and outcomes expected for one’s efforts (Bandura, 1997).

Rotter’s primary contribution to social learning theory came through the concept of locus of control (Rotter, 1966). Locus of control (Rotter, 1966) is known as perceived control—the control a person feels like she or he has over the situation. In order for individuals to feel in control of their life, one’s physiological state plays a role since it “informs the individual, correctly or not, that he or she is not capable of performing or maintaining a given action—or success in eliminating negative affect” (Rosenstock et al., 1988, p. 180). Finally, anxiety has become a key component of the psychological state (Rosenstock et al., 1988), and therefore, affects the cognitive processes. The financial behavior literature has shown that personal factors, such as age, gender, ethnicity, financial knowledge, locus of control, and financial anxiety, have relationships with financial behaviors.

Age. Age has been found to play a significant role in money management and financial behaviors, but it has had mixed results for determining its effect on financial behaviors. Some studies have shown age to be positively correlated with specific financial behaviors. When studying the emergency fund adequacy of households, Bhargava and Lown (2006) found that age was an indicator of respondents who were more likely to meet the savings guidelines. In a study of college students, Henry et al. (2001) found that non-traditional students (ages 36 to 40) were more likely to have and follow a budget than respondents in other age categories. Other college student research has found that age was not significantly related to financial behaviors (Grable & Joo, 2006; Joo et al., 2003). Other researchers found age to be significantly related to financial

behaviors, where older college students, over the age of 25, had a higher number of problematic financial behaviors than younger students (Worthy et al., 2010).

When looking at other populations, research has found that financial savings followed a bell-shaped curve: starting off slow, gaining momentum over the years, peaking mid-range, and then trailing off in the older years (Yuh & Hanna, 2010). In fact, the researchers found younger households (younger than 30) are more likely to report financial savings than older households (Yuh & Hanna, 2010). Another study showed respondents least likely to be saving were respondents between the ages of 45 to 54 when compared to households under the age of 35 (Rha, Montalto, & Hanna, 2006). If a household began saving early and as they near or exceed their financial savings target, the household may discontinue new contributions to savings (Rha et al., 2006). Research in regards to age has been somewhat mixed, but it has shown that savings peaks well before retirement and during the heaviest earning years.

Gender. From a financial behavior perspective, literature shows that gender can play a role in financial matters. In fact, research has shown that males have better financial behaviors than females (Fisher, 2010; Rha et al., 2006; Worthy et al., 2010; Yuh & Hanna, 2010). Research has shown that women are less likely to save in the short term if they were in poor health, whereas poor health did not affect short-term savings of men (Fisher, 2010). In other research, financial concerns for women were twice as likely to affect their work performance and women were also twice as likely to report buying without need than men (Hira & Mugenda, 2000). In a study sampling college students, female students tended to have more problematic financial behaviors than male students (Worthy et al., 2010). Finally, studies have shown that single female households are less likely to report saving than single male households and married

households (Rha et al., 2006; Yuh & Hanna, 2010). Therefore, the financial behavior research has shown that females tend to have more problematic financial behaviors than males.

Ethnicity. The personal factor of ethnicity has also been shown to be correlated with financial behavior outcomes. Research has shown that Caucasian populations are more likely to exhibit positive financial behaviors than other races. Specifically, respondents in white households were more likely to save than members of households of other races (Bhargava & Lown, 2006; Rha et al., 2006; Yuh & Hanna, 2010). In studying college students, Grable and Joo (2006) found that African American students held higher credit card debt and were more likely to engage in problematic financial behaviors than non-Hispanic white students. However, Worthy et al. (2010) found no relationship between ethnicity and financial behaviors. Most research has shown that if ethnicity is a predictor in financial behaviors, then usually Caucasian populations are more prevalent savers than other ethnicities.

Financial Knowledge. Social learning theory hypothesizes that knowledge and personal control serve as the foundation for behavior change to occur (Bandura, 1977). In studying high school students, research has shown that greater financial knowledge and personal control were positively correlated with desirable financial behaviors (Danes & Haberman, 2007), which verified the earlier research that showed an increase in financial knowledge and better financial behaviors (Danes, Huddleston-Casas, & Boyce, 1999). The characteristic of financial knowledge alone has been shown to lead to better financial behaviors (Hilgert, Hogarth, & Beverly, 2003; Perry & Morris, 2005). Although much research has correlated better financial behaviors with increased financial knowledge, other research has shown financial knowledge does not always guarantee better financial behaviors. For example, after completing a personal financial management course, a survey of high school students found that respondents who completed the

course were no more financially literate than respondents who had not (Mandell & Klein, 2009). Another study of college students who had credit card balances found that respondents with more financial knowledge had higher credit card balances (Robb & Sharpe, 2009). This research underscores the complex relationship between subjective financial knowledge and financial behavior outcomes.

Locus of Control. Locus of control has been researched to help understand predictors of financial behaviors. Individuals with an internal locus of control are more likely to view an event as a result due to their own behavior or action; whereas, individuals with an external locus of control are much more likely to view the event as a result of luck, fate, chance, unpredictability, or the actions of others (Rotter, 1966).

Much of the research, thus far, has centered on understanding the relationship between locus of control and debt behaviors. One study found that a college student's locus of control was positively associated with his or her attitude toward credit where respondents with a higher level of external locus of control had a more positive attitude toward credit (Joo et al., 2003). Students who had debt were more likely to have more of an external locus of control, which resulted in greater anxiety about financial matters than respondents who did not have debt (Tokunaga, 1993). Internal locus of control has also been positively associated with financial planning (McKenna & Nickols, 1986). For example, respondents engaged in retirement planning were more likely to be future oriented and feel in control of their lives (Noone, Stephens, & Alpass, 2010). Internal locus of control is also tied to greater financial independence (Into, 2003). In studying college students, researchers found students who had more of an internal locus of control have better perceived financial well-being and psychological well-being (e.g., more satisfaction with life and lower stress) (Norvilitis et al., 2003).

These findings have also been replicated internationally. In looking at revolving credit card and installment debt in China, Wang, Lu, and Malhotra (2011) found respondents with higher self-control, more internal locus of control, and higher self-efficacy were able to manage their credit card debt better and avoid carrying too much debt. In examining the indebtedness of New Zealand families, researchers found respondents with an external locus of control were more likely to be in debt (Legge & Heynes, 2009). Researchers in England also found individuals with more of an external locus of control were more likely to have problems with debt than respondents who were not (Mewse, Lea, & Wrapson, 2010). Studies with both U.S. and international populations have shown that internal locus of control is related to better financial behaviors.

Financial Anxiety. Finally, an individual's physiological state, specifically relating to anxiety, can either enhance or decrease the feeling of individual responsibility (Rosenstock et al., 1988). Perceived behavioral control has also been linked to overall psychological health (Shim, Xiao, Barber, & Lyons, 2009). Therefore, psychological state, and in particular, anxiety, is an important component when studying personal factors and their influence on financial behaviors.

When studying students, research has shown that financial anxiety was directly affected by student loans (Archuleta, Spann, & Dale, in press). Earlier research has shown that financial stress and anxiety has been linked to college student debt (Grable & Joo, 2006; Joo et al., 2003). Research has also shown respondents with debt have greater anxiety (Tokunaga, 1993) and respondents with less financial strain had more positive financial behaviors (Loibl, Grinstein-Weiss, Zhan, & Red Bird, 2010). Specifically, respondents who have the ability to cope with financial strain and to envision the future are more likely to build savings (Loibl et al., 2010).

Financial anxiety, as a proxy for psychological state, should be addressed to determine the effect on financial behavior outcomes.

Personal factors play a vital role in behavioral outcomes, but they do not operate alone. Given the interaction of expectations, beliefs, self-perceptions, goals, and intentions that give shape and direction to behavior (Wood & Bandura, 1989), personal factors influence both environmental factors and behaviors, thereby, ultimately influence outcomes.

Past Behaviors. Behavior, which consists of actions, habits, skills, and practice, has a direct effect on the environmental influence or conditions for the behavior and personal factors that are developed and activated (Bandura, 1977). A person's motivation to engage in a certain behavior is directly correlated on the perceived outcome of that behavior (Lefcourt, 1976). Past behaviors are an antecedent to the experiences individuals have in their lifetime (Bandura, 1977) and influence the outcome behavior (Lefcourt, 1976; Rotter, 1954). Past behaviors have been found to be a predictor of variance in intentions and future behavior (Conner & Armitage, 1998). These influences are so strong that marketing experts and merchants have successfully used past consumer transaction data to predict future spending based on previous spending (Lazarus et al., 2002). Honing in on financial behaviors, the literature shows that past financial behaviors, specifically credit card debt, have an influence on future financial behaviors (Joo et al., 2003; Worthy et al., 2010; Xiao & Wu, 2008).

Credit Card Debt. Credit card debt has been shown to influence future financial behaviors (Joo et al., 2003; Xiao & Wu, 2008). Both the student and military populations have been shown to have high levels of credit card debt (FINRA, 2010; Henry et al., 2001). Credit card debt has also been shown to have an effect on credit card attitudes in college students; more specifically, college students who had credit cards had a more positive attitude towards credit

(Joo et al., 2003). Research studying college students has shown that credit card debt is related to negative financial behaviors, in particular money management behaviors (Grable & Joo, 2006). Making late payments on a credit card is a determinant in who is more likely to have a revolving balance on a credit card (Rutherford & DeVaney, 2009).

Researchers have also found that future financial problems are created by past problematic financial behaviors (Worthy et al., 2010), including compulsive buying that leads to credit card debt among college students (Joireman, Kees, & Sprott, 2010). Military service members also have higher amounts of credit card debt than civilians (FINRA, 2010). Almost 41% of service members had at least \$5,000 on their credit cards and 10% had \$20,000 or more; nearly half of the military respondents with credit cards indicated they paid sizeable interest payments and/or fees (FINRA, 2010).

The influence of credit card debt is important to consider when studying the relationship between past behaviors and future financial behavior outcomes. Behavior alters environmental conditions by determining which of the many potential environmental influences will come into play and what forms they will take (Wood & Bandura, 1989).

Environmental Factors. Environmental factors, or socialization, also influence outcomes since individuals learn rapidly by watching another person, thus reinforcing a behavior (Bandura, 1963). An individual learns vicariously through observation and modeling (e.g., imitating) the environmental factors surrounding them (Bandura, 1997). Although the environment has an influence on an individual, ultimately, human behavior is determined, at least partially, by the individual and not solely by the environment surrounding them (Bandura, 1997). In fact, Bandura (1997) argued that environment is multifaceted, and humans adapt to aspects of the environment they like and strive to change the ones they do not. It is through

acquirable skills, such as greater foresight, proficiency, and means of self-influence, that individuals are better able to achieve what they want. Therefore, a person is both an agent of change and a responder to change (Bandura, 1997). The environment includes both the physical and sociocultural environments surrounding the individual, and it provides opportunities and social support from relationships with family, friends, peers, and co-workers (Bandura, 1997). Since a key component of environmental influences includes communication with friends, peers, and co-workers, it is important to consider communication sources as an environmental factor that influences financial behavior outcomes.

Communication Sources. From a financial behavior perspective, literature shows that parental behaviors, attitudes, and expectations are related to the children's financial behaviors and attitudes (Worthy et al., 2010). Financial education, taught both at home and school, has been found to play an important role in the way young adults gain financial knowledge (Shim et al., 2009). Other studies have researched social learning opportunities through the context of exposure to observations and discussions of financial matters with parents and peers (Garrison & Gutter, 2010). Discussions of money with parents and peers had a significant effect on willingness to take on financial risk, while simply observing financial behaviors of parents and peers did not (Garrison & Gutter, 2010).

A study of college students who carried credit card debt found that students who had parents that argued about finances were more likely to have higher levels of credit card debt and more credit cards (Hancock et al., 2012). For students, parents have been found to play a vital role in socialization regarding credit card knowledge (Norvilitis & MacLean, 2010). In fact when studying first-year college students, it has been shown that a parent's influence on financial learning, attitude, and behavior is more substantial than work experience, a high school financial

education course, or a combination of the two (Shim et al., 2009). Students whose parents avoided talking about finances were more likely to have problematic credit card use (Norvilitis & MacLean, 2010). College students of parents who used credit cards had a more positive attitude towards credit, and students whose parents had credit related problems tended to have a more negative attitude towards credit (Joo et al., 2003).

The influence of parents is obviously an important environmental influence, but other studies have shown that other influences matter as well. Subjective norms, consisting of one's beliefs about whether significant others think that one should engage in the behavior, have also been found to be significantly related with financial behaviors (Rutherford & DeVaney, 2009). The influence of social norms was observed by Roberts and Jones (2001), who found students were more likely to buy on impulse, especially using credit cards.

In the military, research has shown that an individual is shaped by the community in which they participate (Mancini, Bowen, & Martin, 2005). There is a lack of research that looks at the military community and its effect on financial behaviors. The hope is that the current research will begin to lay the foundation for more work in this community surrounding the effects of environmental influences on financial behaviors. The interaction of these three factors – personal, environmental, and past behaviors – produces an outcome according to social learning theory (Bandura, 1977). This research will look at the interplay of these three factors, personal, behavioral, and environmental, and their influence on financial behavior outcomes.

Financial Behavior Outcomes. Financial behavior has been broadly defined in the literature to include many different types of behaviors related to personal finance. Xiao (2008) defined financial behavior as “any human behavior that is relevant to money management” (p. 70). Many common financial behavior definitions include budgeting and spending habits (Britt,

Grable, Goff, & White, 2008; Henry et al., 2001; Hira & Mugenda, 2000; O'Neill, Sorhaindo, Xiao, & Garman, 2005; Xiao & Wu, 2008), credit (Grable & Joo, 2006; Joo et al., 2003; Rutherford & DeVaney, 2009), and savings behavior (Bhargava & Lown, 2006; Fisher, 2010; Loibl et al., 2010; Rha et al., 2006; Yuh & Hanna, 2010). Financial behavior has also been described in terms of investment behavior and decisions, including risk tolerance (Bailey & Kinerson, 2005; Gunay & Demirel, 2011). Although each of these behaviors can be individually defined as financial behaviors, other studies have utilized a combination of these topics to relate financial behavior as a whole instead of a single individual behavior (Garman, Leech, & Grable, 1996; Hilgert et al., 2003; Perry & Morris, 2005; Worthy et al., 2010). For purposes of this paper, financial behavior outcomes are defined primarily as money management behaviors.

Summary. In summary, research surrounding age and financial behaviors has been mixed (Henry et al., 2001; Rha et al., 2006; Yuh & Hanna, 2010). Studies have shown that males are more likely to have better financial behaviors than females (Fisher, 2010; Hira & Mugenda, 2000; Rha et al., 2006; Worthy et al., 2010; Yuh & Hanna, 2010). In terms of ethnicity, Caucasian respondents have been shown to have better financial behaviors than other ethnic groups (Bhargava & Lown, 2006; Grable & Joo, 2006; Rha et al., 2006; Yuh & Hanna, 2010). Respondents with more financial knowledge are more likely to have better financial behaviors (Bell, et al., 2009; Danes, et al., 1999; Hilgert et al., 2003; Perry & Morris, 2005). When studying locus of control, respondents with a more internal locus of control are also expected to have better financial behaviors (Joo et al., 2003; Legge & Heynes, 2009; Mewse et al., 2010; Norvilitis et al., 2003; Wang et al., 2011). Higher financial anxiety has been found to have a negative impact on financial behaviors (Archuleta et al., in press; Loibl et al., 2010; Tokunaga, 1993). Past behaviors, specifically higher credit card debt, is expected to have a negative

relationship with financial behaviors (Grable & Joo, 2006; Joo et al., 2003; Joireman et al., 2010; Rutherford & DeVaney, 2009; Worthy et al., 2010; Xiao & Wu, 2008). Finally, environmental factors, in particular more communication sources, are expected to have a positive relationship with financial behavior outcomes (Garrison & Gutter, 2010; Hancock et al., 2012; Norvilitis & MacLean, 2010; Shim et al., 2009; Worthy et al., 2010).

Hypotheses. To address the research questions of what factors impact financial behavior outcomes, eight hypotheses were developed for the combined sample within the framework of social learning theory, specifically the interaction of financial behavior outcomes with personal factors, environmental factors, and past behaviors (see Table 4.1). Each hypothesis was also supported from the financial behavior research. They are as follows:

(1) Personal Factors

H₁: Age is expected to have a mixed effect on financial behavior outcomes.

H₂: Male respondents are more likely to report better financial behavior outcomes than female respondents.

H₃: Caucasian respondents are more likely to report positive financial behavior outcomes than other ethnic groups.

H₄: Respondents with higher levels of subjective financial knowledge are more likely to report positive financial behaviors outcomes than respondents with lower levels of subjective financial knowledge.

H₅: Respondents with an internal locus of control are more likely to report more positive financial behavior outcomes than respondents with an external locus of control.

H₆: Respondents with low levels of financial anxiety are more likely to report more positive financial behavior outcomes than respondents with high levels of financial anxiety.

(2) *Past Behaviors*

H₇: Respondents with low levels of credit card debt are more likely to report more positive financial behavior outcomes than respondents with high levels of credit card debt.

(3) *Environmental Factors*

H₈: Respondents who discuss their financial matters with others (i.e., parents, peers, colleagues, resources, etc.) are more likely to report positive financial behavior outcomes than respondents who do not discuss their financial matters with others.

Table 4.1

Hypothesized Effect of Independent Variables on Financial Behaviors

Variables	Hypothesized Effect on Financial Behavior Outcomes
<i>Personal Factors</i>	
Older	+/-
Male	+
Caucasian	+
More subjective financial knowledge	+
Internal locus of control	+
Lower financial anxiety	+
<i>Past Behavior</i>	
Less credit card debt	+
<i>Environmental Factors</i>	
More communication sources	+

Methods

Data. For this study, two separately administered surveys were utilized in order to compare the financial behaviors of young adults including both Soldiers and college students. The military data was obtained through a scantron-based survey distributed in November 2010 to three infantry Army combat units shortly before deploying to a war zone. The survey was conducted within a single command and approval was given by the unit commander. This 50 question survey included demographic characteristics, financial behaviors, subjective financial knowledge, and locus of control information among other questions (see Appendix C). The survey was administered to 825 Soldiers with 701 surveys returned and deemed usable⁸, which is a response rate of 85%. This data set was then limited to include only respondents under the age of 30. This allowed for a more comparable sample to the student population. Also, only Soldiers who had not deployed were used in order to give a complimentary comparison in the student population since students do not deploy to war zones like Soldiers do. The final dataset included responses from 579 Soldiers.

The student data was collected on a mid-Western university campus to undergraduate and graduate students who had voluntarily sought financial help at the student financial counseling clinic, which is available to all students on campus. The survey was a five page questionnaire covering demographic, financial behavior, financial stress, subjective financial knowledge, financial anxiety, depression, and locus of control topics (see Appendix E). The survey was administered to 722 students with 448 surveys returned, which is a 62% response rate. After

⁸ Some respondents randomly bubbled in their responses marking responses on the answer sheet that were not a possible option on the survey, and therefore, these responses were not included in the final analysis.

eliminating incomplete surveys or respondents who were over the age of 30, the final dataset included responses from 268 students.

All surveys were conducted using the protocol approved by the primary investigator's university Institutional Review Board (IRB). The Army installation received command approval from both the Division and unit leadership to administer the survey to the Soldiers. For the study variables, the same questions were included from both samples except in specific situations as discussed below.

Dependent Variable. To quantify the dependent variable of financial behavior outcomes, the following six questions were included in both the military and the student surveys (see Table 4.2). This scale was modified from the Financial Behavior Scale (Grable & Joo, 2001), which had nine questions, with an original alpha of 0.74. For purposes of the current study, the scale only used five of the original items and added an additional question in order to test specific behaviors based on cash flow, goals, and budgets for a total of six items. All questions were scaled on a Likert-type scale ranging from "almost never" (coded 1) to "almost always" (coded 5). Total scores ranged from 6 to 30. Three negative financial behavior questions were recoded to reflect all positive financial behaviors with higher scores indicating positive financial behaviors. The Cronbach's alpha was 0.66 for these six items, indicating an alpha that meets the acceptable limit of 0.5 (Field, 2009). A principal axis factor analysis was conducted with all factors loaded onto one factor. A factor score was used instead of a summation of the items to allow for greater variability in the respondents' scores (Field, 2009).

Table 4.2

Financial Behavior Scale

I have a weekly or monthly budget that I follow. ^a
I have specific short-term, mid-term, or long-term written financial goals. ^b
I pay my credit card bills in full and avoid finance charges. ^a
I reach the maximum limit on my credit cards. (reverse coded) ^a
I spend more money than I earn. (reverse coded) ^a
I have difficulty paying bills because of not enough income. (reverse coded) ^c
<i>(Responses: 1=almost never, 2=seldom, 3=sometimes, 4=often, 5=almost always)</i>

Note: ^aOriginal question from the Financial Behavior Scale (Grable & Joo, 2001). ^bEdited question from the Financial Behavior Scale. ^cAdditional question.

Independent Variables. The three concepts of personal factors, past behavior, and environmental factors drove the selection of the variables and proxies used to measure the independent variables in the current study.

Personal Factors. Personal factors studied included age, gender, ethnicity, subjective financial knowledge, locus of control, and psychological factors. Age was measured on a continuous scale, while gender and ethnicity were measured as dichotomous variables. For the Soldier data, age and rank were significantly correlated ($r = 0.46, p < .001$); therefore, rank was not used in further analysis. Gender was coded “1” for male and “0” for female. Ethnicity was coded “1” for Caucasian respondents and “0” for all other ethnicities.

Subjective financial knowledge was studied using a series of subjective questions, which sought to understand how much an individual knew about: interest rates, credit reports, budgeting, and investing. The Financial Knowledge Scale (Perry & Morris, 2005) was used where the original scale had five questions with an alpha of 0.91. The scale used in the current study used only four of the five original questions given that the Soldier and student surveys varied slightly (see Table 4.3). These measures were reported on a Likert-type scale with five responses ranging from “nothing” (coded 1) to “a lot” (coded 5). Total scores ranged from 4 to

20, with higher scores indicating higher subjective personal financial knowledge. The Cronbach's alpha was 0.86 for these eight items, indicating good reliability. Using a principal component factor analysis, all factors loaded onto one item. Instead of summing the items for a single subjective financial knowledge score, a factor score was used to allow for greater variability in the respondents' scores (Field, 2009).

Table 4.3

Financial Knowledge Scale

How much do you know about the following?

1. Interest rates, finance charges, and credit terms.
2. Credit ratings and credit reports.
3. Managing finances.
4. Investing money.

(Responses: 1=nothing, 2=very little, 3=some, 4=a fair amount, 5=a lot)

The Pearlin Mastery Scale (Pearlin & Schooler, 1978) in its entirety was used to address locus of control in this study. The Cronbach's alpha for the Pearlin Mastery Scale has varied among different financial research studies: $\alpha = .74$ (Whitbeck, Simons, Conger, Wickrama, Ackley, & Elder, 1997), $\alpha = .84$ (Kim & Moen, 2002), and $\alpha = .88$ (Donaldson, Earl, & Muratore, 2010). The scale consists of seven questions with five of the questions being reflective of being externally driven and two questions focused on being internally driven (see Table 4.4). It was measured on a five-point Likert-type scale with responses ranging from "almost never" (coded 1) to "almost always" (coded 5). Total scores ranged from 7 to 35. The external questions were reversed coded to reflect an internal locus of control scale, with higher scores indicating more of an internal locus of control. The Cronbach's alpha for these seven items was 0.78, indicating good reliability. A principal component factor analysis was conducted and all variables loaded

onto one factor. The factor score was used instead of a summation of the items to allow for greater variability in the respondents' scores (Field, 2009).

Table 4.4

Locus of Control Questions

External Locus of Control

1. There is really no way I can solve some of my problems. (reverse coded)
2. I am being pushed around in my life. (reverse coded)
3. I am helpless in dealing with the problems of life. (reverse coded)
4. There is little that I can do to change the important things in my life. (reverse coded)
5. I have little control over the things that happen to me. (reverse coded)

Internal Locus of Control

1. I can do anything I set my mind to.
2. What happens to me in the future depends on me.

(Responses: 1=almost never, 2=seldom, 3=sometimes, 4=often, 5=almost always)

The final personal factor tested was financial anxiety, which was tested using the Financial Anxiety Scale (Archuleta, Spann, & Dale, in press). Measurement of these items was based on the DSM-IV-TR diagnostic criteria for General Anxiety Disorders. The original Financial Anxiety Scale had seven questions and an alpha of 0.94 (Archuleta et al., in press). In the current study, only four of the seven questions from the original scale were used due to space constraints and applicability to the sample (see Table 4.5).

The five point Likert-type scale had responses ranging from “never” (coded 1) to “always” (coded 5). Total scores ranged from 4 to 20. The items were reverse coded where higher scores indicated lower levels of financial anxiety. The Cronbach's alpha for these four items was 0.87, indicating good reliability. The factor analysis score was created using principal components analysis and all variables loaded onto one score. A factor score was used instead of a summation of the items to allow for greater variability in the respondents' scores measuring overall financial anxiety (Field, 2009).

Table 4.5

Financial Anxiety Scale

Question: “How often do you feel the following ways when thinking about your financial situation?”

1. I feel anxious about my financial situation.
2. I have difficulty sleeping because of my financial situation.
3. I have difficulty concentrating because of my financial situation.
4. I worry about my financial situation.

(Responses: 1=never, 2=almost never, 3=sometimes, 4=almost always, 5=always)

Past Behavior. Past financial behavior was measured by assessing the amount of credit card debt the individual carried. In the Soldier data, the variable was measured by asking how much credit card debt the participant had on a five-point categorical scale: (a) \$0; (b) \$1 to \$1,000; (c) \$1,001 to \$2,500; (d) \$2,501 to \$5,000; and (e) \$5,001 or more. For the student survey, the question asked “How much in revolving credit card debt (debt that you do not pay off at the end of the month) do you currently owe?” This was measured on a continuous scale and for statistical purposes was re-categorized to be measured on the same categorical scale as defined in the Soldier survey. Due to measurement differences on the student and Soldier surveys, the variable of emergency financial savings was not utilized in the current study.

Environmental Factor. The environmental factor used in this study assessed help seeking behaviors. The question in the Soldier survey asked if the Soldier had talked with various sources about their personal financial situation in the last 12 months. The military help sources included: (a) Army Community Service/Family Readiness programs, (b) chain of command, (c) Military OneSource, (d) Personal Financial Counselors (part of the Military Family Life Consultant program), or (e) other military personnel. Other help sources included: (a) family member/spouse, (b) friend, (c) financial advisor/planner, (d) internet, or (e) other. The variable was measured on a continuous scale with each communication source being coded as

“1” for respondents who sought help from a communication source or “0” for respondents who did not seek any financial help. These items were then summed together to give an overall score for communication sources. The final analysis categorized the information into three categories: (a) zero communication sources, (b) one communication source, or (c) two or more communication sources.

In the student survey, the environmental factor question asked how they had heard about the student financial counseling services. The items consisted of 28 options, ranging from information from a friend to academic advisor to student life to other (see Appendix E). Each option received a “1” if checked. The items were then summed together to create one communication source total score for students measured on a continuous scale. The final analysis categorized the information into three categories: (a) zero communication sources, (b) one communication source, or (c) two or more communication sources.

Control Variables. Several control variables were used in the analysis in order to control for specific demographic variables that were not tested in the model. Marital status was measured by re-categorizing the data into a dichotomous variable. The number “1” was used for respondents who were single and a “0” was used for other situations, including married, divorced, remarried, engaged, and separated. A question asking how many financial dependents, excluding the Soldier’s spouse, was included with five options from “0” to “4 or more.” A similar question was included for the students for how many financial dependents they supported. The data were then re-categorized into a dichotomous variable the coded “0” for respondents with no dependents and “1” for respondents with one or more dependents.

Income was also used as a control variable. In the Soldier data, income was assessed using the rank classification (see Appendix A). Rank has been used as a proxy for an individual’s

socioeconomic status since each rank has a narrow pay range that is achievable (Green, 1970). Military basic pay scales are directly correlated with rank and years of service (see Appendix B), allowing the use of rank as a proxy for income (Defense Finance and Accounting Service, 2010) (see Table 4.6).

Respondents' Army ranks and pay grades were segmented into five categories, where each rank was associated with its yearly salary range. Then these categories were reduced to three primary categories to make a more reasonable comparison with the student data. Therefore, the income band for privates (E1 to E2) was the first income category, which encapsulated respondents making less than \$1,617 per month. The second income category included privates first class (E3) to specialists or corporals (E4). This income category included respondents earning between \$1,617 and \$2,292 per month. The final income category included all other ranks and included anyone earning more than \$2,292 per month. The student data collected the gross income information on a continuous scale, ranging from no income to \$4,700 monthly gross income. The student income was re-categorized into the three categories used for the Soldier data described above. A majority of the students (91%) were making less than \$1,617 monthly. Another 3% earned between \$1,617 and \$2,292 per month with 6% earning more than \$2,292 every month. When considering the income between Soldiers and college students, Soldiers begin earning a substantial amount of money at an earlier age than most college students. Therefore, the income differences most often come after the student graduates and begins full-time employment, whereas Soldiers are earning money during the time when students are in school, most of the time, earning a much lower salary if any at all. Therefore, the student income data is expected to be limited when compared to Soldiers' salary ranges.

Table 4.6

Army Basic Pay Scales

<i>Army Rank Classification</i>	<i>Army Rank</i>	<i>2010 Yearly Salary Ranges</i>
Private	E-1 to E-2	\$17,400 - \$19,400
Private First Class to Specialist or Corporal	E-3 to E-4	\$20,500 - \$27,500
Sergeant to Staff Sergeant	E-5 to E-6	\$24,700 - \$41,800
Sergeant First Class to First Lieutenant	E-7 to O-2	\$31,200 - \$52,500
Captain or higher officer	O-3 or above	\$43,900 - \$145,500

Note. Based on the military basic bi-monthly pay charts (Defense Finance and Accounting Service, 2010). The survey banded the ranks together in the manner described above. Given the restrictions of the survey, these ranks are not able to be separated into individual ranks or grouped in any other order.

Data Analysis. The data analysis was completed using SAS version 9.3 statistical software. An ordinary least squares (OLS) regression was used to predict the relationship between the seven independent variables with the dependent variable of financial behavior outcome score (see Figure 4.2). There were no multicollinearity issues with the variables used in the analysis.

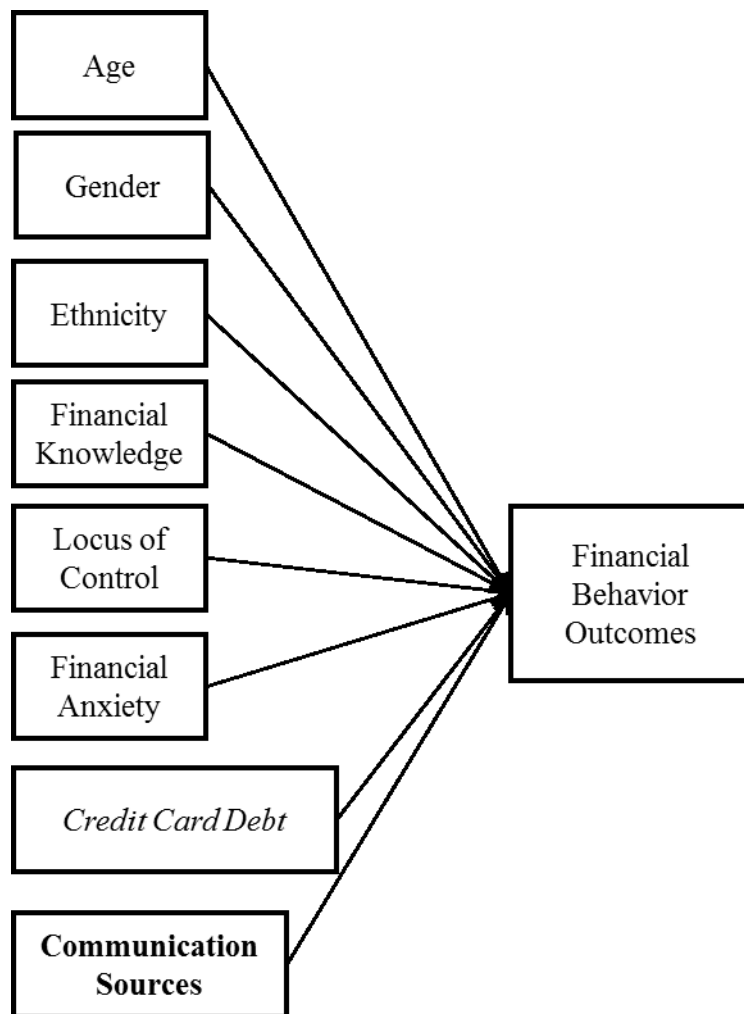


Figure 4.2 Empirical framework

Results

Descriptive Statistics. Table 4.7 contains the descriptive statistics of variables used in the multivariate analysis.

Financial Behaviors. Financial behaviors were assessed by six questions before being reduced to a factor score. Higher scores indicated a higher level of subjective psychological well-being. The average score was 22 ($SD = 4.58$; range = 8 to 30), which indicated a fairly high level of positive financial behaviors among the sample.

Personal Factors. The data was limited to only respondents between the ages of 17 to 30 in order to give a more accurate comparison between the two samples. The average age was 23 ($SD = 2.98$; range = 17 to 30). A majority of the sample was male (78%; $n = 663$) and Caucasian (73%; $n = 618$). Another personal factor was subjective financial knowledge, which was determined using four variables. Respondents with higher scores indicated higher levels of subjective financial knowledge. The average for this variable was 12 ($SD = 3.60$; range = 4 to 20). This was a moderate average of subjective financial knowledge. Locus of control was assessed by asking seven questions where higher scores indicate more of an internal locus of control. The average internal locus of control score for this sample was 30 ($SD = 4.44$; range = 11 to 35) indicating a slighter preference toward internal locus of control. The last variable used to assess personal factors was financial anxiety. This variable consisted of four questions, where a higher score indicates higher levels of financial anxiety. The average score for financial anxiety was 16 ($SD = 3.44$; range = 4 to 20), indicating fairly low levels of financial anxiety.

Past Behavior. For this sample, over 53% ($n = 450$) reported no credit card debt, which also included respondents without a credit card. Another 22% ($n = 186$) carried a credit card debt balance of \$1 to \$1,000, 10% ($n = 88$) carried a balance of \$1,001 to \$2,500, 8% ($n = 68$) carried a balance of \$2,501 to \$5,000, and 6% ($n = 55$) of the sample carried a balance of more than \$5,000 on their credit card.

Environmental Factor. Almost 19% ($n = 159$) of the sample reported accessing no communication sources regarding their financial matters. Another 44% ($n = 376$) spoke to at least one source, and 37% ($n = 312$) spoke with two or more communication sources.

Control Variables. Several control variables were included in this multivariate analysis. Over 59% ($n = 499$) of the sample were single, and 34% ($n = 288$) of the sample had one or more

dependents. Over 61% ($n = 517$) of the sample had at least some college education versus a high school education or less. Over 37% ($n = 315$) of the sample was earning less than \$1,617 gross income per month. Another 43% ($n = 367$) of the sample earned between \$1,617 and \$2,292 every month. More than 19% ($n = 165$) of the sample earned greater than \$2,292 gross income monthly. Finally, over 68% ($n = 579$) of the sample was Soldiers with the remainder being college students.

Table 4.7

Descriptive Statistics for Soldiers and Students Combined Data (N = 847)

Variables	Frequency	<i>M</i> (<i>SD</i>)	Range
<i>Dependent Variable</i>			
Financial Behaviors		21.51 (4.58)	8 to 30
<i>Personal Factors</i>			
Age		23.32 (2.98)	17 to 30
Male	78.28% (<i>n</i> =663)		
Caucasian	72.96% (<i>n</i> =618)		
Higher financial knowledge		12.22 (3.60)	4 to 20
Internal locus of control		30.06 (4.44)	11 to 35
Lower financial anxiety		15.86 (3.34)	4 to 20
<i>Past Behaviors</i>			
Credit card debt			
\$0	53.13% (<i>n</i> =450)		
\$1 to \$1,000	21.96% (<i>n</i> =186)		
\$1,001 to \$2,500	10.39% (<i>n</i> =88)		
\$2,501 to \$5,000	8.03% (<i>n</i> =68)		
\$5,001 and above	6.49% (<i>n</i> =55)		
<i>Environmental Factors</i>			
Communication Sources			
Talked to no sources	18.77% (<i>n</i> =159)		
Talked to one source	44.39% (<i>n</i> =376)		
Talked to multiple sources	36.84% (<i>n</i> =312)		
<i>Control Variables</i>			
Single	58.91% (<i>n</i> =499)		
One or more dependents	34.00% (<i>n</i> =288)		
Some college	61.04% (<i>n</i> =517)		
Monthly income			
Less than \$1,617	37.19% (<i>n</i> =315)		
Between \$1,617 - \$2,292	43.33% (<i>n</i> =367)		
Greater than \$2,292	19.48% (<i>n</i> =165)		
Soldiers	68.36% (<i>n</i> =579)		

Note. The mean and standard deviation for financial behaviors, financial knowledge, locus of control, and financial anxiety factor scores are 0 and 1, respectively.

Regression Results. An ordinary least squares regression was conducted to assess the influence of personal factors, past behaviors, and environmental factors on financial behaviors of Soldiers and college students. Results indicated that past behaviors and some personal factors influenced financial behaviors, explaining 43% of the variation in Soldiers' and college students'

financial behaviors ($F = 31.12, p < .001$). Variables with a positive coefficient indicated an increase in more positive financial behaviors, whereas a negative coefficient indicated more negative financial behaviors. The full results of the regression analysis are presented in Table 4.8.

Personal Factors. Personal factors played a significant role in the financial behaviors of Soldiers and college students. The hypothesized personal factors of age, gender, and ethnicity did not have a statistically significant association with the financial behaviors of Soldiers and college students, and therefore, Hypotheses 1, 2 and 3 were not supported. Soldiers and college students with higher levels of subjective financial knowledge reported more positive financial behaviors ($b = 0.20, p < .001$). Therefore, Hypothesis 4 was supported in that respondents with higher levels of subjective financial knowledge were more likely to report positive financial behaviors outcomes than respondents with lower levels of subjective financial knowledge. Respondents with an internal locus of control reported more positive financial behaviors ($b = 0.14, p < .001$). Results also indicated respondents with lower financial anxiety had a statistically significant increase in positive financial behaviors ($b = 0.27, p < .001$). Therefore, Hypotheses 5 and 6 were accepted given that respondents with more of an internal locus of control and lower financial anxiety were more likely to report positive financial behavior outcomes than respondents with an external locus of control or higher financial anxiety.

Past Behavior. The concept of past behaviors had the most explanatory value in financial behaviors as shown by the standardized estimates. Participants with no credit card debt had better financial behaviors compared to respondents with any level of credit card debt. Respondents with credit card debt from \$1 to \$1,000 ($b = -0.19, p < .001$), \$1,001 to \$2,500 ($b = -0.51, p < .001$), \$2,501 to \$5,000 ($b = -0.55, p < .001$), and \$5,001 and above ($b = -0.78, p <$

.001) reported worse financial behaviors than respondents with no credit card debt. Therefore, Hypothesis 7 was supported since respondents with no credit card debt were more likely to report positive financial behavior outcomes than respondents with credit card debt.

Environmental Factor. No environmental factors were statistically significant in this model. Therefore, Hypotheses 8 was not supported given the lack of statistical significance. This indicated that utilizing communication sources to speak about one's personal financial matters did not have an impact on financial behavior outcomes with the methods utilized in the current study.

Control Variables. Some of the control variables in this model had statistical significance on financial behaviors. Respondents who were single reported worse financial behaviors ($b = -0.16, p < .01$) than respondents who were married. Soldiers and college students who have dependents and some college education did not differ from respondents who did not have dependents or any level of college education. Respondents with monthly gross incomes greater than \$2,292 reported statistically better financial behaviors ($b = 0.26, p < .01$) than respondents with monthly gross incomes less than \$1,617. Respondents with gross monthly income between \$1,617 and \$2,292 were not statistically any different than respondents earning less than \$1,617. Finally, Soldiers were not statistically different in their financial behavior outcomes than were college students in this model. Table 4.8 displays the full results of the regression analysis.

Table 4.8

*Regression Results Predicting Positive Financial Behaviors of Soldiers and College Students**(N=847)*

Predictors	<i>b</i>	SE β
<i>Personal Factors</i>		
Age	-0.01	-0.04
Male	-0.11	-0.05
Caucasian	-0.01	0.01
Higher subjective financial knowledge	0.20***	0.26
Internal locus of control	0.14***	0.18
Lower financial anxiety	0.27***	0.34
<i>Past Behaviors</i>		
Credit card debt (reference = \$0)		
\$1 to \$1,000	-0.19***	-0.09
\$1,001 to \$2,500	-0.51***	-0.20
\$2,501 to \$5,000	-0.55***	-0.18
\$5,001 and above	-0.78***	-0.24
<i>Environmental Factors</i>		
Communication sources (reference = talked to one source)		
Talked to no sources	-0.10	-0.06
Talked to multiple sources	-0.03	-0.02
<i>Control Variables</i>		
Single	-0.16**	-0.10
One or more dependents	-0.04	-0.02
Some college education	0.04	0.02
Monthly Gross Income (reference = Less than \$1,617)		
Between \$1,617 and \$2,292	0.09	0.06
Greater than \$2,292	0.26**	0.13
Is a Soldier	-0.06	-0.04

Note. Model F value = 31.12***; $R^2 = 0.43$; * $p < .05$, ** $p < .01$, *** $p < .001$

Discussion

The results of the current study have offered insight into the financial behavior outcomes of Soldiers and college students. This research has highlighted that past behaviors and some personal factors are significant predictors in terms of future financial behavior outcomes. The

findings reported that age, gender, and ethnicity were not significant predictors of financial behavior outcomes, while financial knowledge, locus of control, and financial anxiety all have a direct impact on future financial behaviors. Young adults with higher levels of subjective financial knowledge were more likely to report positive financial behavior outcomes than respondents with lower levels of subjective financial knowledge. This is in keeping with prior research that also found more financial knowledge leads to better financial behaviors (Bell et al., 2009; Danes et al., 1999; Hilgert et al., 2003; Perry & Morris, 2005). Respondents with more of an internal locus of control were more likely to report positive financial behavior outcomes than respondents with an external locus of control. Previous research has also shown similar results for individuals possessing an internal locus of control (Legge & Heynes, 2009; Norvilitis et al., 2003; Perry & Morris, 2005; Wang et al., 2011). Finally, respondents with low levels of financial anxiety were more likely to report positive financial behavior outcomes than respondents with high levels of financial anxiety. Past research shows an intricate relationship between levels of financial anxiety within the context of financial behaviors (Grable & Joo, 2006; Joo et al., 2003; Loibl et al., 2010; Tokunaga, 1993).

Past behaviors were the most significant predictor for future financial behavior outcomes. Respondents with no credit card debt were more likely to report positive financial behavior outcomes than respondents with any level of credit card debt. Earlier research has shown past debt negatively affects financial behaviors (Grable & Joo, 2006; Joo et al., 2003; Joireman et al., 2010; Rutherford & DeVaney, 2009; Worthy et al., 2010; Xiao & Wu, 2008). Since this finding was a strong predictor, it is important to consider past behaviors when looking at future financial behaviors.

Finally, in the current study, the environmental factors concept was not statistically significant. This lack of significance could be due to the methodology used in this research. Questions asked on the survey may not have correctly assessed the significance of environmental factors on these populations. Past literature has shown that environmental sources, such as discussions with parents and peers, has an effect on financial knowledge and behaviors (Garrison & Gutter, 2010; Hancock et al., 2012; Joo et al., 2003; Norvilitis & MacLean, 2010; Shim et al., 2009). Future research should continue to study this variable in conjunction with financial behavior outcomes.

Some control variables in this model were significant. Single respondents were more likely to have negative financial behavior outcomes than married respondents, while having dependents was not statistically significant in this model. Respondents who had monthly gross income above \$2,292 did have a significantly positive relationship with better financial behavior outcomes than respondents making less money. Most of the sample earning over \$2,292 per month were Soldiers, since less than 6% of the student sample was earning this amount of income. It is interesting to note that when comparing the variable of being a Soldier versus a college student there was not a statistically significant relationship with financial behavior outcomes. Higher levels of education also did not have a statistically significant relationship with financial behavior outcomes. Future research should continue to explore the relationship and these variables since the limitations could be data specific.

It is important to note that age, gender, ethnicity, educational attainment, having dependents, and in this case, even talking to others about their financial situation, did not have an impact on financial behavior outcomes in the current study. It is especially important to note that there was not a statistical difference between the financial behaviors of Soldiers or college

students. Instead, the results suggest that these financial issues are typical among the young adult population and if wanting to improve financial behaviors, one should focus on gaining more financial knowledge, reducing financial anxiety, and improving past financial behaviors.

Although some factors, such as locus of control, one is not able to change, these factors should be noted when a financial planner or counselor is working with a young adult since it seems to have an effect on financial behavior outcomes. Being married and having more income can also be variables that change over time and should be considered when speaking with a young adult on financial matters.

Implications. The current study has many possible implications for the college and military community as well as policy makers and respondents who serve both communities. First of all, this research shows the need to know a client's past behaviors and some personal factors in order to provide better financial advice and recommendations. Given the significance of financial knowledge and its effect on financial behavior outcomes, this research also emphasizes the importance for policy makers to further increase both the breadth and depth of financial education that is offered in school systems and work environments. It is important to note that only increased financial knowledge improved financial behaviors, not education itself. Financial knowledge is important to improve in order to give young adults the education they need to be financially successful.

When a financial planner or counselor speaks with a young adult regarding his/her financial situation, it is important to understand the locus of control and financial anxiety that the individual is experiencing. Even though locus of control cannot be manipulated or controlled, it is important to recognize this variable when discussing personal financial matters with the young adult. This understanding will help the professional to be able to communicate the needed action

in order to help the individual with their financial situation. The research also emphasized the importance of helping a client decrease their level of financial anxiety to improve financial behaviors. A new area of interest, entitled financial therapy, mixes financial planning and counseling practices to include therapy in order to decrease the level of financial anxiety an individual experiences. Financial therapy involves financial planners and counselors using a variety of therapy techniques to help clients decrease stress and/or anxiety. A decrease in anxiety has been shown to help improve financial behaviors (Loibl et al., 2010).

Since a person's past behavior is indicative of their future behavior, it is important to recognize that in order to help individuals improve future financial behaviors, they must first break past behaviors and habits. Past literature has shown that poor credit card management and debt is more likely to create future financial problems (Grable & Joo, 2006; Rutherford & DeVaney, 2009). It is important to start positive financial behaviors early, especially the habit of avoiding debt. These necessary behavioral changes are needed to get the young adult on solid ground for better future financial behaviors.

For researchers interested in either military or student populations, the current study adds to the current body of knowledge on the factors that impact financial behavior. Consistent with the prior study, the factors that had the most impact on financial behaviors of young adults are past behaviors and personal factors. Past behavior, such as having less credit card debt, was shown to be a significant predictor of young adults who were more likely to have better future financial behaviors. Young adults with more knowledge, less financial anxiety, and more of an internal locus of control were also more likely to have better financial behaviors than others. Some of the most interesting findings included the fact that age, gender, ethnicity, having dependents, and educational attainment did not have a significant relationship with financial

behaviors. This means that service providers and others working with these populations should not use these variables to predict those with better financial behaviors. Financial planners and counselors working with this population should consider that those with more income and who are married are more likely to have better financial behaviors than others. The fact that there was not a significant relationship with Soldiers and better financial behaviors also shows that one cannot distinguish better financial behaviors between Soldiers and college students. The research does indicate that having more financial knowledge is an important factor when trying to improve financial behaviors. Therefore, educators and counselors should emphasize financial education with young adult populations. The current study adds to the body of empirical evidence showing what factors impact personal financial behaviors. These factors should be used to better identify young adults who are in the most need of financial help.

Limitations. The current research was not without its limitations. The military data only included infantry Soldiers at one location. It is important to study all of the Service branches in various locations and with various jobs (military occupational specialty) in order to further generalize the findings among a broader group of service members. The students in this sample were attending a state school, and therefore, most of the students were raised in the Midwest. Therefore, this sample is not necessarily representative of all college students across the U.S. The students completed the survey when they came to seek help from the student center on financial matters; therefore, the student population was self-selected whereas the Soldier data was more representative in its sampling technique. The student research was also limited due to the narrow range of income earned in comparison to the Soldier data. Future research should seek to include a broader spectrum of students and service members to give a better picture of

financial behavior of young adults in a variety of locations, with varied backgrounds, and a variety of career choices.

The environmental factors concept was not well tested in this survey. None of the environmental questions included questions about the type of parent, family, or peer influences and experiences. Also, the past behaviors concept was limited due to varying questions on both the student and Soldier surveys. Future studies should incorporate more detailed questions about social and familial influences on the respondent's environment as well as more questions about an individual's past financial behaviors.

Future Research. The current research will hopefully lead to future research that looks at a variety of young adults, including but not limited to respondents in college and other work environments. It is important to replicate this study among other Service branches in the military and in various collegiate populations in order to substantiate similar findings in various communities. For the student data, future research should use a more nationally representative sample. Future studies should also investigate other aspects of young adult behavior and the effects on one's financial matters. There are a multitude of factors that go into making a decision and therefore, future research should engage multiple factors over various time periods to enhance the financial picture that individuals experience over their lifetime. Research should also expand the research base in other career fields outside of respondents who chose a college education. These future findings can provide valuable and unique insights to the communities that serve young adults.

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Chapter 5 - Conclusion of the Financial Behaviors of Soldiers Before and After Deployment

This dissertation engaged a population that has not been well researched in terms of financial behaviors. The financial readiness of service members has been a common topic addressed by many government and military leaders (U.S. Executive Office of the President, 2011; U.S. Department of Treasury, 2010; U.S. Department of Defense [DoD], Office of the Assistant Secretary of Defense, 2012), but the empirical data to support their observations has been lacking. This research is among the first to quantify the financial behaviors of service members using data gathered from service members before and after deployment. This chapter provides a brief summary of each study, including implications, limitations, future research ideas, and final recommendations regarding the financial behaviors of service members as a whole.

Chapter Summaries

The current dissertation consisted of three essays, each with unique variables analyzing service members' financial behavior. Given the unique stressors of military life, the first essay explored the relationship between financial behaviors, financial knowledge, and financial anxiety in relation to military rank and war-time deployment status. The results suggested that financial behaviors were related to only deployment status and not rank. Financial behaviors improved after deployment, but part of this "improvement" could be attributed to the fact that the service member had more money in his pocket after deployment to meet personal and family needs than before deployment. Further research on this relationship is encouraged. Secondly, findings indicated that financial knowledge had a relationship with rank but was not necessarily related to

deployment status. There was a significant difference between the financial knowledge of privates (E1 to E2) when compared with all other rank categories. The only other significant difference evidenced specific to financial knowledge was when comparing privates first class, specialists, and corporals (E3 to E4) with their direct supervisors, sergeants and staff sergeants (E5 to E6). This finding suggests that financial literacy should be taught earlier in the military career life-cycle so that financial knowledge can have a more positive effect on the financial behaviors of all service members throughout their career. Finally, results suggested that there was a significant difference in financial anxiety before and after deployment, regardless of military rank. Financial anxiety actually decreased after deployment as opposed to before deployment. This finding could be only a temporary effect on financial anxiety since there is the potential for a honeymoon effect where the service member returns home from deployment with their deployment pays and bonuses, but then may return to their spending habits and financial anxiety similar to before deployment. The Time 2 survey was administered within weeks of the Soldiers returning home and many of the Soldiers had not taken their leave time yet. Therefore, future longitudinal research should be done in order to see if these patterns of lower financial anxiety are sustained after deployment or if past spending behaviors increase financial anxiety due to a pattern of poor financial behaviors.

The second essay analyzed the financial behavior outcomes of service members before deployment. Social learning theory (Bandura, 1977; Rotter, 1954) was used as the framework for this research which analyzed financial behaviors in terms of personal factors (e.g., age, ethnicity, financial knowledge, locus of control, and financial anxiety), past behaviors (e.g., credit card debt and emergency financial savings funds), and environmental factors (e.g., communication sources and deployment status). Study results suggested that some personal factors (e.g.,

financial knowledge, locus of control, and financial anxiety) and past behaviors (e.g., credit card debt and emergency financial savings funds) were the biggest predictors of service members' potential future financial behavior outcomes before deployment, regardless whether they have previously deployed or not. Specifically, three personal factors (e.g., financial knowledge, locus of control, and financial anxiety) were shown to have a significant relationship with financial behavior. Service members with both high financial knowledge and low financial anxiety were most likely to demonstrate the best financial behaviors. Service members who had a more internal locus of control also had better financial behavior outcomes. Age and ethnicity did not have a significant relationship with financial behavior outcomes in the second study.

Past behaviors did have a significant relationship with financial behavior outcomes. Service members with higher levels of credit card debt were more likely to have credit card debt in the future, and service members with higher levels of emergency financial savings funds were more likely to have financial savings in the future. Neither environmental factors (e.g., communication sources and deployment status) were found to have a significant relationship with financial behavior outcomes. However, two control variables were significantly related to financial behaviors. Those who were married had better financial behaviors than those who were single, and sergeants and staff sergeants (E5 to E6) reported more positive financial behaviors than privates (E1 to E2). These findings underscore the importance of teaching service members early about good financial behaviors and the way in which other factors can affect them, including financial anxiety, locus of control, and marital status.

Finally, the third essay predicted the financial behaviors of young adults based on social learning theory (Bandura, 1977; Rotter, 1954). The sample included both Soldiers as well as college students, and therefore, more fully examined and compared the financial behaviors of

young adult populations regardless of career or education choices. The results indicated that some personal factors (e.g., financial knowledge, locus of control, and financial anxiety) and past behaviors (e.g., credit card debt) had a significant impact on future financial behavior outcomes.

In terms of financial behavior outcomes, service members with more financial knowledge and lower financial anxiety had better financial behavior outcomes. Also, service members with a higher internal locus of control had better financial behavior outcomes. Neither age nor ethnicity had a significant relationship with financial behavior outcomes in the current study. Past behaviors, specifically current credit card debt, was an indicator for service members who were more likely to have credit card debt in the future. Environmental factors (e.g., communication sources) were not statistically significant in this study.

A few control variables were significantly related to financial behavior outcomes, including monthly income and marital status. Married respondents and those with more than \$2,292 in gross monthly income were more likely to have better financial behaviors than single respondents or respondents with lower income levels. Having dependents, higher educational status, and being a Soldier rather than a college student (i.e., career choice) had no statistical significance with financial behavior outcomes. The current research suggests that financial education may benefit young adult populations by preventing poor financial behaviors if financial knowledge and competency levels can be increased. It also emphasizes the importance of understanding young adults in order to better assess whether certain factors, such as financial knowledge, locus of control, financial anxiety, credit card debt, income levels, and marital status, are more likely to have positive effects on the financial behaviors of the individual. Such knowledge arms the service provider, financial planner, or counselor with important information needed to help the client improve their financial behavior outcomes.

Implications

The hallmark findings of these studies were that financial behaviors are not improved by age, rank, or increase in income status alone. The factors that did improve financial behaviors were better past financial behaviors, increased financial knowledge, decreased financial anxiety, and having an internal locus of control. These findings contribute to the increased understanding of what drives financial behavior for a military audience. Financial planners and financial counselors can use the current research to better understand their clients and what drives their financial behavior, while military command leaders and service providers can use this information to more fully develop their financial education programs to the appropriate audience and implement training briefings and programs to better utilize their limited resources. The findings also serve as a way to better understand the behavior associated with a service member's personal finances before and after a deployment period.

Specific past behaviors, such as less credit card debt and more financial emergency savings, for financial resources have been identified to prevent financial behavior problems before deployment for all ranks. The evidence showed that starting good habits early on can be a significant predictor of positive financial behaviors in the future. This is in keeping with previous literature that shows poor credit card management and debt is more likely to create future financial problems (Grable & Joo, 2006; Rutherford & DeVaney, 2009) and that good savings behavior increases future positive financial behaviors (Bhargava & Lown, 2006; Loibl, Grinstein-Weiss, Zhan, & Red Bird, 2010; Rha, Montalto, & Hanna, 2006). With this evidence, it is important that military leaders and service providers work to create a culture of saving and avoiding debt, which have been shown to enhance better financial behaviors in the future.

The current research has also identified service members who have financial problems, ways to increase their financial knowledge, opportunities to recognize their locus of control, and reduce their financial anxiety. Supporting research has shown that Soldiers who took a financial education course were more likely to have better financial behaviors and less likely to make risky financial decision (Bell, Gorin, & Hogarth, 2009). Other research has shown that education and money management experiences, both in the military and pre-military, were closely associated positive savings behaviors (Brand, Hogarth, Peranzi, & Vlietstra, 2011).

Given the supporting research for financial knowledge, this could lead to development of a more comprehensive, holistic financial planning and education program that is seen as preventive instead of a financial counseling model that primarily focuses on remediating problems as they arise. As a part of the holistic financial education program, it is important to include the personal responsibility a service member has to learn basic life skills, such as money management and budgeting. Sometimes these basic life skills are not taught in the home, and therefore, there is a need to learn these skills through other means be it through schooling, training, or other courses. There is a shared responsibility for command leaders to provide the necessary information and resources, and it is up to the individual service member to take advantage of those resources. A possible incentivized opportunity may be to include the ability for command leaders to offer promotion points to service members who take financial planning and education courses on their own initiative. Since past behaviors are such a significant factor in predicting future behavior, it is important to teach service members positive financial behaviors in order to have more positive financial behavior outcomes in the future.

Research has shown the importance of financial knowledge in financial behavior outcomes, and therefore, this could lead to a significant need to assess the effectiveness of the

current military financial education programs to determine if these programs are having positive effects on service member financial behavior outcomes. The current research suggests that by tracking financial education and behavioral outcomes over time, policy makers, program managers, and military leaders should see an increase in financial knowledge, better/sustained financial behaviors (regardless of rank) and less financial anxiety, both before and after deployments.

The results of the current dissertation also confirm the need to target service members of all ranks early in their military career life-cycle with appropriate financial principles for their current stage of life. Financial educational resources should be specifically geared towards young populations to set in motion positive financial behaviors that will be continued as the service member ages and moves up through leadership ranks. Even though prior research has shown that junior enlisted service members have the most serious financial problems (Tiemeyer, Wardynski, & Buddin, 1999), the current research argues that financial education should be taught throughout the military lifecycle and not be solely focused on junior ranks. Instead, all ranks should receive age and circumstance appropriate financial education for their specific needs at current phase of life of the service member. Moreover, even command leaders need ongoing financial education opportunities in order to improve their own financial behavior outcomes. There are some teachable moments that service members experience and that command leaders should take advantage of, such as: Advanced Individual Training (AIT), officer training courses, in-processing, and pre-deployment opportunities, among others. There should be an emphasis on early financial education since most individuals will not seek help until there is a problem. The emphasis should be preventative instead of remedial.

Given that rank and income are directly related (Green, 1970), it is important to remember that just because a service member receives a higher income than another service member, it does not mean that the higher paid service member has better financial behavior outcomes than the lower paid service member. Duesenberry (1949) first postulated the relative income hypothesis, which states that households are concerned with their consumption compared to their community, which leads to savings rates being an increasing function of a household's position in the income distribution. As other research has shown (Sumarwan & Hira, 1993), income perception is as important if not more important than the actual amount of income received. Learning the skills needed to take care of basic needs within current income restraints is an important part of financial management that should be included in all financial education courses. Additionally, as shown in the current research, past behaviors are an important predictor of future behaviors; therefore, a service member should learn early on about how positive financial behaviors are required to improve future financial behaviors.

Even though environmental factors, specifically communication sources, were not significant in the current dissertation, one cannot overlook the environment surrounding a service member and its relationship with the financial behavior outcomes of the service member. Prior financial behavior literature has shown that environmental sources, such as parents, peers, home, and school, have a significant effect on financial behaviors (Garrison & Gutter, 2010; Shim, Xiao, Barber, & Lyons, 2009; Worthy, Jonkman, & Blinn-Pike, 2010). With better methodology in future studies, research may find that communication avenues such as using military financial programs, may have more of a positive financial behavior outcome than is recognized in the current dissertation.

As shown in the Time 1 survey, 50 percent of the sample had spoken with a military communication source (i.e., Army Community Service, Military OneSource, personal financial counselor, chain of command, or other military personnel) about their personal financial situation. When asked about communication with a non-military source (i.e., family member, friend, financial advisor, the Internet, or other), 75% had spoken to at least one of the communication sources. Obviously, there is communication taking place regarding personal financial matters; however, the information received by the service member is not correlated with improved financial behavior outcomes. This could be the result of a number of possibilities, including the type of information that is being provided or the depth of the conversation specific to personal finances. Regardless, it is important that future research more fully study environmental factors to better understand the ways that communication sources impact personal financial behaviors and/or how these communication sources can be enhanced to produce better financial behavior outcomes. It is important to remember that financial knowledge was a significant factor in positive financial behavior outcomes, and therefore, researchers should more fully understand how these financial concepts and principles (e.g., financial knowledge) can be conveyed to this audience in a more effective manner.

A more immediate implication for command leaders and military service providers is to authorize support for individual service members struggling with personal financial matters in addition to focusing on removing the current stigma surrounding these problems. Financial fitness should be as important as physical fitness and could be taught similar to the way in which a fitness trainer would coach a service member into shape. One potential solution would be to change the label of “counselor” (i.e., personal financial counselor) to “coach”, which could be a more effective and less stigmatizing term for encouraging service members to seek help to

improve their financial behaviors. In the past, there were career risks that may have decreased the willingness of service members to seek help for financial matters. Many military leaders are working to change the stigmas associated with seeking help for personal matters. The increased emphasis on removing these barriers should be encouraged, especially as it pertains to financial help seeking from approved service providers.

During an era of fiscal restraint and federal budget reductions, additional empirical data is needed to justify financial education programs, which are expected to produce desired financial behavior outcomes for military service members throughout their military career life-cycle. Research-based financial education programs are needed to help ensure that military members are deployment ready, which includes financial readiness. Unfortunately, a military leader's mission is negatively affected when service members are unable to deploy due to financial problems.

Limitations

The current dissertation was not without its limitations. In terms of the sample, there was limited officer data; no high ranking officers above the captain (O-3) level participated in the survey. This is only a slight limitation given that all enlisted ranks and junior officers make up the large majority of the military and were well sampled in the current studies. In some of the research, the higher officer (O-3 and above) data were combined with the sergeants first class to first lieutenant (E7 to O2) band since the sampling was limited. This command leader group comprised all senior enlisted officers (E7 and above), warrant officers, and all other higher ranking officers (O1 and above) (see Appendix A). Another limitation came in the way the higher ranks were banded together. This led to a limitation when analyzing the data since sergeants first class to first lieutenant (E7 to O2), including warrant officers, were banded

together in the survey. This did not allow for analyzing enlisted with officers or with warrant officers.

All of the data for the current research were gathered at one Midwestern United States Army post within one infantry brigade. This limited the survey data to only Soldiers with no other Service branches being sampled. The intent of the original research was to also gather spouse data to compare to the Soldier data. Although attempted, the final sample did not include comparable spouse surveys to give a better picture of couple or family financial behaviors.

The military surveys were given only a few weeks before the Soldiers deployed (Time 1 survey) and within weeks of the Soldiers return from deployment (Time 2 survey). Many other distractions, besides financial matters, taking place during both the pre- and post-deployment periods, which could have also had an effect on how the Soldiers answered the survey questions. These surveys were leadership directed, and therefore, the Soldiers were expected to complete the surveys and most Soldiers complied since leadership was present during the data collection. In accordance with the IRB, the survey instructions stated that the Soldiers could choose to not complete the survey or stop participation at any time without penalty.

The student research also had limitations. The research was gathered from one Midwestern university where students voluntarily sought help on financial matters. Therefore, the student population was self-selected whereas the Soldier data was more representative in its sampling technique. Future research should seek to include a broader spectrum of students who are more representative of all college students across the U.S. When considering the income between Soldiers and college students, Soldiers begin earning a substantial amount of money at an earlier age than most college students. The income differences come after the student graduates and begins full-time employment, whereas Soldiers have been earning money all

during the time the students are in school most likely earning a much lower salary, if any at all. Therefore, the student income data is expected to be limited when compared to Soldiers' salary ranges.

Future Research

The Army's Comprehensive Soldier and Family Fitness initiative included five personal and family readiness pillars: physical, emotional, social, family, and spiritual readiness (U.S. Army, n.d.). The current dissertation suggests that without a financial readiness pillar, service member readiness may still be negatively impacted by financial problems and anxiety. Such problems can prevent service members from being able to perform their duties and carry out their mission, especially if they are unable to deploy or mobilize with their command units.

Future studies are needed to quantify data based on each identified pillar of personal readiness, including financial, and to then analyze this data to determine the impact of each pillar on overall personal readiness. This comparison will help researchers and Army leaders determine if financial readiness helps strengthen overall personal readiness as a predictor for overall military readiness – or ability to deploy. If tested empirically, these pillars, including a financial pillar, can focus limited resources on education programs that are effective.

Other future research should capture environmental factors that could affect the personal financial situation of a service member and his or her decision regarding whether to remain in military service. An individual's financial status can be affected by a variety of factors including, but not limited to, state and national unemployment rates, overall cost of living relative to military salaries and benefits, cost of housing versus military housing benefits, and other similar variables. For many service members, the cost of living directly affects their disposable income and their ability to meet their financial obligations. Because the military is such a mobile

community, it is important that service members take into consideration the average cost of housing, child care, transportation, and other life necessities in the geographic areas in which they will potentially be stationed. These factors directly influence career decisions, level of quality of life satisfaction, and the personal or family budget. Future research should also include more objective personal financial variables to better understand a service member's financial situation, such as the percentage spent on variable and fixed costs. These and other similar financial factors can produce a more complete financial picture of service member financial health and well-being.

Financial education programs have not been comprehensively assessed for overall effectiveness or return on investment. The DoD has stated that they are working on a larger evaluation of all of its family programs to develop outcome measures for the financial readiness campaign and the services of its financial counselors (U.S. Government Accountability Office [GAO], 2012). The Consumer Financial Protection Bureau [CFPB] has just released a separate request for proposal to determine the quality and impact of the PFM programs (CFPB, 2013). These types of outcome based measures and effectiveness standards should be encouraged in order to enhance financial behaviors of all service members.

Conclusion

The purpose of this dissertation was to quantify personal financial variables associated with service members with the deployment factor in order to better help military financial education programs to have a more positive impact on service member financial knowledge and behaviors. In the past, the military has relied heavily on anecdotal data from installations and leaders, a few qualitative studies, and DoD administered surveys, which included only a few

financial questions. The current research sought to understand more fully the financial behaviors of service members given the deployment stressors they face.

Financial education and counseling programs need to be assessed based on quantitative data that has been comprehensively gathered from a large military population and which asked several financial questions addressing financial behavior, attitudes, and satisfaction. Such data should be used to inform policy and program decisions, allowing leaders to focus limited resources on programs that produce desired financial behavior outcomes. By identifying and focusing on financial education programs that produce desired outcomes, military leaders will improve personal and command readiness. The current research began the conversation regarding factors that underlie effective financial education and counseling programs designed to prevent, produce, and change financial behavior, with limited resources. There is much more work to do specific to financial behaviors across all military service branches and multiple segments of the military population in order to improve the financial behavior outcomes of all military personnel.

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Appendix A - The Rank Structure of the Military

Adapted from the U.S. Department of Defense The United States Military Officer and Enlisted Rank Insignia.

Retrieved from <http://www.defense.gov/about/insignias/officers.aspx> and <http://www.defense.gov/about/insignias/enlisted.aspx>

Warrant Officer Ranks	Army	Navy	Marines	Air Force
W1	Warrant Officer 1 WO1	USN Warrant Officer 1 — WO1	Warrant Officer 1 WO	No Warrant
W2	Chief Warrant Officer 2 CW2	USN Chief Warrant Officer 2 — CWO2	Chief Warrant Officer 2 CWO2	No Warrant
W3	Chief Warrant Officer 3 CW3	USN Chief Warrant Officer 3 — CWO3	Chief Warrant Officer 3 CWO3	No Warrant
W4	Chief Warrant Officer 4 CW4	USN Chief Warrant Officer 4 — CWO4	Chief Warrant Officer 4 CWO4	No Warrant
W5	Chief Warrant Officer CW5	USN Chief Warrant Officer — CWO5	Chief Warrant Officer 5 CWO5	No Warrant

Officer Ranks	Army	Navy	Marines	Air Force
O1	Second Lieutenant 2LT	Ensign ENS	Second Lieutenant 2ndLt	Second Lieutenant 2ndLt
O2	First Lieutenant 1LT	Lieutenant Junior Grade LTJG	First Lieutenant 1LT	First Lieutenant 1LT
O3	Captain CPT	Lieutenant LT	Captain Capt	Captain Capt
O4	Major MAJ	Lieutenant Commander LCDR	Major Maj	Major Maj
O5	Lieutenant Colonel LTC	Commander CDR	Lieutenant Colonel LtCol	Lieutenant Colonel LtCol
O6	Colonel COL	Captain CAPT	Colonel Col	Colonel Col
O7	Brigadier General BG	Rear Admiral Lower Half RDML	Brigadier General BGen	Brigadier General Brig Gen
O8	Major General MG	Rear Admiral Upper Half RADM	Major General MajGen	Major General Maj Gen
O9	Lieutenant General LTG	Vice Admiral VADM	Lieutenant General LtGen	Lieutenant General Lt Gen
O10	General GEN Army Chief of Staff	Admiral ADM Chief of Naval Operations	General Gen Commandant of the Marine Corps	General Gen Air Force Chief of Staff

Enlisted Ranks	Army	Navy	Marines	Air Force
E1	Private	Seaman Recruit (SR)	Private	Airman Basic
E2	Private E-2 (PV2)	Seaman Apprentice (SA)	Private First Class (PFC)	Airman (Amn)
E3	Private First Class (PFC)	Seaman (SN)	Lance Corporal (LCpl)	Airman First Class (A1C)
E4	Corporal (CPL)/ Specialist (SPC)	Petty Officer Third Class (PO3)	Corporal (Cpl)	Senior Airman (SrA)
E5	Sergeant (SGT)	Petty Officer Second Class (PO2)	Sergeant (Sgt)	Staff Sergeant (SSgt)
E6	Staff Sergeant (SSG)	Petty Officer First Class (PO1)	Staff Sergeant (SSgt)	Technical Sergeant (TSgt)
E7	Sergeant First Class (SFC)	Chief Petty Officer (CPO)	Gunnery Sergeant (GySgt)	Master Sergeant (MSgt) / First Sergeant
E8	Master Sergeant (MSG) / First Sergeant (1SG)	Senior Chief Petty Officer (SCPO)	Master Sergeant (MSgt) / First Sergeant	Senior Master Sergeant (SMSgt) / First Sergeant
E9	Sergeant Major (SGM) / Command Sergeant Major (CSM)	Master Chief Petty Officer (MCPO) / Fleet/Command Master Chief Petty Officer	Master Gunnery Sergeant (MGySgt) / Sergeant Major (SgtMaj)	Chief Master Sergeant (CMSgt) / First Sergeant/ Command Chief Master Sergeant
E9^a	Sergeant Major of the Army (SMA)	Master Chief Petty Officer of the Navy (MCPON)	Sergeant Major of the Marine Corps (SgtMajMC)	Chief Master Sergeant of the Air Force (CMSAF)

^a Authorized only while serving as the senior enlisted member of any branch of military service

Appendix B - Military Basic Bi-Monthly Pay Charts

Effective January 1, 2010 for service members with less than 20 years in the military

Adapted from the Defense Finance and Accounting Services Military Pay Tables.

Retrieved from <http://www.dfas.mil/militarymembers/payentitlements/militarypaytables.html>

Pay Grade	2 years or less	Over 2 years	Over 3 years	Over 4 years	Over 6 years	Over 8 years	Over 10 years	Over 12 years	Over 14 years	Over 16 years	Over 18 years
O-10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
O-9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
O-8	9399.00	9706.80	9911.10	9968.40	10223.40	10649.10	10748.40	11152.80	11268.60	11617.20	12121.20
O-7	7809.90	8172.90	8340.60	8474.10	8715.60	8954.40	9230.40	9505.50	9781.80	10649.10	11381.40
O-6	5788.50	6359.40	6776.70	6776.70	6802.50	7094.10	7132.50	7132.50	7537.80	8254.80	8675.40
O-5	4825.50	5436.00	5812.50	5883.30	6117.90	6258.60	6567.60	6794.10	7086.90	75354.10	7748.10
O-4	4163.70	4819.80	5141.40	5213.10	5511.60	5831.70	6230.10	6540.60	6756.60	6880.20	6951.90
O-3	3660.60	4149.90	4479.30	4883.40	5117.10	5373.90	5540.10	5813.40	5955.60	5955.60	5955.60
O-2	3162.90	3602.40	4149.00	4289.10	4377.30	4377.30	4377.30	4377.30	4377.30	4377.30	4377.30
O-1	2745.60	2857.50	3454.20	3454.20	3454.20	3454.20	3454.20	3454.20	3454.20	3454.20	3454.20
W-5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W-4	3783.00	4069.50	4186.50	4101.10	4499.10	4695.00	4893.00	5191.80	5453.40	5702.10	5905.50
W-3	3454.50	3598.50	3746.10	3794.70	3949.50	4254.00	4571.10	4720.20	4892.70	5070.90	5390.40
W-2	3057.00	3346.20	3435.30	3496.50	3694.80	4002.90	4155.30	4305.90	4489.50	4633.20	4763.40
W-1	2683.50	2971.80	3049.80	3213.90	3408.30	3694.20	3827.70	4014.30	4197.90	4342.20	4475.40
E-9	n/a	n/a	n/a	n/a	n/a	n/a	4570.80	4674.30	4804.80	4958.40	5112.90
E-8	n/a	n/a	n/a	n/a	n/a	3741.60	3907.20	4009.50	4132.50	4265.40	4505.40
E-7	2601.00	2838.90	2947.50	3091.80	3204.00	3396.90	3505.50	3699.00	3859.50	3969.00	4085.70
E-6	2249.70	2475.30	2584.50	2690.70	2801.40	3051.00	3148.20	3336.00	3393.60	3435.60	3484.50
E-5	2061.30	2199.30	2305.50	2414.40	2583.90	2761.80	2906.70	2924.70	2924.70	2924.70	2924.70
E-4	1889.70	1986.30	2094.00	2199.90	2293.80	2293.80	2293.80	2293.80	2293.80	2293.80	2293.80
E-3	1705.80	1831.20	1923.00	1923.00	1923.00	1923.00	1923.00	1923.00	1923.00	1923.00	1923.00
E-2	1622.10	1622.10	1622.10	1622.10	1622.10	1622.10	1622.10	1622.10	1622.10	1622.10	1622.10
E-1	1477.20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Appendix C - Pre-Deployment (Time 1) Survey

Please bubble the response that most closely matches YOU, not your spouse (leave blank if item does not apply to you).

1. A) Male B) Female
2. A) White (non-Hispanic) B) Hispanic C) African American D) Other
3. A) Single B) First Marriage C) Re-married D) Divorced E) Separated
4. A) Army B) Air Force C) Army Reserve D) Army National Guard E) Other
5. A) Combat Arms B) Support (Intel, Signal) C) Service & Support D) Aviation E) Other
6. A) E-1 or E-2 B) E-3 or E-4 C) E-5 or E-6 D) E-7 to O-2 E) O-3 and up
7. A) Less than High School B) High School/GED C) Some College D) Bachelor's Degree E) Graduate Degree
8. **How many financial dependents (excluding spouse) do you have?**
A) 0 B) 1 C) 2 D) 3 E) 4 or more
9. **How many months have you been deployed to an area that qualifies for hazardous duty pay in the last 7 years?**
A) 0 B) 1 to 12 C) 13 to 24 D) 25 to 48 E) 49 or more
10. **Do you plan on re-enlisting while in theater during this deployment?**
A) Yes B) No C) Not applicable
11. **Do you plan on contributing to the Savings Deposit Program (SDP) while deployed?**
A) Yes B) No C) I'm not familiar with SDP
12. **Do you plan on contributing to the Thrift Savings Plan (TSP) while deployed?**
A) Yes B) No C) I'm not familiar with TSP
13. **If you do plan on contributing to TSP while deployed, how much do you plan on contributing while in theater?**
A) \$1 to \$500 B) \$501 to \$2,000 C) \$2,001 to \$5,000 D) \$5,001 to \$10,000 E) \$10,001 or more
14. **How much money do you have set aside in a savings account for emergencies?**
A) \$0 B) less than \$500 C) \$501 to \$1,000 D) \$1,001 to \$2,000 E) \$2,001 or more
15. **How much credit card debt do you have?**
A) \$0 B) \$1 to \$1,000 C) \$1,001 to \$2,500 D) \$2,501 to \$5,000 E) \$5,001 or more
16. **How much in auto/motorcycle/truck/boat/ATV/personal watercraft loan(s) do you currently owe?**
A) \$0 or I don't own a vehicle B) \$1 to \$5,000 C) \$5,001 to \$10,000 D) \$10,001 to \$20,000 E) \$20,001 or more

17. **In the past 12 months, have you used any of the following? (Mark all that apply)**
 A) payday loan B) rent to own C) auto title loan D) AER (Army Emergency Relief) loan E) Other type of loan
18. **Suppose you were to sell everything you own and pay all of your debts with the cash you currently have with no new loans. Would you be in debt, break even, or have something left over?**
 A) Be in serious debt B) Some debt C) Break even D) Have money left over E) Be set for retirement
19. **How satisfied are you with your current financial situation?**
 A) Very dissatisfied B) Dissatisfied C) Neutral D) Satisfied E) Very satisfied
20. **How would you rate your financial knowledge level compared to your friends?**
 A) Much lower B) Somewhat lower C) About equal D) Somewhat higher E) Much higher

How often do you feel the following ways when thinking about your financial situation?	
21. I feel anxious about my financial situation.	A) Never B) Almost never C) Sometimes D) Almost always E) Always
22. I have difficulty sleeping because of my financial situation.	A) Never B) Almost never C) Sometimes D) Almost always E) Always
23. I have difficulty concentrating because of my financial situation.	A) Never B) Almost never C) Sometimes D) Almost always E) Always
24. I worry about my financial situation.	A) Never B) Almost never C) Sometimes D) Almost always E) Always

25. **Have you talked to any of the following military/service providers in the last 12 months about your personal financial situation?** (Mark all that apply)
 A) ACS/Financial Readiness program B) Chain of command C) Military OneSource D) PFC (part of MFLC program) E) Other military personnel
26. **Have you talked to any of the following non-military sources about your personal financial situation in the past 12 months?** (Mark all that apply)
 A) Family member/spouse B) Friend C) Financial advisor/planner D) Internet E) Other
27. **In general, how would your best friend describe you as a risk taker?**
 A) A real gambler B) Willing to take risks C) Middle of the road D) Cautious E) A real risk avoider

How much do you know about the following?	
28. Interest rates, finance charges, and credit terms	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot
29. Credit ratings and credit reports	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot
30. Managing finances/budgeting	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot
31. Investing money	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot
32. Life insurance/SGLI/TSGLI	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot

33. Will	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot
34. Retirement accounts (i.e. TSP, IRA, 401k)	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot
35. Taxes	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot

36. **Do you openly and honestly discuss your finances with your spouse?**
 A) Yes B) No C) Not applicable

37. **Do you openly and honestly discuss your finances with your children?**
 A) Yes B) No C) Not applicable

Please indicate how often you agree with the following statements:	
38. There is really no way I can solve some of my problems.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
39. I have a weekly or monthly budget that I follow.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
40. I have specific short-term, mid-term, or long-term written financial goals.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
41. I am being pushed around in my life.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
42. I pay my credit card bills in full and avoid finance charges.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
43. I reach the maximum limit on my credit cards.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
44. There is little that I can do to change the important things in my life.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
45. I spend more money than I earn.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
46. I can do anything I set my mind to.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
47. I have difficulty paying bills because of not enough income.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
48. I am helpless in dealing with the problems of life.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
49. What happens to me in the future depends on me.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
50. I have little control over the things that happen to me.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always

Appendix D - Post Deployment (Time 2) Survey

1. **Please bubble the response that most closely matches your rank.**
A) E-1 or E-2 B) E-3 or E-4 C) E-5 or E-6 D) E-7 to O-2 E) O-3 and up
2. **Please bubble the response that most closely matches your marital status.**
A) Single B) First Marriage C) Re-married D) Divorced E) Separated
3. **How much did you contribute to SDP while deployed?**
A) Did not contribute B) \$1 to \$500 C) \$501 to \$2,000 D) \$2,001 to \$5,000 E) \$5,001 or more
4. **How much did you contribute to TSP while deployed?**
A) Did not contribute B) \$1 to \$250 C) \$251 to \$500 D) \$501 to \$2,500 E) \$2,501 or more
5. **Did you contribute to another retirement plan (i.e. 401(k), IRA, or Roth IRA) while deployed?**
A) Yes B) No C) I'm not familiar with other retirement plans
6. **If you did contribute to another retirement plan while deployed, how much did you contribute?**
A) \$0 B) \$1 to \$500 C) \$501 to \$2,000 D) \$2,001 to \$5,000 E) \$5,001 or more
7. **Currently, how much money do you have set aside in a savings account for emergencies?**
A) \$0 B) less than \$500 C) \$501 to \$1,000 D) \$1,001 to \$2,000 E) \$2,001 or more
8. **How much credit card debt do you have?**
A) \$0 B) \$1 to \$1,000 C) \$1,001 to \$2,500 D) \$2,501 to \$5,000 E) \$5,001 or more
9. **How much in auto/motorcycle/truck/boat/ATV/personal watercraft loan(s) do you currently owe?**
A) \$0 or I don't own a vehicle B) \$1 to \$5,000 C) \$5,001 to \$10,000 D) \$10,001 to \$20,000 E) \$20,001 or more
10. **In the past 12 months, what is the most recent type of loan your or someone in your household has used?**
A) payday loan B) rent to own C) auto title loan D) AER (Army Emergency Relief) loan E) None or none of these
11. **Suppose you were to sell everything you own and pay all of your debts with the cash you currently have with no new loans. Would you be in debt, break even, or have something left over?**
A) Be in serious debt B) Some debt C) Break even D) Have money left over E) Be set for retirement
12. **How satisfied are you with your current financial situation?**
A) Very dissatisfied B) Dissatisfied C) Neutral D) Satisfied E) Very satisfied
13. **How would you rate your financial knowledge level compared to your friends?**
A) Much lower B) Somewhat lower C) About equal D) Somewhat higher E) Much higher
14. **While deployed, did you have any serious financial concerns?**
A) Yes B) No
15. **If you did have serious financial concerns, which of the following did it concern?**
A) Garnishment B) Tax Liens C) Collections on an overdue bill D) Repossession E) Other

How often do you feel the following ways when thinking about your financial situation?	
16. I feel anxious about my financial situation.	A) Never B) Almost never C) Sometimes D) Almost always E) Always
17. I have difficulty sleeping because of my financial situation.	A) Never B) Almost never C) Sometimes D) Almost always E) Always
18. I have difficulty concentrating because of my financial situation.	A) Never B) Almost never C) Sometimes D) Almost always E) Always
19. I worry about my financial situation.	A) Never B) Almost never C) Sometimes D) Almost always E) Always

20. **In the last 12 months, have you communicated with any of the following service providers about your personal financial situation?**
 A) Chain of command B) Family member/spouse C) Military OneSource or Other Military Service Provider (i.e. PFC/Financial MFLC) D) Friend E) None of the Above
21. **Which of the following will you most likely use in the next 12 months to improve your personal financial situation?**
 A) Attend financial briefing B) Phone consultation C) Financial planner/advisor D) Internet research E) None

How much do you know about the following?	
22. Interest rates, finance charges, and credit terms	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot
23. Credit ratings and credit reports	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot
24. Managing finances/budgeting	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot
25. Investing money	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot
26. Life insurance/SGLI/TSGLI	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot
27. Will	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot
28. Retirement accounts (i.e. TSP, IRA, 401k)	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot
29. Taxes	A) Nothing B) Very Little C) Some D) A Fair Amount E) A Lot

Please indicate how often you agree with the following statements:	
30. To be a good soldier, I need to have my personal finances in order.	A) Never Agree B) Rarely Agree C) Sometimes Agree D) Almost Always Agree E) Always Agree
31. Being disciplined for personal financial irresponsibility is worse than getting a DUI.	A) Never Agree B) Rarely Agree C) Sometimes Agree D) Almost Always Agree E) Always Agree
32. Being disciplined for personal financial irresponsibility is worse than falling below the physical fitness standards.	A) Never Agree B) Rarely Agree C) Sometimes Agree D) Almost Always Agree E) Always Agree
33. Most of the people in my unit have their personal finances in order.	A) Never Agree B) Rarely Agree C) Sometimes Agree D) Almost Always Agree E) Always Agree
34. I am no worse off financially than most others in my pay grade.	A) Never Agree B) Rarely Agree C) Sometimes Agree D) Almost Always Agree E) Always Agree
35. If my whole unit knew how I handled my personal finances, they would be proud of me.	A) Never Agree B) Rarely Agree C) Sometimes Agree D) Almost Always Agree E) Always Agree
36. The Army provides everything a soldier would need to learn how to handle personal finances effectively.	A) Never Agree B) Rarely Agree C) Sometimes Agree D) Almost Always Agree E) Always Agree
37. Financial readiness is one of my leadership's top three personnel-related priorities.	A) Never Agree B) Rarely Agree C) Sometimes Agree D) Almost Always Agree E) Always Agree

Please indicate how often you agree with the following statements:	
38. There is really no way I can solve some of my problems.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
39. I have a weekly or monthly budget that I follow.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
40. I have specific short-term, mid-term, or long-term written financial goals.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
41. I am being pushed around in my life.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
42. I pay my credit card bills in full and avoid finance charges.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
43. I reach the maximum limit on my credit cards.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
44. There is little that I can do to change the important things in my life.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
45. I spend more money than I earn.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
46. I can do anything I set my mind to.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
47. I have difficulty paying bills because of not enough income.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
48. I am helpless in dealing with the problems of life.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
49. What happens to me in the future depends on me.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always
50. I have little control over the things that happen to me.	A) Almost Never B) Seldom C) Sometimes D) Often E) Almost Always

Appendix E - Student Financial Counseling Survey

Please answer the following demographic questions about yourself.

Gender: Male Female **Age:** _____

Ethnicity: White Hispanic Native American African American

Hawaiian/Pacific Islander Other (specify) _____

Marital Status: Single Married Divorced Separated Engaged

Grade Level: Freshman Sophomore Junior Senior Graduate Student

Major: _____ **Academic College:** _____

What is your current housing? On-campus Off-campus rent Off-campus own

How much does your current housing cost per month? _____

Are you the first person in your family to attend college? Yes No

Do you have any financially dependent children? Yes; how many? _____ No

Do you have any other financial dependents? Yes; how many? _____ No

Do you currently receive student loans? Yes No

Do you currently receive workstudy? Yes No

Do you currently receive a scholarship(s)? Yes No

Current Job Status: Full-time Job Part-time Job Seasonal Job No Job

Monthly Pay (Before Tax): \$ _____ Monthly Take Home Pay: \$ _____

Payment Frequency: Weekly Pay Biweekly Pay Monthly Pay Semi-monthly

If you lost your job today, how many months could you live using your savings? _____

How much in revolving credit card debt (debt that you don't pay off at the end of the month) do you currently owe? If none, please write \$0. If you do not have a credit card, please write n/a. _____

How much in student loans do you currently have? If none, please write \$0. _____

How much in auto loan(s) do you currently owe? If none, please write \$0. _____

How much in installment loan(s) (home appliances, electronics, furniture, etc) do you currently owe? If none, please write \$0.

Suppose you were to sell all of your major possessions (including your home), turn all of your investments and other assets into cash, and pay all of your debts. Would you be in debt, break even, or have something left over?

1 2 3 4 5

Be in serious debt Break even Have money left over

Please indicate the reason(s) for your visit. If you sought assistance for multiple reasons, please rank the reasons with 1 being the most important reason, 2 being the second most important reason, and so forth.

Overspending /Budgeting	_____	Need to Establish Credit	_____
Credit Report Questions	_____	Too Much Debt	_____
Behind in Monthly Payments	_____	Rent/Mortgage Questions	_____

Financial Aid Questions	_____	Unexpected Financial Crisis	_____
Student Loan Counseling	_____	Medical Expenses	_____
Considering Bankruptcy	_____	Unemployment	_____
Repayment of Loans	_____	Set up Savings Plan	_____
Settle Old Debts	_____	Gambling	_____
Other	_____ (Please specify) _____		

Please indicate how you heard about our services:

Friend	_____	Relative	_____	Classmate	_____
Brochure	_____	Career Center	_____	Guest Speaker	_____
Housing/Dining	_____	Student Legal Services	_____	Other KSU Office	_____
Counseling Center	_____	Financial Aid Office	_____	Student Life	_____
Newspaper Article	_____	PFP Student	_____	Resident Assistant	_____
Center Website	_____	Academic Advisor	_____	Healthy Decisions	_____
Employee Program	_____	Ombudsman	_____	E-mail	_____
KSU Credit Union	_____	PFC Employee	_____	KSU organization	_____
Instructor	_____	Sidewalk Chaulking	_____		
Other	_____ (Please specify) _____				

Anything else we should know about your situation:

Please circle the number that best represents your reactions to the following questions.	
I feel anxious about my financial situation.	1 2 3 4 5 6 7 Never Sometimes Always
I have difficulty sleeping because of my financial situation.	1 2 3 4 5 6 7 Never Sometimes Always
I have difficulty concentrating on my school/or work because of my financial situation.	1 2 3 4 5 6 7 Never Sometimes Always
I am irritable because of my financial situation.	1 2 3 4 5 6 7 Never Sometimes Always
I have difficulty controlling worrying about my financial situation.	1 2 3 4 5 6 7 Never Sometimes Always
My muscles feel tense because of worries about my financial situation.	1 2 3 4 5 6 7 Never Sometimes Always
I feel fatigued because I worry about my financial situation.	1 2 3 4 5 6 7 Never Sometimes Always

How satisfied are you with your overall current financial situation?	1 2 3 4 5 6 7 8 9 10 Very dissatisfied Very Satisfied
How stressed do you feel about your personal finances?	1 2 3 4 5 6 7 8 9 10 Not at all Average Extremely
How would you rate your financial knowledge level?	1 2 3 4 5 6 7 8 9 10 Lowest level Highest level

In general, how would your best friend describe you as a risk taker?

- A real gambler
- Willing to take risks after completing adequate research
- Cautious
- A real risk avoider

Which of the following groups best matches the type of activities that you enjoy participating in? Please circle only ONE group.

Group 1
Walking, Bowling, Gardening,

Group 2
Motor boating, Rugby, Basketball, Hunting, Racquetball, Rollerskating,

Group 3
White-water rafting, Mountain climbing, Snow skiing, Auto-

Please circle what you consider to be the correct answer.	
You may obtain a copy of your credit report(s) at any time with no cost to you.	TRUE FALSE
Higher insurance deductibles lead to lower insurance premiums.	TRUE FALSE
An annuity is a contract issued by a financial institution that guarantees a series of payments for over a lifetime.	TRUE FALSE
A mutual fund is an investment company that invests its shareholders' money in a diversified portfolio of securities.	TRUE FALSE
Social security and company pension plans are sufficient to meet retirement needs.	TRUE FALSE
Over 20 years, you will earn more money to invest in bonds compare to stocks.	TRUE FALSE

Please indicate your level of agreement with the following statements:

a. I make myself aware of the total amount of money I owe.	Almost Never	Seldom	Sometimes	Often	Almost Always
b. There is really no way I can solve some of my problems.	Almost Never	Seldom	Sometimes	Often	Almost Always
c. I have a weekly or monthly budget that I follow.	Almost Never	Seldom	Sometimes	Often	Almost Always
d. I have specific short-term, mid-term, or long-term written financial goals.	Almost Never	Seldom	Sometimes	Often	Almost Always
e. I am being pushed around in my life.	Almost Never	Seldom	Sometimes	Often	Almost Always
f. I pay my credit card bills in full and avoid finance charges.	Almost Never	Seldom	Sometimes	Often	Almost Always
g. I reach the maximum limit on my credit cards.	Almost Never	Seldom	Sometimes	Often	Almost Always
h. I obtain cash advances to pay money toward other credit balances.	Almost Never	Seldom	Sometimes	Often	Almost Always
i. There is little that I can do to change the important things in my life.	Almost Never	Seldom	Sometimes	Often	Almost Always
j. I spend more money than I earn.	Almost Never	Seldom	Sometimes	Often	Almost Always

Please indicate your level of agreement with the following statements (continued):

k. I can do anything I set my mind to.	Almost Never	Seldom	Sometimes	Often	Almost Always
l. When I borrow money (e.g. for a car, big purchase, or credit cards), I shop around for the lowest interest rate.	Almost Never	Seldom	Sometimes	Often	Almost Always
m. I have difficulty paying bills because of not enough income.	Almost Never	Seldom	Sometimes	Often	Almost Always
n. I am helpless in dealing with the problems of life.	Almost Never	Seldom	Sometimes	Often	Almost Always
o. I set money aside for savings.	Almost Never	Seldom	Sometimes	Often	Almost Always
p. What happens to me in the future depends on me.	Almost Never	Seldom	Sometimes	Often	Almost Always
q. I have little control over the things that happen to me.	Almost Never	Seldom	Sometimes	Often	Almost Always
r. I have calculated the amount of savings I will need for my retirement.	Yes			No	

How much do you know about the following?					
Interest rates, finance charges, and credit terms	Nothing	Very Little	Some	A Fair Amount	A Lot
Credit ratings and credit files	Nothing	Very Little	Some	A Fair Amount	A Lot
Managing finances	Nothing	Very Little	Some	A Fair Amount	A Lot
Investing money	Nothing	Very Little	Some	A Fair Amount	A Lot
What is on your credit report	Nothing	Very Little	Some	A Fair Amount	A Lot

Over the last two weeks, how often have you been bothered by any of the following problems? Read each item carefully, and circle your response.

Little interest or pleasure in doing things	Not at all	Several days	More than half the days	Nearly every day
Feeling down, depressed, or hopeless	Not at all	Several days	More than half the days	Nearly every day
Trouble falling asleep, staying asleep, or sleeping too much	Not at all	Several days	More than half the days	Nearly every day
Feeling tired or having little energy	Not at all	Several days	More than half the days	Nearly every day
Poor appetite or overeating	Not at all	Several days	More than half the days	Nearly every day
Feeling bad about yourself, feeling that you are a failure, or feeling that you have let yourself or your family down	Not at all	Several days	More than half the days	Nearly every day
Trouble concentrating on things such as reading the newspaper or watching television	Not at all	Several days	More than half the days	Nearly every day

Moving or speaking so slowly that other people could have noticed. Or being so fidgety or restless that you have been moving around a lot more than usual	Not at all	Several days	More than half the days	Nearly every day
Thinking that you would be better off dead or that you want to hurt yourself in some way	Not at all	Several days	More than half the days	Nearly every day
If you checked off any problem in this section, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	Not Difficult at All	Somewhat Difficult	Very Difficult	Extremely Difficult