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# Financial Literacy and Religiosity among Undergraduates at Mississippi State University

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# Financial literacy and religiosity among undergraduates at Mississippi State University

By

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Financial literacy and religiosity among undergraduates at Mississippi State University

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Financial literacy is a growing problem in the United States. While research has approached the formation of financial skills from a variety of angles, little is known about the influence of religiosity. Using the College Student Financial Literacy Survey (CSFLS) and Duke University Religiosity Index (DUREL), data was analyzed for correlations between religiosity and financial knowledge, financial attitudes, and financial behaviors. Data was collected from 938 undergraduates at Mississippi State University via an online survey using Qualtrics survey software in the spring of 2015. Items measured on the DUREL (i.e., religiosity) were not significantly related to financial attitudes, financial knowledge, or financial behavior. These findings are important for churches and faith-based organizations as well as financial educators as populations in need seek financial education. Faith leaders and institutions could incorporate financial lessons to improve the financial skills of all members.

DEDICATION

I dedicate my thesis to Brett, my wonderful husband. Thank you for enduring graduate school with me. I could not have completed this journey without your love, support, and belief that I could succeed.

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# CHAPTER I

# INTRODUCTION

Two in five American adults recently rated their personal finance knowledge as a "C" or lower (Financial, 2012). Another telling survey revealed that 21% of respondents, including 38% of those with income below $25,000, reported that winning the lottery was "the most practical strategy for accumulating several hundred thousand dollars" to save for retirement (Gale, Harris & Levine, 2012, p.39). With these statistics, one might question whether Americans are financially literate. Financial literacy denotes one's understanding and knowledge of financial concepts (Fox, Bartholomae & Lee, 2005).

Recent studies found that less than one-third of young adults have a basic understanding of interest rates, inflation, and risk diversification (Gale et al., 2012; Lusardi et al., 2010). This problem has become increasingly dire as multiple studies show a lack of savings (Gale et al., 2012), debt-to-income ratios beyond recommended levels (Lusardi et al., 2010) and student loan debt preventing young professionals from having a firm financial footing (Tetreault, 2012). Consumer debt is on the rise as seen in credit cards and student loans (Tetreault, 2012). Rising educational costs and inflation will continue to exacerbate the problem without serious, widespread intervention.

## Statement of the Problem

Financial literacy is a growing area of research in many different populations and contexts. However, the concept of financial literacy is a complex subject since many variables are involved in forming a person's base of financial knowledge and concepts (Chinen & Endo, 2012). Social Learning Theory states that much of the knowledge one has comes from observing others, such as parents (Bandura, 2001; Jorgensen & Savla, 2010; Serido, Shim, Mishra & Tang, 2010). However, other influences become apparent during college. Work experiences (Shim, Barber, Card, Xiao & Serido, 2010), peers and environment (Bandura, 2001), grade point average (GPA) and extracurricular activities (Mooney, 2010), as well as many other new influences may play a role in forming one's concept of financial literacy. Also, while in college, many students begin to manage their money for the first time and make decisions independently of their parents (Lusardi, et al., 2010; Mandell & Klein 2009).

Little is known about Mississippi State University students' financial literacy. Mississippi is often ranked lowest in the United States of America in terms of financial literacy (FINRA, 2013) but there have been few published studies about the financial literacy of students at Mississippi State University (MSU) (Li, 2012). Additionally, the MSU student body is not solely comprised of Mississippians therefore the financial literacy results of one the state's largest public universities may or may not match that of the state's population.

## General Background of the Problem

The concept of financial literacy continuously develops throughout the lifespan. Children form attitudes about social status and finances early in life from what they observe. Eventually peer pressure, advertising and personal buying decisions all play a role in the development of financial skills. The world can be used as a classroom from which to teach many life skills. By watching parents and others, children are taught financial skills (Martin & Oliva, 2001).

Financial skills are lacking for many different populations. However, one of the most vulnerable groups in a variety of ways is college students. Most undergraduate students have not reached full autonomy from their parents in regards to finances, religion, and other forms of support, so parents still play a role in their development.

**Financial Literacy and Religiosity: The Current Study**

By combining the topics of financial literacy and religiosity, contributions have been made to both areas of research. By exploring the connection of religiosity and one's financial literacy congregations and other bodies of worship can begin to understand the need for financial teachings to their members and strategize with financial experts to raise the financial understanding of their members. Financial educators can also gain understanding of how their clients' financial priorities are influenced by religiosity from this work.

To date, the most common risk-taking behaviors studied in combination with religiosity have been alcohol consumption, sexual behaviors, and drug use. However, little is known about risky financial behaviors such as spending habits and repaying of debt, number of credit cards, and if there is a link in these financial behaviors and religiosity (Barry & Nelson, 2005).

Cull and Whitton (2011) cite a relevant quote from Alan Greenspan, the former U.S. Federal Reserve Chair, Certainly young adults have access to credit at a much younger age than their parents did. Accordingly, they need a more comprehensive understanding of credit than was afforded to the previous generation--including the impact of compounding interest on debt balances and the implications of mismanaging credit accounts. (2003, para. 2). However, legislative changes have made it harder for credit card companies to issue cards to those under 21-years-old and prevented the marketing of credit cards to students on college campuses (Detwiler, 2009).

Negative aspects of low financial literacy include problems with debt, lack of retirement planning and poor investment decisions. Typically, women tend to be less financially literate than men but these results are mixed (Hess, 2012; Lusardi, Mitchell & Curto, 2010). Additionally, differences in ethnicity, gender, education levels, and other observable characteristics have also been identified as influencers of financial literacy (Lusardi et al., 2010). Furthermore, financial products, such as retirement plans and insurance policies, have arguably become more complicated than ever which may harm people with less financial knowledge (Mandell & Klein, 2009).

## Obtaining Knowledge (theory, parents, peers)

Bronfenbrenner (2005) points out that the culture in which one resides plays a large role on development. The same can also be true when one considers the influence of those around them in the context of Social Learning Theory (Bandura, 2001; Miller, 2011). A public university such as MSU has many influences on campus while private or religious institutions may have cultures that promote certain behaviors to uphold religious practices and beliefs. Another influence on a college campus is the formation of patterns that often carry into adulthood (e.g., religious practices or the lack thereof) (Barry & Nelson, 2005).

## Preliminary Research on Religiosity and Financial Literacy

Multiple studies suggest that people know what to do with their money but that knowledge does not always translate into financially sound decisions (Danes & Brewton, 2013; Heckman & Grable, 2011; Shim et al., 2010). It is important to point out that without education, people with low levels of financial literacy may not realize or know that certain financial behaviors are risky.

In a sample of religious-affiliated people, Blake and Vucetic (2013) found that people knew what financial concepts were important but lacked the discipline to change behaviors. The study participants were aware of the negatives associated with credit card use, yet they continued to use them. Interestingly, “The behaviors of faith-based participants and consequently their mindset gravitate toward that of the borrower more than one who accumulated wealth” (Blake & Vucetic, 2013, p. 36) which may suggest a negative financial attitude for religious-oriented individuals. Additionally, hours of church attendance and service have been positively associated with greater confidence in the ability to handle personal problems which might include finances (Merrill, Read & LeCheminant, 2009).

## College Students

Since research suggests that the prefrontal cortex is not completely formed until age 25, the transition to full autonomy during college is a pivotal time to develop financial skills and knowledge. Arnett (2000) is credited with the concept and definition of “emerging adulthood.” Arnett describes this phase as “a new, distinct developmental period which is characterized by heightened risk-taking behavior and self-exploration of numerous domains, including one’s spirituality” which typically occurs from 18-25 years of age (2000). As college students explore new freedoms, they have the ability to spend money as never before. This can lead to massive credit card, student loan and other debts. Since this is such a critical time in the lifecycle, students need to be equipped to handle their new-found liberty.

However, other research suggests that religious identity is furthered during the college years (e.g., Meeus et al., 1999; Waterman, 1985). So, one could assume that as the religiosity of a person is encouraged or discouraged during the college years, religious practices could also have an impact on the experiences that occur during that time such as risky financial behaviors, negative financial attitudes and practices, higher number of credit cards, increasing student loan debt, and others (Barry & Nelson, 2005). With the freedom to manage their money and develop their own religious identity during college, a link between these two variables could guide future work in financial literacy and education efforts. Teaching financial education is a way for churches and other faith-based organizations to contribute to knowledge gains and promote financial literacy.

## Purpose of the Study and Research Questions

The purpose of this study was to investigate if a correlation exists between college student financial literacy and religiosity. Participants were undergraduate students at MSU when data were collected in the spring of 2015. Answers to the following research questions were sought.

1. Is there a correlation between religiosity and financial knowledge, financial attitudes, or financial behaviors?
2. What personal characteristics correlate with financial knowledge, financial attitudes, and financial behaviors?

## Theoretical Framework

Bandura's Social Learning Theory was the guiding theoretical framework for this research. Bandura postulates that learning comes from observing others (Bandura, 2001, Miller, 2011). Since financial behaviors and concepts are learned from interaction with money and watching others interact with money, Social Learning Theory was a natural fit for this project. Social Learning Theory has also been used by numerous other researchers when studying financial literacy (e.g., Goetz, Durband, Halley & Davis, 2011; Jorgensen, 2007; Jorgensen & Savla, 2010; Martin & Oliva, 2001). This study was largely based on Jorgensen's work with an added lens of religiosity (Jorgensen, 2007; Jorgensen & Savla, 2010).

## Summary of Methodology

This study was conducted through a convenience sample of undergraduate students at MSU in March and April of 2015. Students were recruited via an email to all undergraduates the day the survey was made available and a reminder email was sent the morning the survey closed. Data was collected through an online survey available to all undergraduates open for two and a half weeks. The survey was collected using Qualtrics survey software and accessible through a link on the login-secured MyState homepage.

Three $50 gift cards to a local restaurant were offered as an incentive for participating. The gift cards were awarded after randomly selecting three participants.

## Significance of the Study

To date, no research has been found on the relationship between financial literacy and religiosity among college students. Churches and other religious organizations could help address a need by teaching local congregants or interested individuals and families. Houses of worship are widely accepted as places to disseminate information (e.g., health fairs, financial teachings, and community information), so research into linkage between religiosity and financial literacy could benefit populations in need (CDC, 2013; Stephens, 2013).

Finally, learning occurs in groups (e.g., classrooms full of students) across the lifespan. This is an opportunity for churches and religious organizations to take advantage of on their members learning in groups or having built-in support networks in the congregations. Because knowledge alone is not enough to make change happen, the community support provided by religious organizations is a natural fit. Peer support to make positive financial decisions may be worth as much as correct financial knowledge.

## Assumptions

One assumption that must be considered is that many undergraduate students at MSU are making independent decisions regarding money and religiosity for the first time in their lives as they now live away from their parents. Another salient point to this work is the assumption that people will accept and trust financial education programs from religious organizations. Some members of religious organizations may feel manipulated or that the church is only offering education programs to benefit the organization, not for the benefit of members.

Additionally, financial literacy may vary among student classification (e.g., seniors may have higher financial literacy). Finally, we assume that the three $50 gift cards were incentive enough for students to participate in this survey. Some students may have participated because of their personal interest in the subjects surveyed.

## Definitions

For the purpose of this study, several terms frequently found in the literature are used. While there are various ways to define the terms in today's literature, the following definitions best fit the aims of this study. As previously stated, financial literacy denotes one's understanding and knowledge of financial concepts (Fox, Bartholomae & Lee, 2005). Religiosity is "the importance that individuals place upon their religious affiliation and practice" (Chan, Tsai & Fuligni, 2014).

CHAPTER II

# LITERATURE REVIEW

Financial literacy is a complex concept and is influenced by many factors. Considering the many influences on one's concept of financial ideas, this study is exploring whether religion influences one's financial knowledge, financial attitudes, financial behaviors, three factors related to financial literacy. College students were chosen since they are at a critical time in life on their way to full autonomy and financial independence.

## Financial Literacy

Figure 1 denotes the conceptual model used for this study. Personal characteristics and religiosity are the only two variables tested in the current study. However, other research has looked at the influence of relationships (e.g., parents and peers) on financial literacy.

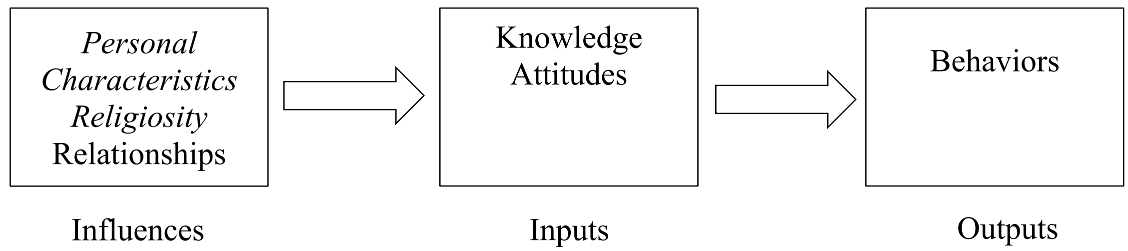


Figure 1 Conceptual Model of Study

## Youth

The findings from Wave 11 of the National Longitudinal Survey on Youth suggest that financial literacy is severely lacking in young adults; only 27% knew about inflation and risk diversification and were able perform simple interest rate calculations (Lusardi et al., 2010). They also identified an important source of financial information for young adults-their parents.

## Young Adults

Cognitive ability is not the only predictor of financial knowledge. Lusardi et al. (2010) pointed out that not all young adults are lacking financial knowledge, so they should not be treated as one large group. Additionally, high school work experience has been shown to contribute to financial knowledge but not alter financial attitudes or behaviors (Shim et al., 2010).

## Adults

Multiple studies suggest a link between levels of financial knowledge and wealth accumulation (Gale et al., 2012). Conversely, a lack of financial knowledge is commonly linked to debt accumulation, problems with debt, less participation in the stock market, less likely to choose mutual funds with lower fees, less likely to accumulate wealth and manage wealth effectively, and less likely to plan for retirement (Gale et al., 2012; Lusardi et al., 2010). Gale et al. (2012) stated

> Low levels of financial literacy are prevalent among adults, particularly among disadvantaged groups, and are associated with poor financial choices that can lead to economic insecurity. Increased financial literacy could help individuals understand their saving situations better, save more, and attain higher economic status and more economic security (p. 44).

## College Students

Parents, work experience, and high school financial education, all anticipatory socialization agents, contribute to financial knowledge. Anticipatory financial socialization is the process by which children acquire skills, attitudes, and values that relate to adults. This occurs through conscious and unconscious learning (Shim et al., 2010). Kolb (1984) suggests that as college students learn more about finances and take more financial responsibility, their willingness to learn and interest in the subject increases. Kolb (1984) also suggested that learning is enhanced by personal involvement and concrete experiences. Some of this may be attributable to college students' impending independence and preparing to reach financial autonomy.

Jorgensen and Savla (2010) identified financial attitudes as the conduit between actual knowledge and behaviors. Financial knowledge can impact behaviors and attitudes toward money. However, knowledge does not always translate into positive actions so research should focus on knowledge and behavior together, not just one or the other

(Shim et al., 2010). If financial attitudes become more positive and self-reassuring, then financial outcomes might improve (Hancock, Jorgensen & Swanson, 2012).

## Influences

### Parental Influence

Parents are the primary teacher of financial concepts or financial socialization agents (Serido et al., 2010). Thus, one's perceptions of what is normal or appropriate when dealing with money are learned from parents, peers, and personal experiences with money and society (Chinen & Endo, 2012). Parental social status also plays a role in shaping a child's ideas about financial attitudes and concepts. High quality communication between parents and children has long been associated with better child outcomes in a variety of ways.

In terms of financial education, one could argue that the basis for most people's financial knowledge comes from their parents, and in many cases this is true (Lusardi et al., 2010). When a student goes to college, he or she is usually heavily influenced by the peers with which he or she interacts. Media and peers are also strong influences on college students (Lachance & Legault, 2007).

Parents are arguably the first and most influential teachers in life. Not surprisingly, many teens say they would seek assistance from their parents for financial matters, but many parents do not know how to teach their teens about money (Lusardi et al., 2010) nor do they know sound financial practices themselves. As one matures, peers seem to have a larger influence on one's ideas and actions.

Parent financial behavior has been studied to predict the adoption of the same financial behaviors in their children and direct teaching from parents predicted use of those techniques and financial knowledge. Additionally, parents who took the time to teach their children about finances and displayed positive financial behaviors were regarded as financial role models by their first-year college students. The researchers found a link between seeing one's parents as financial role models and following parental expectations in positive ways. The same students also displayed favorable attitudes toward using healthy financial behaviors (Shim et al., 2010).

Shim et al., (2010) found that parental socio-economic status (SES) and parental financial behaviors predicted a tendency to use the same responsible behaviors modeled by parents while others point to no link between parental SES and financial behaviors (Hancock et al., 2012). Other research suggested that parental behavior and attitudes influence children but knowledge is not necessarily transferred (Gudmunson & Danes, 2011; Hancock et al., 2012).

Finally, Shim et al., (2010) pointed toward parental teaching as the most important source of financial knowledge, more important than financial education and work experience combined. Implicit and explicit parental financial teaching have been reported with mixed results. Hancock et al. (2012) reported no influence from either form of teaching in the number of credit cards or amount of credit card debt held by students. However, direct parental teaching played a role in predicting a tendency to use the behaviors modeled by parents as well as acceptance of parental knowledge in another study (Shim et al., 2010).

Since parents pass on knowledge to their children, understanding the influence parents have is key to uncovering the pieces that contribute to one's financial skill set.

Students report parents as their primary source of financial information, but students may be getting inaccurate information from their parents (Hancock et al., 2012).

## Religiosity (young adult & adult studies)

Past research suggests that religious identity is furthered during the college years (e.g., Meeus et al. 1999; Waterman, 1985). However, research about the evolving role of religiosity during the transition to adulthood is limited (Chan et al., 2014). As the religious beliefs and practices of a person change during college, religiosity could also have an impact on the experiences that occur during those years. Studies suggest higher satisfaction with the college experience (Mooney, 2010), grade point average (GPA) (Mooney, 2010) and other positive outcomes are associated with religiosity (Merrill et al., 2009).

Some research indicates that no matter the religion practiced, emerging adults who regularly attended religious services were less likely to participate in risk-taking behaviors (Barry & Nelson, 2005). To date, the most common risk-taking behaviors studied with religiosity have been alcohol consumption, sexual behavior, and drug use. Little is known about financial behaviors such as spending habits, repaying of debt, and financial attitudes and practices in connection with religiosity. Additionally, researchers point to a need for more information on how religion influences the lives of college students (Mooney, 2010).

One might explore the link between academic achievement and religiosity from the lens of religion leading to a more disciplined lifestyle or work ethic than that of the non-religious (Mooney, 2010). Barry and Nelson (2005) explored the role of religion as it relates to culture on the financial literacy of undergraduate students at Catholic, Mormon, and public universities. The Arnett concept and definition of "emerging adulthood" was used. Arnett defined as a "distinct developmental period which is characterized by heightened risk-taking behavior and self-exploration of numerous domains, including one's spirituality" (2000, p. 471). The researchers also stated that emerging adults' religious beliefs were not strongly associated with personal socialization experiences during childhood. There is some evidence to suggest that the importance of religiosity in one's life makes a difference during emerging adulthood and there may be a difference for those deeply immersed in their religious practices than their less religious peers (p. 246). Consistently attending religious gatherings or services was related to increased academic achievement in undergraduates (Mooney, 2010).

In one study, 30 Arizona church members were interviewed to understand their economic interest, attitudes, and values. The results showed that people knew what financial items were salient but lacked the discipline to do anything with that knowledge. Participants reported religious beliefs were more important than financial practices such as budgeting. Some cited the potential cost and negative impacts of credit card debt while continuing to use credit cards. Additionally, participants reported church involvement as "very important" for aspects such as socialization and to promote well-being (Blake & Vucetic, 2013). While this study focused on adults ages 20-51, the same attitudes may be held by college students.

The findings from related studies have consistently shown that young adults' religious behavior tends to decline over this transitional period whereas their religious beliefs remain stable or even increase (e.g., Arnett & Jensen, 2002; Stoppa & Lefkowitz, 2010) (Chan et al., 2014). Conversely, the percentage of youth who reported an affiliation with a particular religion or faith declined significantly across the transition to adulthood. Neither ethnic group nor gender influenced this decline. While religious identity is thought to remain stable for females during this time, it declines for males (Chan et al., 2014).

Religiosity has been linked to positive outcomes associated with college student stressors (Merrill et al., 2009). Murphy (2013) examined the impact of various psychosocial factors such as religiosity on financial literacy on individuals over age 50. While this is not the target age group used in the current study, there are some interesting correlations that might hold true for any age group.  Murphy (2013) stated that theoretical associations have been discovered between the impacts of financial satisfaction, hopelessness and religiosity on financial literacy but these associations have not been fully explored. This study suggests that "financial satisfaction and religiosity are both significant independent predictors of financial literacy" (p. 73, Murphy, 2013).

On average, Catholics and Protestants and those with no religious affiliation earn roughly the same grades. However, Jews were found to earn higher grades than all other religious affiliations as well as non-religious affiliated students. People who are strongly committed to their religion typically have a better GPA than those who do not have a strong religious commitment (Mooney, 2010). In that vein of thought, some might cite the Biblical reference to working with all your heart at the task at hand ("Whatever you do, work at it with all your heart, as working for the Lord, not for human masters," Colossians 3:23, NIV).

However, the positive impact of religious attendance on college grades was no different when tested by demographic characteristics (e.g., race, class, gender, or immigration status) (Mooney, 2010). It would appear that religiosity increases GPA regardless of other variables. Not only does religion influence what people do but also how they do it and why (e.g., financial behavior vs. knowledge) (Mooney, 2010).

## Theoretical Base

Social Cognitive Theory states that people learn from observing others in their environment (Bandura, 2001; Goetz et al., 2011; Miller, 2011). As the theoretical framework in Figure 1 shows, personal characteristics and religiosity are contributing influences to knowledge and attitudes that ultimately impact behaviors.

Bandura (2001) defines *agency* as "the capacity to exercise control over the nature and quality of one's life" (p. 1). Bandura (2001) also points out that forethought as well as generative and reflective capabilities are also necessary for human progress. One could argue that agency, forethought, and generative and reflective capabilities play a role in each person's level of financial literacy and daily money management strategies.

Agency involves planning a course of action and then carrying out that action (Bandura, 2001). Creating a budget and holding to the plan are examples of exerting agency in one's life. Forethought could be directly linked to budgeting available money, planning for retirement or a large purchase, and many other aspects of financial management by planning for a specific outcome. Generative and reflective capabilities also go hand-in-hand with financial literacy. One has the capability to decide his or her own financial outcomes and then work toward them.

Some of the questions that assessed one's locus of control or agency were "How sure do you feel about your ability to manage your own finances?;" "I feel in control of my financial situation;" "I feel capable of using my future income to achieve my financial goals;” “I feel capable of using my future income to achieve my financial goals;” “I compare prices when shopping for purchases;” and “I read over and understand apartment leases and loan agreements before I sign them.”

Bandura and Bronfenbrenner point out that the culture in which one resides plays a large role on development. The same can also be true when one considers the influence of those around them (Miller, 2011). Students are socialized and de-socialized in college thus academic institutions and peers may play a large role in forming the patterns that will follow students into adulthood.

Students enter classrooms with different knowledge sets from their cultural backgrounds, time spent with family and a host of other factors suggesting that family socialization plays a key role in how one gains financial knowledge. What students bring to the classroom from prior experiences might impact how they learn as well as what they learn (Danes & Brewton, 2013).

## Conclusion

While the constructs of financial literacy and religiosity may have seem unrelated may cultural mores have religious significance (e.g., “Love your neighbor as yourself,” Matthew, 22:39, NIV) which play into the priorities and behaviors of today’s culture. Pre-marital counseling and marital counseling often address the topic of money within a religious context. Oftentimes churches require pre-martial counseling before allowing a marriage ceremony to take place within the church. Additionally, faith-based organizations are often a place of refuge for those in financial strain (e.g., food assistance, home repairs, and electricity bills).

Religion impacts what people do as well as how and why, researchers just do not know how to connect all of this to financial literacy in college students (Mooney, 2010). One idea that may be overlooked is that some members save money to be able to give more to the church. "No one can serve two masters. Either you will hate the one and love the other, or you will be devoted to the one and despise the other. You cannot serve both God and money" (Luke 16:13, NIV)

There is enough research to suggest that there could be a link between one's religiosity and financial literacy. If this is the case, churches and faith-based organizations may be able to intervene in increasing financial literacy for many different populations. Uncovering whether religiosity contributes to college student financial literacy would be a significant contribution to the literature.

# CHAPTER III

# METHODS

## Research Design

A cross-sectional survey using a descriptive study design was utilized for this study. The survey sought to identify a linkage between religiosity and financial literacy in undergraduate college students at MSU. This design was selected because the available literature reported that many of the other financial literacy studies focused on college students used a similar approach with an online survey (Dillman, 2007; Jorgensen, 2007).

### Population

The population for this study was undergraduate students at MSU who volunteered to participate in an online survey (See Appendix C for survey). At the time of the study, approximately 15,096 undergraduate students were enrolled at MSU. Undergraduate students were the target population because they are increasingly being included in studies about financial literacy and undergraduates are transitioning to financial autonomy.

### Participants

1,334 undergraduates started the survey, for a response rate of 8.84%. Participants that only provided partial responses were eliminated from the study. Analyses included 938 participants.

## Instrumentation

The College Student Financial Literacy Survey (CSFLS) was used to measure financial literacy among participants in the study (Jorgensen, 2007). This survey was developed to collect information about students' financial literacy and has been used to survey over 400 students on multiple college campuses. The CSFLS includes multiple scales related to financial literacy. The scales include financial attitudes, financial behaviors, financial influences, and financial knowledge. Jorgensen's scale on financial influence was not included in the current study.

The CSFLS was selected because it is considered to have acceptable reliability. For the financial attitudes subscale (items 1, 5 & 6), $\alpha = 0.77$, financial behaviors subscale (items 7, 11 & 12) $\alpha = 0.73$, and financial knowledge subscale (items 20-44) $\alpha = 0.77$ (Jorgensen & Savla, 2010). Additionally, the CSFLS has significantly correlated ($p<.01$) financial attitudes, behavior, and knowledge (Jorgensen, 2007).

The second instrument used was The Duke University Religion Index (DUREL) which was designed to quantify religiosity in predominantly Western cultures (Koenig & Bussing, 2010). The five-item survey collected religiosity information on three religiosity subscales (organizational religious activity (ORA), non-organizational religious activity (NORA), and inherent religiosity (IR)) from the undergraduate sample at MSU. DUREL has been used in more than 100 studies with high reported validity (r's = 0.71-0.86) and reliability (intra-class correlation = 0.91) (Koenig & Bussing, 2010).

## Personal Characteristics

For the purpose of collecting demographic information, including personal and family characteristics, a series of questions were included to the aforementioned surveys.

Participants were asked to provide information about: (1) gender (e.g., female or male), (2) age, (3) academic standing, (4) race/ethnicity, (5) student income, (6) parental income, (7) religious affiliation, (8) marital status, (9) field of study, (10) work experience (in years), (11) father's primary occupation, (12) mother's primary occupation, (13) father's education, (14) mother's education, (15) college payment arrangement (with or without parents), (16) international student, (17) housing arrangement, (18) GPA, and (19) religious affiliation.

**Data Collection and Procedures**

The Mississippi State University Office of Regulatory Compliance Institutional Review Board (IRB) granted approve to conduct an online survey with undergraduate students at MSU (See Appendix A for the approval letter). An online survey was proposed because email has been shown to be a cost-effective way of accumulating survey data (Dillman, 2007) and is commonly used on many different populations. Additionally, email is the primary source of communication between MSU representatives and students so online data collection and contact through email followed the communication standards established by the University. Furthermore, this study was not grant funded and MSU resources were maximized to ensure proper data collection with an adequate sample size. Email was the best method to contact all undergraduates without incurring costs.

After IRB approval, the Provost's Office and Information Technology Services were contacted to seek permission to post the survey on "My State", allowing students the opportunity to complete the surveys through their student email accounts. A description of the survey and rationale for the study was explained to the MSU Provost's office. Once approval was granted by the MSU Provost, the survey was added to the online student portal to begin data collection.

Students were recruited via email from an automated ITS form email (See Appendix B for recruitment email script). The recruitment email explained the exploratory nature of the study as well as the constructs to be measured (Financial Attitudes, Financial Behaviors, Financial Knowledge, and Religiosity). Two and a half weeks later the second and final email (See Appendix B for reminder email script) from the ITS form was sent to all undergraduates. This email reminded potential participants about the survey and notified them that it would close that afternoon. Three $50 gift cards were offered as incentives to encourage participation. Informed consent was obtained via the first screen of the survey after clicking the link to the survey in a student's "MyState" account.

Due to the login credentials needed to access an MSU "MyState" student account, each student was only able to complete the survey one time. Data was collected using the Qualtrics online survey software. Participants had two and a half weeks to complete the survey. Incomplete surveys were discarded and not used in data analysis. Any survey missing five consecutive answers was deemed incomplete and eliminated from the study.

**Variables**

The dependent variables for this study include three scales related to financial literacy. The scales measured financial knowledge, financial attitudes, and financial behaviors. The financial attitude scale is comprised of 20 questions and response options differed based on the question asked. Depending on the respective question, responses ranged from "not sure at all" to "very sure"; "not important" to "very important"; "not at all true of me" to "very true of me". The financial behavior scale is comprised of three questions and response options ranged from "very thrifty, saving money whenever I can" to "very spending-oriented, hardly ever saving money"; "strongly agree" to "strongly disagree"; "not at all true of me" to "very true of me". The financial knowledge scale is comprised of 25 scenario-oriented questions that a participant could answer either correctly or incorrectly, for a possible total score of 25.

The independent variables are three dimensions of religiosity (ORA, NORA, and IR), as described above. Additional independent variables included selected personal characteristics. As previously stated, the religiosity scale is comprised of five items. ORA is quantified by the question, "How often do you attend church or other religious meetings?" The response options to these items ranged from "never" to "more than once a week" with a total possible score of 6. NORA is measured by the question "How often do you spend time in private religious activities, such as prayer, meditation or Bible study?" The response options to this item ranged from "never" to "more than once a day" with a total possible of score of 6. The IR scale is comprised of the following three statements: "In my life, I experience the presence of the Divine (i.e. God)," "My religious beliefs are what really lie behind my whole approach to life," and "I try hard to carry my religion over into all other dealings in life." The response options to each of these items ranged from "definitely not true of me" to "definitely true of me" with a total possible score of 5 for each item, and combined score of 15.

In the current study, Cronbach's Alpha was repeated to test the reliability of each subscale included in this project. For the financial-related scales, financial attitudes (items 1, 5 & 6), $\alpha = 0.74$, financial behaviors subscale (items 7, 11 & 12) $\alpha = 0.64$, and financial knowledge subscale (items 20-44) α = 0.71. The reliability scores were similar to those obtained by Jorgensen (2007). The DUREL is composed of three scales. The three-item IR subscale had a Cronbach's alpha of 0.75.

Selected personal characteristics were measured as follows: (1) gender (e.g., female or male), (2) age (e.g., 18-22, 23-29, 30-39, 40-59, or 60 or older), (3) academic standing (e.g., First Year/Freshman, Sophomore, Junior, or Senior), (4) race (e.g., Caucasian-not Hispanic, Asian, African American, Hispanic, Multiracial, Native American/Pacific Islander, or other), (5) student income (e.g., $0-9,999, $10,000-19,999, $20,000-29,999, $30,000-39,999, or $40,000 or more), (6) parental income (e.g., $0-34,999, $35,000-49,999, $50,000-79,999, $80,000 or more, or don't know), (7) religious affiliation (e.g., no religion, Christian, other religion, or unidentified, (8) GPA (e.g., 0-.99, 1-1.99, 2-2.99, 3-3.99, or 4.0), (9) Years of Work Experience (e.g., none, less than 2 years, two-to-less-than-four years, four-to-less-than-six years, or six years or more), (10) College Education Paid (e.g., self, parents, mostly self (more than 50%), mostly parents (more than 50%),  or 50% self, 50% parents), (11) Level of Schooling (Father) (e.g., Less than High School, High School or Equivalent, Associates, Bachelor, Advanced Degree, or other), (12) Level of Schooling (Mother) (e.g., Less than High School, High School or Equivalent, Associates, Bachelor, Advanced Degree, or other).

**Data Analysis**

Quantitative analyses were used for data analyses. SPSS was used to conduct all analyses. Descriptive statistics, including frequencies, means, and standard deviations, were calculated for variables included in the study. Frequencies were calculated for the following variables: gender, race, age, GPA, academic standing, parental income, student income, years of work experience, religious affiliation, income (parent), college education paid, and level of school (mother and father) (See Tables 1 and 2). Means and standard deviations were calculated for the following variables: financial knowledge, financial attitudes, financial behaviors, and IR (See Table 3).

Next, individual items to be included on the respective scales were combined to make composite measures of financial knowledge, financial attitudes, financial behaviors, and religiosity. Once the composite measures were formed, Correlations were conducted to answer this study's research questions. Pearson Correlation was used to explore the relationship between ORA, NORA, IR and financial knowledge, ORA, NORA, IR and financial attitude, and ORA, NORA, IR and financial behaviors. Spearman Rho was used to explore the relationship between personal characteristics (ordinal in nature) and financial knowledge, financial attitudes, and financial behaviors. Spearman Rho was also used to explore the relationship between student's GPA and the dependent variables because student's GPA was not normally distributed. Spearman Rho is used to determine nonparametric correlation (Leech, Barrett & Morgan, 2011).

The strength of the relationship, or magnitude of effect size, between the independent variables and dependent variables were interpreted based on Cohen's guidelines (Cohen, 1988). Cohen described correlation coefficients of .10 as "small," those of .30 as "medium," and those of .50 as "large" in terms of magnitude of effect sizes (Hemphill, 2003).

# CHAPTER IV

# FINDINGS

This chapter provides a description of the participants that completed the survey. Descriptive statistics are provided on personal characteristics at the family and individual level. Bivariate correlations were conducted to determine whether there is a relationship between religiosity and the dependent variables: financial attitudes, financial knowledge, and financial behaviors. Bivariate correlations were also conducted to determine whether there is a relationship between selected personal characteristics and the dependent variables: financial attitudes, financial knowledge, and financial behaviors.

## Description of Personal Characteristics (Individual)

As previously stated, SPSS was used to obtain frequencies and other descriptive statistics. Participants were most likely to be male (63%) and Caucasian-not Hispanic (74%). Slightly more than one-third of respondents were female and less than one-fifth of participants were African American. The majority of participants were between 18-22 years of age (82%). Eighteen percent of participants were over the age of 22, many falling outside of the age of what is considered a “traditional” college undergraduate student. About one-third of the respondents were seniors (33%), closely followed by juniors (30%). Roughly two-thirds of participants had a GPA between 3.0 and 3.99. Two-to-less-than-four years of work experience was most common (30%), and the majority of students earned less than $10,000 last year (78%). Not surprisingly, over half of the students were Christians (54%). Most undergraduates are from Mississippi, followed by Tennessee and Alabama, respectively; all three states are commonly cited as parts of the "Bible Belt."

Jorgensen's sample was nearly the opposite of the current study in gender (59% female and 41% male). More of Jorgensen's sample was Caucasian (87%) and only 3% African American. In both studies, most participants (80%) were 18-22 years old. Jorgensen reported an almost equal distribution of freshman and seniors (30%).

Comparatively, the MSU student body is 48% female and 52% male and about 73% of undergraduates are under age 25. The majority (72%) of undergraduates are Caucasian, not-Hispanic. African Americans make up 21% of the undergraduate population and 2% of undergraduates are Hispanic (Common Data Set, 2014-2015). The academic standing in this sample closely resembles that of the University. Seniors are the biggest classification (33%), followed by freshmen (24%), juniors (22%), and sophomores (20%) (Mississippi, 2014). Additionally, GPA is often reported in research as correlating with higher financial literacy scores and higher religiosity (Mooney, 2010).

Table 1 Individual Personal Characteristics

| | Characteristics | N | % |
|---|---|---|---|
| Gender | Female | 337 | 36 |
| | Male | 597 | 63 |
| | No Response | 4 | <1 |
| Race | Caucasian-not Hispanic | 697 | 74 |
| | Asian | 38 | 4 |
| | African American | 141 | 15 |
| | Hispanic | 12 | 1 |
| | Multiracial | 14 | 1 |
| | Native American/Pacific Islander | 2 | <1 |
| | Other | 25 | 3 |
| | No Response | 9 | 1 |
| Age | 18-22 | 772 | 82 |
| | 23-29 | 113 | 12 |
| | 30-39 | 22 | 2 |
| | 40-59 | 25 | 3 |
| | 60 or older | 4 | <1 |
| | No Response | 2 | <1 |
| Academic Standing | First Year (Freshman) | 169 | 18 |
| | Sophomore | 173 | 18 |
| | Junior | 281 | 30 |
| | Senior | 314 | 33 |
| | No Response | 1 | <1 |
| GPA | 0-.99 | 3 | <1 |
| | 1-1.99 | 4 | <1 |
| | 2-2.99 | 198 | 21 |
| | 3-3.99 | 568 | 61 |
| | 4.0 | 92 | 10 |
| | No Response | 73 | 8 |
| Income (Student) | $0-9,999 | 730 | 78 |
| | $10,000-19,999 | 102 | 11 |
| | $20,000-29,999 | 49 | 5 |
| | $30,000-39,999 | 13 | 1 |
| | $40,000 or more | 25 | 3 |
| | Unidentified | 19 | 2 |

Table 1 (Continued)

| | | | |
|---|---|---|---|
| Years of Work Experience | None | 67 | 7 |
| | Less than 2 years | 247 | 26 |
| | Two to less than 4 years | 279 | 30 |
| | Four to less than 6 years | 157 | 17 |
| | Six years or more | 180 | 19 |
| | No response | 8 | <1 |
| Religious Affiliation | No Religion | 30 | 3 |
| | Christian | 508 | 54 |
| | Other Religion | 72 | 8 |
| | Unidentified | 328 | 35 |

**Description of Personal Characteristics (Family)**

Parental income was most likely to be $80,000 or more (35%), yet nearly one-third of students reported funding their own college education. Fathers were less educated than mothers. The highest degree held by 30% of fathers was a high school diploma or equivalent while nearly one-third of mothers and fathers held a bachelor's degree (33% and 29% respectively).

To compare the current study to Jorgensen's (2007) results, 39% of students reported parental income as $80,000 or more. In both studies, about half of participants report that their educations are paid either completely by the student or completely by parents. The parental educational breakdown is very similar in both studies as well.

Students in the "No Religion" category reported atheist, agnostic or something similar. Any denominational response or religion associated with God was categorized as "Christian." "Other religion" was made up of responses such as Buddhism, Hindu, or Islam. Participants who did not answer the religious affiliation question were coded as "Unidentified."

Table 2 Family Characteristics

| | Characteristic | N | % |
|---|---|---|---|
| Income (Parent) | $0-34,999 | 141 | 15 |
| | $35,000-49,999 | 126 | 13 |
| | $50,000-79,999 | 161 | 17 |
| | $80,000 or more | 328 | 35 |
| | Don't know | 169 | 18 |
| | No Response | 13 | 2 |
| College Education Paid | Self | 291 | 31 |
| | Parents | 239 | 26 |
| | Mostly Self (more than 50%) | 159 | 17 |
| | Mostly Parents (More than 50%) | 141 | 15 |
| | 50% self, 50% parents | 90 | 9 |
| | No Response | 18 | 2 |
| Level of Schooling (Father) | Less than High School | 47 | 5 |
| | High School or Equivalent | 273 | 30 |
| | Associates | 116 | 12 |
| | Bachelor | 266 | 29 |
| | Advanced Degree | 192 | 21 |
| | Other | 25 | 3 |
| | No Response | 19 | 2 |
| Level of Schooling (Mother) | Less than High School | 26 | 3 |
| | High School or Equivalent | 206 | 22 |
| | Associates | 168 | 18 |
| | Bachelor | 313 | 33 |
| | Advanced Degree | 196 | 21 |
| | Other | 16 | 2 |
| | No Response | 13 | 1 |

## Correlations between Religiosity and Dependent Variables

Table 3 reports the relationship between three dimensions of religiosity (ORA, NORA, and IR) and financial knowledge, three dimensions of religiosity and financial attitudes, and three dimensions of religiosity and financial behaviors. Pearson was used to calculate the correlation coefficients. No scales were considered statistically significant.

When analyzing the coefficients, the following results were found for ORA plus financial knowledge (r= -.037), ORA plus financial attitude (r= -.023), ORA plus financial behaviors (*r*= -.044); NORA plus financial knowledge (r= -.043), NORA plus financial attitudes (r= .006), NORA plus financial behaviors (r= -.034); IR plus financial knowledge (r= -.031), IR plus financial attitudes (r= .022), and IR financial behaviors (r= .010). None of the religiosity measures were significantly related to any of the financial subscales.

Table 3 Correlations of Religiosity and Financial Literacy Items (N=938)

| Measure | *ORA* | *NORA* | *IR* |
|---|---|---|---|
| Financial Knowledge | -.037 | -.043 | -.031 |
| Financial Attitudes | -.023 | .006 | .022 |
| Financial Behaviors | -.044 | -.034 | .010 |
| *M* | 3.82 | 3.16 | 3.73 |
| *SD* | 1.54 | 1.76 | 1.26 |

**Correlations between Personal Characteristics and Financial Literacy**

Next, the relationship between personal characteristics and financial knowledge, financial attitudes, and financial behaviors was examined. As reported in Table 4, the following characteristics were significantly related to financial knowledge: age (*r*=.159), academic standing (*r*=.185), overall GPA (r= .162), parental income (r= .108), student income ($r$=.203), and years of work experience ($r$= .198). The magnitude of the significant correlations were weak. A statistically significant relationship was not observed between selected personal characteristics and financial attitudes or selected personal characteristics and financial behaviors.

Table 4 Correlations of Personal Characteristics and Financial Literacy Items (N=938)

| Measure | *Age* | *Academic standing* | *Income (Parent)* | *Income (Student)* | *Overall GPA* | *Years of Work Experience* |
|---|---|---|---|---|---|---|
| Financial Knowledge | .159** | .185** | .108** | .203** | .162** | .198** |
| Financial Attitudes | .045 | .037 | .036 | .031 | .016 | .042 |
| Financial Behaviors | .049 | -.042 | .035 | .018 | -.003 | .047 |

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

# CHAPTER V

# IMPLICATIONS

Many religious institutions (e.g., churches) seek to strengthen individuals, including college students, families, and communities. Increasingly, churches provide strategies to handle the demands of routine tasks such as finding jobs, financial assistance for monthly bills, or practical ways of handling debt (France, 2008). The Mission Waco reported that financial planning and debt reduction courses are the most requested services by the low-income clients served (Hoover, 2015). Religious organizations have long been places to network, find local resources and news, and fulfill other needs of members such as prayer requests. Since churches often provide a support system to members, making necessary changes can become easier when done in conjunction with friends in the faith and provide accountability to participants (France, 2008; Hamm, 2011; Hoover, 2015). Services such as financial education or financial counseling can go hand-in-hand with pre-marital and marital counseling, services that many churches already provide (Ottney, 2013). Due to the multiple influencers of financial literacy, a concerted educational effort among multiple institutions, including churches has been recommended (France, 2008; Hamm, 2011; Hoover, 2015; Leland, 2007).

Over the last decade, churches have offered financial counseling and education programs (e.g., Dave Ramsey and Chuck Bentley) from a biblical perspective to individuals and couples (France, 2009; Hamm, 2011; Hoover, 2015; Leland, 2007;

Wolgemuth, 2008). While not rigorously evaluated or researched using scientific methods, such counseling and classes indicate that religious leaders perceive that they have a role in financial literacy. Some evidence suggests that financial education offered through churches has positively influenced individual and family financial decision making (France, 2009; Hamm, 2011; Hoover, 2015; Leland, 2007; Wolgemuth, 2008).

Although churches have increasingly offered financial education through workshops and speakers, it is undocumented whether such education has reached college students. The lack of relationship between the religious scales and the financial scales could suggest that religious leaders and institutions are not formally or informally reaching emerging adults with financial education. In fact, participants who had high religiosity scores did not know more about money that those who had low religiosity scores. The lack of influence among college students could be due to multiple factors, factors such as decreasing church attendance or adherence to religious principles, conflicting demands on college students' attention, strong peer influence, and risk-taking behaviors.

Past research has connected religious affiliation and involvement to positive characteristics such as higher GPA (Mooney, 2010) and confidence to handle problems out of one's control (Merrill et al., 2009), less pre-martial sexual activity, getting drunk, and illegal drug use (Barry & Nelson, 2005). Other areas of research have found mixed results when studying the influence of religiosity on people (e.g., Sherkat & Ellison, 2007; Murphy, 2013). Additionally, Murphy (2013) reported a negative impact of religiosity on financial literacy among adults over 50-years-old.

The aforementioned factors could suggest that the time to reach congregants is before the college years. The tumultuous transition to adulthood and autonomy seems to cause lower affiliation with a specific religion or faith as well as decreased religious identity and involvement through the college years (Chan, et al., 2014). However, regardless of the religious affiliation of college students, those who attend religious services on a regular basis participated in fewer risk-taking behaviors than their non-regularly attending peers (Barry & Nelson, 2005). Perhaps financial literacy should also be viewed as a risky behavior.

## Financial Education

Currently, about half of the states in the United States of America mandate financial education classes or programs in high school (Jump Start, 2013). With the far-reaching cultural effects of this problem such as delaying home purchases, moving in with parents after college graduation, and taking jobs that would otherwise be rejected just to make debt payments, it is surprising that more policies do not address the lack of financial knowledge (Tetreault, 2012). "The promotion of financial literacy can be seen as a means for the State to mitigate the social welfare issues which stem from poor financial decisions," said Cull and Whitton (2011, p. 99).

Some in higher education want to add financial education to the general education requirements for college graduation (Chinen & Endo, 2012; Maurer & Lee, 2011; Supiano, 2008). Conversely, some experts point to expanding low-cost credit options for students (Robb & Sharpe, 2009). These potential policies will not be implemented without more research to support them or similar measures.

## Limitations

There were several limitations to this study. First, a convenience sample was used to gather undergraduate student information. Second, students were only recruited via an email with a brief introduction of the survey and incentive information. Third, the instrument used did not go in-depth on variables measured for time sake of the undergraduates who self-selected to participate (e.g., budgeting priorities, entertainment spending habits, and personal opinions about student loan debt, credit card debt and borrowing practices). There is no way to predict whether the time of year (immediately after Spring Break) had an impact on participation or results. Fourth, by only surveying students at Mississippi State University this study has limited generalizability, but the design allows for replication at other institutions. Regardless of these limitations, the results contribute to the financial literacy and religiosity literature.

## Future Research

Since the results of this study point to no link between financial literacy and religiosity, an important gap in the literature has been addressed. Financial literacy research should be focused on other variables surrounding college students. Religiosity research should look to other points in life to see if additional factors and personal characteristics impact financial literacy.

Future research should look to other variables such as denomination or length of membership to see if other parts of religiosity may influence one’s financial literacy. Religious culture or denomination is worth exploring for this reason alone. Additionally, behavioral research (e.g., financial tracking and budgeting priorities) may prove more meaningful than questions about financial knowledge, considering that knowledge does not necessarily result in recommended practices.

The college years are documented as a time of great change in a number of ways. If researchers could better understand how this period of time influence's one's financial knowledge and financial behaviors, perhaps educational programs could be developed and more policies could be put into place to encourage teaching financial principles and best practices.

Another conclusion that must be mentioned is that religiosity may not be as influential until later in life (Murphy, 2013). As young adults explore ideas and develop their own religious identities, financial behaviors may not reflect spiritual beliefs or practices. While the current study found no link between religiosity and financial literacy, if conducted at a different time in the life cycle, the results might be different.

Additionally, research is mixed on best practices for studying financial literacy (e.g., business or economic perspective, actual knowledge, or social science focused on behavior) (Robb & Sharpe, 2009). One approach is not right or wrong, but the concept of financial literacy may necessitate a more holistic approach. Various methods and instruments of financial literacy have been used on many different populations, so consistent instrument use and results are hard to find. Until instruments are created that are widely accepted and used, these mixed results are likely to continue.

Research into family characteristics could also be important to informing what form of financial education is most beneficial and implementing changes as participants in the course (e.g., parents and children together). These findings suggest that understanding financial literacy formation is complex and a subject worth more research. Richard Cordray of the Consumer Financial Protection Bureau summarized the issue,

> But as the financial marketplace has grown more complex, we have made an enormous mistake in this country by not placing a consistent and sustained emphasis on financial education. Every year, we send thousands of young people out into the world to survive on their own, with little or no training in the kinds of decisions they must make to succeed financially (Cordray, 2013).

## Recommendations

The process of conducting this thesis research has resulted in recommendations for future graduate students and researchers interested in measuring financial literacy and religiosity among college students. Future researchers should pilot test the combined instruments prior to data collection. Moreover, graduate students and researchers could invite experts in the field to review the combined instruments for face validity.

Financial literacy research should take a longitudinal approach to research. Financial literacy literature is severely lacking a long-term perspective on the issues that are crippling so many in our country. Many limitations that factor into longitudinal data collection (e.g., cost and time), but a long-term perspective would add understanding to programs aimed at financial knowledge.

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APPENDIX A

IRB STUDY APPROVAL

IRB Study Approval

Protocol Title: Financial literacy and religiosity among MSU undergraduates

Protocol Number: 15-030

Principal Investigator: Ms. Karen Crow

Date of Determination: 1/30/2015

Qualifying Exempt Category: 45 CFR 46.101(b)(2)

Attachments: 15-030 - Stamped IC and survey (in follow-up email)

Dear Ms. Crow:

The Human Research Protection Program has determined the above referenced project exempt from IRB review.

Please note the following:

• Retain a copy of this correspondence for your records.

• An approval stamp is required on all informed consents. You must use the stamped consent form for obtaining consent from participants.

• Only the MSU staff and students named on the application are approved as MSU investigators and/or key personnel for this study.

• Your approved study will expire on 5/31/2016, which was the completion date indicated on your application. If additional time is needed, please contact our office. (SOP 01-03 Administrative Review of Applications)

• Any modifications to the project must be reviewed and approved by the HRPP prior to implementation. Any failure to adhere to the approved protocol could result in suspension or termination of your project.

- Per university requirement, all research-related records (e.g., application materials, letters of support, signed consent forms, etc.) must be retained and available for audit for a period of at least 3 years after the research has ended.
- It is the responsibility of the investigator to promptly report events that may represent unanticipated problems involving risks to subjects or others.

This determination is issued under the Mississippi State University's OHRP Federalwide Assurance #FWA00000203. All forms and procedures can be found on the HRPP website: www.orc.msstate.edu.

Thank you! for your cooperation and good luck to you in conducting this research project. If you have questions or concerns, please contact me at kmyhand@orc.msstate.edu or call 662-325-3294.

Finally, we would greatly appreciate your feedback on the HRPP approval process. Please take a few minutes to complete our survey at https://www.surveymonkey.com/s/PPM2FBP.

Sincerely,

Katie Myhand

Assistant Compliance Administrator

cc: Laura Downey (Advisor)

# APPENDIX B

# RECRUITMENT EMAILS

Initial email sent on March 18, 2015

Dear Student,

Want a chance to win a $50 gift card to a local restaurant? All undergraduates over 18-years-old are invited to take an online survey for a chance to enter. Three participants will win a $50 restaurant gift card.

This survey is about financial literacy and also has a few questions about your religious practices. Participation allows you to be part of a Master's thesis project and to contribute to the understanding of undergraduate financial literacy at MSU!

The survey link is located on your MyState homepage. If you have questions, contact Karen Crow for more information at kbc214@msstate.edu.

Thank you for your time!

Reminder email on April 2, 2015

Dear Student,

Want a chance to win a $50 gift card to a local restaurant? All undergraduates over 18-years-old are invited to take an online survey for a chance to enter. Thank you to those who have already taken it. If you have not yet taken it, the survey will close on Thursday, April 2, at 5:00 P.M. Three participants will win a $50 restaurant gift card.

This survey is about financial literacy and also has a few questions about your religious practices. Participation allows you to be part of a Master's thesis project and to contribute to the understanding of undergraduate financial literacy at MSU.

The survey link is located on your MyState homepage. If you have questions, contact Karen Crow for more information at kbc214@msstate.edu.

Thank you for your time!

# APPENDIX C

## INSTRUMENT

College Student Financial Literacy Survey

Welcome!

Thank you for your participation in the College Student Financial Literacy Survey. If you are at least 18-years-old and are an undergraduate or graduate college student, please read the information below about the study before taking the survey.

Information and Consent Form

I invite you to participate in my thesis research about the financial literacy of college students. The purpose of this project is to measure financial literacy and to see if religiosity influences financial behavior. There are questions about financial attitudes, financial behaviors, financial knowledge, influences on financial literacy, religiosity, and demographic information. Please try to answer every question. If there is a question you do not feel comfortable answering, you may skip it.

There are 47 questions in this survey as well as some demographic questions at the end. It will take you about 10-20 minutes to complete the survey.

No one but me will see answers and you will not be asked to give your name or any information that tells us who you are during the survey. This survey is anonymous for all respondents with no link between your answers and you. Your decision to participate in this research is voluntary. You can stop at any time. You may skip questions you do not want to answer.

There are no risks in participating in this research beyond those experienced in everyday life. Many of the questions involve personal opinion.

You may ask questions about this research by contacting me at kbc214@msstate.edu. In addition, you may contact Dr. Jodi Roberts, IRB Officer at Mississippi State at 662.325.2238 or email jroberts@orc.msstate.edu with questions about your rights as a research participant.

By continuing with the survey and submitting it, it means you have read this form and are consenting to take the survey under the conditions described above.

**FINANCIAL ATTITUDES**

1. How sure do you feel about your ability to manage your own finances?
    a. Not sure at all – I wish I knew a lot more about money management
    b. Not too sure - I wish I knew more about money management
    c. Somewhat sure - I understand most of what I'll need to know
    d. Very sure - I understand money management very well

2. How interested are you in increasing your financial knowledge? Why?
    a. Very uninterested
    b. Somewhat uninterested
    c. Not sure
    d. Somewhat interested
    e. Very interested

Why?______________________________________________________________________
__________________________________________________________________________
_____________

3. Would you take a personal finance course as an elective if offered?
____Yes ___No
Why or why not?
________________________________________________________________________
__________________________________________________________________________
____________

4. Which topics would be of interest to you?
(Check all that apply)
Budgeting
Investing
Taxes
Credit
Wills
Life Insurance
Auto Insurance
Loans/debt
Credit cards
Saving
Interest rates
Other:_______________________________________________

5. Using the scale given below, please rate the importance of items to you (1. not important, 2. somewhat unimportant, 3.not sure, 4.somewhat important, 5.very important)

a. Maintaining adequate financial records

1 2 3 4 5

b. Spending less than your income

1 2 3 4 5

c. Maintaining adequate insurance coverage

1 2 3 4 5

d. Planning and implementing a regular savings/investment program

1 2 3 4 5

6. Rate the following items on a scale of 1-5 (1 = not at all true of me and 5 = very true of me)

a. I feel in control of my financial situation

1 2 3 4 5

b. I feel capable of using my future income to achieve my financial goals

1 2 3 4 5

c. My finances are a significant source of worry or "hassle" for me

1 2 3 4 5

d. I am uncertain about where my money is spent

1 2 3 4 5

e. I feel credit cards are safe and risk free

1 2 3 4 5

f. Purchasing things is very important to my happiness

1 2 3 4 5

g. I feel capable of handling my financial future (e.g., buying insurance or investments)

1 2 3 4 5

h. I am afraid of credit and credit cards

1 2 3 4 5

i. I feel the cost of using a credit card is too high

1 2 3 4 5

j. I feel putting away money each month for savings or investments is important

1 2 3 4 5

k. I feel having life insurance is an important way to protect loved ones
1 2 3 4 5

I. I feel it is important to understand apartment leases and loan agreements before I sign
1 2 3 4 5

m. I enjoy thinking about and have interest in reading about money management
1 2 3 4 5

n. I enjoy talking to my peers about money management issues (i.e. taxes, investing, credit cards)
1 2 3 4 5

o. I am comfortable with not paying my credit card bills in full each month as long as I make the minimum payment
1 2 3 4 5

p. I feel disability insurance is less important than life insurance
1 2 3 4 5

q. I feel being covered by homeowner's or renter's insurance is important
1 2 3 4 5

**FINANCIAL BEHAVIORS**

7. Some people tend to be very thrifty, saving money whenever they have the chance while others are spending-oriented, buying whenever they can and even borrowing to consume more. How would you classify yourself?

a. Very thrifty, saving money whenever I can
b. Somewhat thrifty, often saving money
c. Neither thrifty nor spending oriented
d. Somewhat spending-oriented, seldom saving money
e. Very spending-oriented, hardly ever saving money

8. What kind of financial accounts do you have? (Check all that apply)
Savings
Checking
Money market
Certificate of Deposit (CD)
Stocks
Bonds
Mutual funds
IRA
Other: ______________________________

9. How much do you estimate you owe on all debts including credit cards, student loans and other debts? (Do not include mortgage)

a. $0
b. $1-$4999
c. $5000-$9999
d. $10,000- $19,999
e. $20,000 - $39,999
f. $40,000 or more
g. Don't know

10. Respond to the following questions on credit cards: (if you have no credit cards skip to question 11)
a. How many credit cards do you have? ____
b. What is the combined total balance owed on your credit cards?_______________

a. $0 - $99
b. $100 - $499
c. $500 - $1999
d. $2000 - $4999
e. $5000 or more
f. Don't know

c. How do you usually pay your monthly credit card bills?

a. I pay the minimum
b. I pay between the minimum and full amount
c. I pay credit bills in full
d. My parents pay my credit card bill

11. In what manner do you maintain financial records?

a. Maintain no records

b. Maintain minimal records

c. Maintain very detailed records

12. Rate the following items on a scale of 1-5 (1= not at all true of me and 5 = very true of me)

a. I budget and track spending.

1 2 3 4 5

b. I compare my receipts of purchases to my monthly statement.

1 2 3 4 5

c. I use credit cards to make purchases that I can't afford and I don't have the money in the bank to pay the bill.

1 2 3 4 5

d. I get cash advances from my credit card.

1 2 3 4 5

e. I have my parents "bail me out" of credit card debt.

1 2 3 4 5

f.I work extra hours (in excess of 20 hours a week) to meet bills and expenses.

1 2 3 4 5

g. I miss class to work extra hours to meet bills and expenses.

1 2 3 4 5

h. I contribute to a savings account regularly.

1 2 3 4 5

i. I find legal ways to lower my taxes.

1 2 3 4 5

j. I compare prices when shopping for purchases.

1 2 3 4 5

k. I have a life insurance policy.
1 2 3 4 5

I. I read to increase my financial knowledge.
1 2 3 4 5

m. I read over and understand apartment leases and loan agreements before I sign them.
1 2 3 4 5

n. I contribute to an investment account.
1 2 3 4 5

o. I have a disability insurance policy.
1 2 3 4 5

p. I am covered by a homeowner's or renter's insurance policy
1 2 3 4 5

**INFLUENCES**

13. Rate the following influences on a scale of 1-5 (1=none, 2 =not much, 3 =not applicable, 4 = some, 5 = a lot). How much did you learn about managing your money from the following:

Parents
1 2 3 4 5

Friends
1 2 3 4 5

School
1 2 3 4 5

Books
1 2 3 4 5

Media
1 2 3 4 5

Job
1 2 3 4 5

Life experiences
1 2 3 4 5

Internet
1 2 3 4 5

Informal public seminar or class
1 2 3 4 5

Financial planner or counselor (professional)
1 2 3 4 5

14. Rate the following on a scale of 1-5 (1= never, 2 = once per year, 3 = every few months, 4=twice per month, 5 =weekly). How often were you influenced by or did you discuss finances with the following:
Parents
1 2 3 4 5

Friends
1 2 3 4 5

School
1 2 3 4 5

Books
1 2 3 4 5

Media
1 2 3 4 5

Job
1 2 3 4 5

Life experiences
1 2 3 4 5

Internet
1 2 3 4 5

Informal public seminar or class
1 2 3 4 5

Financial planner or counselor (professional)
1 2 3 4 5

15. Which of the following items did you learn about in your home while growing up? (Check all that apply)
Budgeting
Investing
Taxes
Credit
Wills
Auto Insurance
Renter's/Homeowner's Insurance
Giving to charities
Interest rates
Keeping records
Life Insurance
Disability Insurance
Loans/debt
Credit cards
Saving
Being honest in all dealings
Work for what you receive
Other: ________________________

16. Which of the following classes have you had? (check all that apply)

a. An entire course in money management or personal finance
b. A portion of a course where at least a week was focused on money management or personal finance
c. An entire course in economics
d. A portion of a course where at least a week was focused on economics

Other: _______________________________________

17. Where do you expect to learn/increase your financial knowledge? (check all that apply)

Parents
Friends
School
Books
Media
Job
Life experience
Financial planner or counselor (professional)
Other: ___________________________________________________
Explain:__________________________________________________________________

18. How would you describe how finances were handled in your family? (check all that apply)

a. My parents usually argued about the finances
b. Within the family we openly discussed our finances
c. My parents explicitly taught me about finances (e.g., credit cards, debt, budgeting, savings)
d. We didn't talk much about finances but I learned from their examples
e. My parents included me in various financial decisions

Other:__________________________________________________________________

19. Comparing yourself to your parents, would you say that you are:

a. Much more likely to save
b. Somewhat more likely to save
c. About as likely to save/spend
d. Somewhat more likely to spend
e. Much more likely to spend

**FINANCIAL KNOWLEDGE**

20. Net worth is:

a. The difference between expenditures and income
b. The difference between liabilities and assets
c. The difference between cash inflow and outflow
d. The difference between borrowings and savings
e. None of the above

21. In which year after a car is bought does it lose its value the fastest?

a. First Year
b. Second year
c. Fourth year
d. Seventh year

22. Which account usually pays the MOST interest?
a. Certificate of deposit (CD)
b. Savings account
c. Checking account
d. Money Market account

23. When a check bounces, who, if anyone, is usually charged a fee?
a. The check writer only
b. The person to whom the check is written only
c. Neither the check writer nor the person to whom the check is written
d. Both the check writer and the person to whom the check is written

24. Rob and Molly are the same age. At age 25 Rob began saving $2,000 a year for 10 years and then stopped at age 35. At age 35, Molly realized that she needed money for retirement and started saving $2,000 per year for 30 years and then stopped at age 65. Now they are both 65 years old. Who has the most money in his or her retirement account (assume both investments had the same interest rate)?
a. Molly, because she saved more money overall
b. Rob, because his money has grown for longer period of time
c. They would each have about the same amount
d. Unable to determine with information provided

25. If you signed a 12-month lease for $300/month but never occupied the apartment, you actually owe the landlord
a. Your security deposit
b. Your first month's rent of $300
c. Your twelve month's rent of $3600
d. Nothing
e. Whatever the landlord wants

26. The MOST important factors that lender use when deciding whether to approve a loan are
a. Marital status and number of children
b. Education and occupation
c. Age and gender
d. Bill-paying record and income

27. If you co-sign a loan for a friend, then you
a. Become eligible to receive part of the loan principal
b. Vouch for the friend's reliability but have no legal obligation for the loan
c. Are responsible for repaying the loan if the friend defaults
d. Are in a better position to get a personal loan

28. If a consumer fails to pay personal debts, a creditor is allowed to do all of the following
EXCEPT:
a. Discuss the consumer's debts with his or her employer
b. Bring suit against the consumer
c. Tell a credit bureau that the account is delinquent
d. Turn the account over to a professional debt collector

29. All of the following are TRUE of bankruptcies except:
a. It is more difficult to get a low interest rate loan
b. It will stay on your credit for ten years
c. Any loan you receive will have a higher interest rate due to the bankruptcy
d. For all types of bankruptcies you are released from all your debt

30. What does a credit bureau do?
a. Approves applications for credit
b. Informs applicants of the reasons for denial of credit
c. Extends credit to qualified applicants
d. Provides creditors with reports of consumers' bill-paying records

31. The owner of a credit card that is lost or stolen is legally responsible for
a. Any unauthorized charges
b. Any unauthorized charges until the loss or theft is reported
c. Only the first $50 of any unauthorized charges
d. Only the first $500 of any unauthorized charges
e. No unauthorized charges

32. If a credit card account has a balance carried over from the previous month, when will interest charges usually begin on a new credit purchase?
a. On the day of the purchase
b. One month after the date of the purchase
c. After a 2-week grace period
d. After a 2-month grace period

33. Your take home pay for your job is less than the total amount you earn. Which of the following best describes what is taken out of your total pay?
a. Federal income tax, property tax, and Medicare and social security contributions
b. Social security and Medicare contributions
c. Federal income tax, social security and Medicare contributions
d. Federal income tax, sales tax, and social security contribution
e. Federal income tax, social security, Medicare contributions, state and local taxes

34. Is a $500 tax credit or a $500 tax deduction more valuable to you?
a. A $500 tax credit
b. A $500 tax deduction
c. They are the same
d. Depends on your tax bracket

35. Assume you are in your early twenties and you would like to build up your nest egg for a secure retirement in 30 years. Which of the following approaches would best meet your needs?
a. Start to build up your savings account gradually in an insured bank
b. Save money in certificate of deposit accounts
c. Put monthly savings in a diversified growth mutual fund
d. Invest in long-term Treasury bonds
e. Accumulate money in a safe-box rented from a local bank

36. Which of the following combination of investments is most risky?
a. A mutual fund containing 80% stocks and 20% bonds
b. A mutual fund containing 80% bonds and 20% stocks
c. An index fund (like the S&P 500)
d. Stock in a single company

37. Hector and Maria just had a baby. They received money as baby gifts and want to put it away for the baby's education. Which of the following tends to have the highest growth over periods of time as long as 18 years?
a. U.S. Government savings bond
b. Stocks and mutual funds
c. A savings account
d. A money market account

38. Many people put aside money to take care of unexpected expenses. If Susan and Joe have money put aside for emergencies, in which of the following forms would it be of LEAST benefit to them if they needed it right away?
a. Savings account
b. A house
c. Stocks
d. Checking account

39. If an auto insurance policy has bodily injury limits of $100,000/$300,000, the insured person is covered for
a. Up to $100,000 for each accident but no more than $300,000 for the life of the policy
b. Up to $100,000 for medical bills but no more than $300,000 for hospital costs
c. Up to $100,000 for each person injured but no more than $300,000 for each accident
d. Up to $100,000 for people in the insured auto but no more than $300,000 for people outside the insured auto

40. Choose the type of insurance coverage (1. liability, 2. comprehensive, 3. collision, 4. uninsured motorist) that pays for the following:

40-1. The replacement of a stolen car
a. liability
b. comprehensive
c. collision
d. uninsured motorist

40-2.A loss resulting from a lawsuit
a. liability
b. comprehensive
c. collision
d. uninsured motorist

40-3.Damage to your own car from an accident caused by you
a. liability
b. comprehensive
c. collision
d. uninsured motorist

41. The main reason to purchase insurance is to
a. Protect you from a loss recently incurred
b. Provide you with excellent investment returns
c. Protect you from sustaining a catastrophic loss
d. Protect your from small incidental losses
e. Improve your standard of living by filing fraudulent claims

42. Assume you are in your twenties, don't have a lot of money, are married and have one child. Assuming you already have disability insurance through your employment, which of the following would you do regarding your life insurance?

a. You would buy a term insurance policy
b. You probably do not need to buy any life insurance policy
c. You would buy flight insurance each time you travel by air
d. You would buy a cash value insurance policy

43. The owner of a bank debit card that is lost or stolen is legally responsible for

a. Any unauthorized charges
b. Any unauthorized charges until the loss or theft is reported
c. Only the first $50 of any unauthorized charges
d. Only the first $500 of any unauthorized charges
e. No unauthorized charges

44. Which of the following cannot legally access your credit report?

a. Creditors
b. Employers
c. Apartment rental agencies
d. Insurance companies
e. All of the above can access your credit report

Thank you for answering the financial questions. Please answer the final general questions below.

45. What is your gender?

Male
Female

46. What is your age?

a. 18-22
b. 23-29
c. 30-39
d. 40-59
e. 60 or older

47. What is your academic standing?

a. First-year (Freshman)
b. Sophomore
c. Junior
d. Senior

48. What is your race/ethnicity?
a. African American
b. Asian
c. Caucasian-not Hispanic
d. Hispanic
e. Multiracial
f. Native American/Pacific Islander
Other:__________________

49. What is your marital status?
a. Never been married
b. Married
c. Divorced
Other:________________

50. What is your major field of study?
a. Business
b. Agriculture &Life Sciences
c. Education
d. Liberal Arts
e. Human Sciences
f. Science
g. Engineering
h. Medicine
i. Law
Other: ___________

51. Which best describes your parents' income last year?
a. 0-$34,999
b. $35,000-$49,999
c. $50,000-$79,999
d. $80,000 or more
e. Don't Know

52. How many years of working experience do you have? (Include full or part-time experience, internships, co-ops, summer jobs, etc.)
a. None
b. Less than 2 years
c. Two to less than 4 years
d. Four to less than 6 years
e. Six years or more

53. My father's primary occupation is: ___________________________________

54. My mother's primary occupation is: __________________________________

55. What is the highest level of schooling your father has completed?
a. Less than high school
b. High school or equivalent
c. Associates/community college degree
d. Bachelor's degree
e. Masters, doctorate, or professional degree like medical doctor, veterinarian, or lawyer
Other: _______________________________________

56. What is the highest level of schooling your mother has completed?
a. Less than high school
b. High school or equivalent
c. Associates/community college degree
d. Bachelor's degree
e. Masters, doctorate, or professional degree like medical doctor, veterinarian, or lawyer
Other: ________________________________________

57. My college education is paid by (including who will pay off student loans if applicable)
a. self (100%)
b. Parents (100%)
c. Mostly self (more than 50%)
d. Mostly parents (more than 50%)
e. 50% self, 50% parents

58. Are you an international student?
a. No
b. Yes, less than 2 years in the U.S.
c. Yes, 2 to 4 years in the U.S.
d. Yes, 4 to 6 years in the U.S.
e. Yes, 6 years or more in the U.S.

59. What is your housing arrangement?
a. On-campus
b. Off-campus rent
c. Off-campus own
d. Live with parents/relatives
Other: ____________________________

60. Which best describes your income last year (not including student loans)?
a. 0-$9,999
b. $10,000 -$19,999
c. $20,000 -$29,999
d. $30,000-$39,999
e. $40,000 or more

61. What is your overall grade point average (GPA)? _________

62. How often do you attend church or other religious meetings?

a) Never
b) Once a year or less
c) A few times a year
d) A few times a month
e) Once a week
f) More than once/week

63. How often do you spend time in private religious activities, such as prayer, meditation or Bible study?

a) Rarely or never
b) A few times a month
c) Once a week
d) Two or more times/week
e) Daily
f) More than once a day

The following section contains 3 statements about religious belief or experience. Please mark the extent to which each statement is true or not true for you.

64. In my life, I experience the presence of the Divine (i.e., God)

a) Definitely not true
b) Tends not to be true
c) Unsure
d) Tends to be true
e) Definitely true of me

65. My religious beliefs are what really lie behind my whole approach to life
a) Definitely not true
b) Tends not to be true
c) Unsure
d) Tends to be true
e) Definitely true of me

66. I try hard to carry my religion over into all other dealings in life

a) Definitely not true
b) Tends not to be true
c) Unsure
d) Tends to be true
e) Definitely true of me

67. What is your religious affiliation? ____________________________

Enter your email address to be entered into the gift card raffle. This question is optional. Those who do not provide an email address will not qualify for the drawing.
Email: ______________________________________