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## More Than Money: Understanding Marital Influences on Retirement Savings Rates

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More Than Money: Understanding Marital Influences on Retirement  
Savings Rates

Scott H. Payne

A dissertation submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy

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## ABSTRACT

### More Than Money: Understanding Marital Influences on Retirement Savings Rates

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Doctor of Philosophy

Using data from 584 individuals identifying themselves as married, the purpose of this study was to examine how personal and relational characteristics were linked to financial attitudes, knowledge, and capabilities and financial well-being using the family financial socialization framework (Gudmunson & Danes, 2011). Supporting the first two hypotheses, marital quality, materialism, age, and household income were found to directly predict financial prudence as a measure of financial attitudes, knowledge, and capabilities and to indirectly predict retirement savings rate as a measure of financial well-being. Financial prudence supported the first hypothesis as well by directly predicting retirement savings rate. Education also supported the first hypothesis, in that it directly predicted an individual's measure of financial prudence. In support of the third hypothesis, education was associated with retirement savings rate. Results suggest the importance of considering both financial and non-financial predictors of saving for retirement.

Keywords: retirement, retirement saving, marital quality, materialism, financial prudence

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## Introduction

The idea of saving for retirement, or even selecting how much to save is frequently met with procrastination and apathy (Thaler & Benartzi, 2004). Multiple avenues have been evaluated to help individuals overcome the desire to procrastinate, and the lack of inertia often present when saving for retirement. What is often missed, however, is the value that marriage may have in helping individuals to save for retirement. Marriage can provide a rich contextualization for evaluating retirement issues as most married individuals retire as part of a couple (Atchley, 2001). In addition, Knoll, Tamborini, and Whitman (2012) found married young adults placed greater value on saving for retirement than their young adult counterparts that are cohabiting or single. Therefore, understanding aspects of the relational context that may influence saving for retirement, such as marital quality and materialism, would add to the current literature. In addition, understanding these “non-financial” attributes which may be associated with saving more for retirement can broaden our understanding beyond the current literature which has focused mainly on concepts that can be identified as financial attitudes, knowledge, and capabilities.

Family socialization processes, as identified by Gudmunson and Danes (2011), include both personal characteristics and relational characteristics. When considering personal characteristics that may predict saving for retirement, researchers have found that interest in financial preparation (Hershey & Mowen, 2000; Stawski, Hershey, & Jacobs-Lawson, 2007) and higher risk tolerance or lower fear toward financial matters (Jacobs-Lawson & Hershey, 2005; Neukam & Hershey, 2003) are linked with saving more for retirement. Additionally, being goal oriented (Hershey et al., 2007; Petkoska & Earl, 2009) and having a future orientation (Jacobs-Lawson & Hershey, 2005) are associated with retirement preparation. While several personal

characteristics have been identified as being linked with saving for retirement, gaps still remain. Continued identification and study of other personal characteristics can add to our understanding of influences on saving for retirement.

Although beneficial research advances related to personal characteristics have been accomplished, Gudmunson and Danes (2011) noted the low value generally placed on the family context when examining financial socialization processes such as saving for retirement. Marital quality provides one such relationship characteristic that could influence these processes. For example, it could be argued that major financial decisions that couples make are often done in context of relationship quality (Kerkmann, Lee, Lown, & Allgood, 2000). Yet, in a review of research related to marital quality in relation to retirement, Miller and Yorgason (2009) identified only two studies that examined ways that marital quality predicted trends in retirement.

While the research to date has provided valuable insight into attributes predictive of saving for retirement, there remains a gap in understanding ways that personal and relational characteristics may relate to saving for retirement (Endler & Rosenstein, 1997; Mowen, 2000). Using the Family Financial Socialization framework, the current study addresses this void by exploring associations between personal and relational characteristics with the financial socialization processes of saving for retirement.

## **Background**

### **Family Financial Socialization: A Theoretical Framework**

Family financial socialization theory provides a valuable framework (see Top Panel; Figure 1) for understanding characteristics that may influence specific financial behaviors. Danes (1994) noted, “Much of socialization, in general (and, thus, financial socialization, as well), occurs within the context of the family” (p. 128). To date, however, most research related to

retirement saving has focused on financial socialization outcomes. These are defined as financial attitudes, knowledge, and capabilities and financial well-being in the context of the current study. Gudmunson and Danes (2011) identify the minimized importance of the family social context as a weakness in the current literature. To better understand and evaluate the contextual association of families and financial socialization outcomes, Gudmunson and Danes proposed a model that links personal and family characteristics and interactions with financial socialization outcomes. These outcomes include financial attitudes, knowledge, and capabilities, financial behaviors, and financial well-being. For the current study, an adaptation of Gudmunson and Danes' model was used (see Bottom Panel; Figure 1). The adapted model allows for a broader understanding of ways that personal characteristics and marital relationships associate with financial attitudes, knowledge, and capabilities and ultimately financial well-being.

Family contexts, such as marriage, create an environment wherein financial socialization occurs (Payne, Yorgason, & Dew, 2013). Gudmunson and Danes (2011) have noted the growing recognition of individual characteristics being developed in a familial context that relate to financial behaviors and decision-making. This familial context has typically been referred to in research literature as the parent-child relationship. Beyond parents and children, family socialization may occur within the context of a marital relationship (Tallman, Gray, Kullberg, & Henderson, 1999). Huston (2000) noted the symbiotic influence that occurs in marital relationships with couples both influencing and being influenced by that relationship.

The current study will evaluate individual and relational characteristics associated with financial socialization. Individual characteristics will be considered as measured through respondents' sense of materialism along with age, gender, education, and household income. Marital quality will be used as a measure of relational characteristics that may be related to

financial behaviors. The family financial socialization theory posits that individual and familial characteristics will both directly and indirectly be linked with an individual's financial attitudes, knowledge, and capabilities and financial well-being (Gudmunson & Danes, 2011). This study will examine predictors of the amount of monthly income saved for retirement through respondents' financial prudence. This will be done by using data from 584 mid-life married individuals from a large northwestern city in the United States.

Insert Figure 1 about here

### **Saving for Retirement**

Skinner (2007) notes, "The seemingly simple question of 'Am I saving enough for retirement?' is apparently not so simple at all. Instead it touches on a variety of deeper issues in economics, psychology, and health policy" (p. 60). To date, most research examining retirement savings has focused on the "deeper issues" identified by Skinner independent of each other. Specifically, researchers have examined the economic policies that can help at the macro level in incentivizing individuals to save for retirement (Benartzi & Thaler, 2007; Duflo, Gale, Liebman, Orszag, & Saez, 2006; Engelhardt & Kumar, 2007). In addition, much has been done to develop a knowledge base of personal economic issues, such as income replacement rates and personal financial management, which contribute to saving for retirement (Hershey & Jacobs-Lawson, 2012; Samwick, 2006; Skinner, 2007). Last, researchers have evaluated mathematical and financial skill development that may contribute to an individual deciding to save for retirement (Banks & Oldfield, 2007; Choi, Laibson, Madrian, & Metrick, 2002).

Many benefits have resulted from increasing ones' savings rate for retirement, such as, more resources to protect against the potential for increased medical costs and improve the quality of life (Porterba, Venti, & Wise, 2012) and learning to live on less and therefore needing

less accumulated wealth in retirement (Skinner, 2007). While saving for retirement has been shown to reduce marital conflict (Dew & Yorgason, 2010), family financial socialization framework posits the reverse effect; that marital quality should predict how much one saves for retirement.

### **Effects of Marital Quality**

The interaction between marital quality and retirement variables is a complex one, but one that is in need of continued research because as Atchley (2001) noted, “most people retire as members of a couple” (p. 187). A limited number of studies evaluated the links that may exist between marital quality and decisions made related to retirement. Mock and Cornelius (2007) found improved relationship satisfaction to be predictive of a greater likelihood of planning for retirement. Additionally, Szinovacz and DeViney (2000) noted the more satisfied couples were with their marital relationship the more likely they were to retire early. This finding could be confounded by a couple’s ability to retire, however. In other words, while a couple may have the desire to retire early they may lack adequate resources to actually retire. Understanding if marital quality may predict, either directly or indirectly, the retirement savings rates of married individuals would add to current understanding by identifying whether the family context influences retirement savings.

Although literature examining marital relationships and financial socialization is scarce, an abundance of research considers other financial and “non-financial” outcomes associated with marital quality. For example, Archuleta, Britt, Tonn, and Grable (2011) found financial stressors had an inverse relationship with marital satisfaction while Skogrand, Johnson, Horrocks, and DeFrain (2011) noted that strong relationships are linked to improved conflict management in areas such as financial issues. In their meta-analytic review, Proulx, Helms, and Buehler (2007)

noted that improved marital quality was positively associated with personal well-being.

Additionally, Rogers and May (2003) found that increases in marital quality contributed to increases in job satisfaction.

Another way to view marital quality is through the lens of marital conflict. While money is not always the leading source of conflict, it is still one of the more intense topics generating conflict in couples (Papp, Cummings, & Goeke-Morey, 2009). Concerns about increasing debt levels may account for some of the intensity that occurs for couples when conflict arises related to money issues (Dew, 2008). Kamp Dush and Taylor (2012) noted that individuals with a belief in lifelong marriage and cooperation in decision making had lower levels of conflict in their marriages. Myers and Booth (1999) found when spouses believed they had control over events in their marriage they reduced their conflict and increased their marital quality. Such studies highlight the myriad of benefits that can come from increased marital quality and reduced marital conflict. Furthermore, based on these studies, it may be that as marital quality improves; couples may be more likely to be financially prudent and begin saving more for retirement.

These findings support the idea that marital quality can have a far reaching impact in a couple's life. Amato, Johnson, Booth, and Rogers (2003) substantiate this idea by identifying many factors contributing to a change in marital quality between 1980 and 2000. These included such things as increased income, decision-making equality, and support for lifelong marriage. Based on the effects of marital quality found in the literature, there is support for the relationship posited in the family financial socialization theory, that marital quality may predict financial socialization variables such as financial attitudes, knowledge, and capabilities and financial well-being (Mock & Cornelius, 2007; Szinovacz & DeViney, 2000). In the current study, a goal was to increase the understanding of how marital quality is associated with saving for retirement.

### **Personal Characteristics**

**Materialism.** Interpersonal relationships, such as one's family, have been found to play an important role in the development of materialistic attitudes and values (Beutler, 2012; Flouri, 1999). In addition, Belk (1985) found that materialistic attitudes were linked more closely with consuming rather than saving. This idea of consuming, or having a tendency to spend in the moment, has been linked to saving less (Troisi, Christopher, & Marek, 2006), financial overextension (Huhmann & McQuitty, 2009), higher levels of spending and borrowing (Watson 2003), and increased levels of perceived financial problems (Dean, Carroll, & Yang, 2007). In essence, the desire to consume, which seems to be closely related to materialism, appears to be generally associated with financial behaviors that may not be identified as financially prudent and may therefore lead to a reduction in one's saving patterns. This is in line with a study by Payne, Yorgason, and Dew (2013) who found that financial strain mediated the association between husband and wife levels of materialism and the ability to save for retirement. The current study will add to their study by looking beyond the ability to save to how much of the household income was saved for retirement.

**Demographic Factors.** Demographic variables such as age, education, and income (or socio-economic status) are identified in research as some of the strongest predictors of financial preparation for retirement. As individuals age, their proximity to retirement can impact the desire to save (Topa, Moriano, & Moreno, 2012). Likewise, the more educated a person is the more likely they are to understand the importance of planning and saving, and the more income a person has the easier they should be able to find resources to save (Glass & Kilpatrick 1998; Hershey & Jacobs-Lawson 2012; Li, Montalto, & Geistfeld, 1996). It is expected that all of these

variables will be positively associated with how much an individual chooses to save for retirement.

### **Financial Socialization Processes**

Financial socialization processes include financial attitudes, knowledge, and capabilities on financial well-being. Much research has been done to understand the relationship that exists between these two constructs. Hilgert, Hogarth, and Beverly (2003) noted that some families may not follow the recommended financial practices due to a lack of financial skills and abilities. This was in line with several other studies that found negative results, such as an inability to save and inappropriate use of credit, from a lack of financial prudence (Bowen, Lago, & Furry, 1997; Pham, Yap, & Dowling, 2012; Walker, 1996). Other studies have shown positive results such as an increase in financial well-being (Norvilitis et al, 2006), debt avoidance, a reduction in credit card misuse, and reduced financial strain (Hibbert, Beutler, & Martin, 2004), and greater life satisfaction (Xiao, Tang, & Shim, 2009) when financial prudence existed.

Many attitudinal factors have been found to have an effect on retirement preparation and saving and appear to support the idea of being financially prudent. These include having a future orientation (Hershey et al. 2007; Jacobs-Lawson & Hershey 2005), being goal oriented (Petkoska & Earl 2009), and having a general orientation toward financial preparation (Hershey & Mowen 2000; Stawski et al. 2007). These attitudinal variables are in line with Gudmunson and Danes (2011) theory and support the idea of financial prudence as a measure of one's financial attitudes, knowledge, and capabilities. Based on the current literature, it is believed that those with greater financial prudence will save a higher percentage of their income than those with less financial prudence.



### **Focus of the Study**

Studies to date have found increased savings rates when individuals interact with a financial consultant (Thaler & Benartzi, 2004), are more highly educated (Topa, Moriano, & Moreno, 2012), are more goal oriented (Hershey, Jacobs-Lawson, McArdle, & Hamagami, 2007), are more financially literate (Van Rooij, Lusardi, & Alessie, 2012), and are more willing to take financial risks (Jacobs-Lawson & Hershey, 2005). While these studies have added much to our understanding, they have omitted an understanding of how day-to-day decision making within the marital context impacts saving for retirement. This gap likely exists due to a heavy focus on high level financial concepts. Understanding if even basic financial skills such as living within one's means, paying bills on time, budgeting, and debt reduction impact how much of the household's income is saved for retirement can yield valuable insight. These items have been identified in this study as financial prudence and it is believed even these basic skills will influence how much is saved for retirement.

Another area currently missing from the literature is those variables that have been identified as personal and relational characteristics. These "non-financial" predictors have been shown to influence many aspects of life. Materialism, for example, has been associated with an increase the number of reported financial problems (Carroll, Dean, Call, & Busby, 2011). It is expected that the inverse would be true and that individuals who are financially prudent are less likely to have financial problems. Another example of the "non-financial" predictors is marital quality. Bradbury, Fincham, and Beach (2000) noted that evaluating what people do helps to better understand the marital quality that exists for each spouse. The current study evaluated this in the context of financial decision-making that existed for married individuals. It is posited that couples with higher reported marital quality would exhibit both greater financial prudence and

save more for retirement. Such saving behaviors may be linked to couples' desire to spend time together during the later parts of the life course.

The focus of this study, therefore, was to understand ways that personal and relational characteristics were linked to financial attitudes, knowledge, and capabilities. An additional focus was to understand ways financial attitudes, knowledge, and capabilities were associated with financial well-being. Based on the theoretical framework, it is also believed that personal and relational characteristics would be indirectly associated with financial well-being. These associations were explored using structural equation modeling. Accordingly, the following were hypothesized:

1. It was hypothesized that personal and relational characteristics would be linked to financial attitudes, knowledge, and capabilities (Path A in Fig. 1), and financial attitudes, knowledge, and capabilities would be linked to financial well-being (Path B in Fig. 1). It was anticipated that positive relationships would exist between all study variables except materialism (which would be negatively associated with financial outcomes).
2. Based on the family socialization framework, it was hypothesized that indirect relationships would exist between personal and relational characteristics and financial well-being (Path AB in Fig. 1).
3. Based on the family socialization framework, it was hypothesized that indirect relationships would exist between personal and relational characteristics and financial well-being (Path AB in Fig. 1). Finally, the current study explored other direct relationships that existed which were not identified in the family financial

socialization model. These included links between personal and relational characteristics and financial well-being (Path C in Fig. 1).

## Method

### Sample

The data for this study was taken from participant's wave 4 responses of the *Flourishing Families Project* (FFP). This study evaluates family life and involved families with a child between the ages of 10 and 14 at Wave 1. Most of the participant families were randomly selected from targeted census tracts using a national telephone database from a large northwestern city in the United States. These families were administered questionnaires in their homes. The overall response rate of eligible families was 61%. In order to more closely mirror the demographics of the local area, a limited portion of the sample was also recruited through other means (e.g., referrals, fliers;  $n = 77$ , 15%; for additional information on procedures and participants, please see Padilla-Walker, Harper, & Jensen, 2010). The study consisted of 500 families, which typically included responses from both parents and the target child. Each completed a one and a half hour self-administered questionnaire, as well as interaction tasks that were video recorded. The overall sample consisted of 288 couple's and 26 additional wife's survey (26 husbands did not respond to wave 4) data from those participants identifying themselves as married ( $N = 602$ ). Nine couples (Eighteen individuals) in the sample reported annual income in excess of two standard deviations above the mean (i.e., \$306,871). These nine couples (eighteen individuals) were removed leaving 584 individuals identifying themselves as married for the current analysis ( $N = 584$ ).

The targeted age range of children in the FFP sample (i.e., those families with at least one child between the ages of 10 and 14 at Wave 1), produced a sample at Wave 4 where individuals

fell within a fairly uniform stage of the marital lifespan with an average length of marriage of 20.4 years ( $SD = 5.28$ ). Seventy-six percent of the participants for the current analysis were European American, 3.4% were African American, 1.4% were Asian American, 0.3% were Hispanic, and 18.9% indicated that they were “mixed/biracial” or of another ethnicity. The average annual household income was \$111,165 ( $SD = \$51,871$ ) with a median annual income of \$102,000.

### **Measures**

Retirement savings rate was calculated by assessing the reported monthly retirement savings amount and dividing it by the monthly family income for those individuals that answered “yes” to the following: (1) Do you have any private retirement funds set aside? If respondents answered “no” to the question then their retirement savings rate was set to zero. The average retirement savings rate as a percentage of income was 7.04% ( $SD = 7.06\%$ ). The number of non-saver respondents was 127, or nearly 22% of the sample reported not saving anything for retirement.

Materialism was measured using six items to assess the degree to which participants held attitudes and values that aligned with spending and having new and expensive products. Items in this measure were taken from the COmprehensive Marriage Preparation ASSESSment Survey (COMPASS, Carroll, 2004). The measure included the following items: 1) “I like to have the newest products as soon as they come out.” 2) “Having a nice car is important to me.” 3) “Having a home or condo in a nice neighborhood is a priority for me.” 4) “I want my kids to dress in fashionable clothes.” 5) “I want my family to have the finer things in life.” and 6) “Having a high salary is an essential part of the lifestyle I want to live.” Responses ranged from zero to four, with higher scores identifying with a more materialistic attitude. All six items were

used in the creation of a latent variable of materialism. Factor loadings for this study were all .50 or above (see Table 1).

Couple relationship quality was assessed using six items. Five items were taken from the Quality Marriage Index (Norton, 1983). One additional question was added to the FFP to evaluate the degree of happiness that existed in the relationship. The first five questions were measured using a six-point Likert scale ranging from zero to five. The last question used a ten-point scale ranging from zero to nine. Higher scores for all questions indicated better relationship quality among spouses. Berg, Trost, Schneider, and Allison (2001) found reliability for the first five items to be .95. All six items were used to create the latent variable Relationship Quality. Factor loadings for this study were all .84 or above (see Table 1).

Financial prudence was measured from both men and women using six items to evaluate the ability of couples to manage their personal finances. The items were developed for the FFP. This measure included the following items: 1) "In the past year, we spent more than we earned." 2) "In the past year, we paid our bills on time." 3) "In the past year, we paid our credit card bill in full." 4) "In the past year, we got a payday loan, a cash advance loan, or other type of short-term loan." 5) "In the past year, we reduced our personal debt." 6) "In the past year, we started or continued to maintain an emergency savings fund." and 7) "In the past year, did you sell any possessions because of financial difficulties?" Responses for the first six questions ranged from zero to four, with questions one and four being reverse coded for analysis. Question seven had two responses, "No" coded as zero and "Yes" coded as one with the question being reversed coded for analysis. Higher scores indicated increased financial prudence. Factor loadings for this study were all .57 or above (see Table 1).

Several demographic variables were measured in this study including income, age, and education. The average annual income of respondents reported in the analysis was \$111,165 (SD = \$51,871) with a median annual income of \$102,000. Age was reported in whole years (M = 47.2, SD = 5.79). Education was measured as a scale variable with responses ranging from zero to seven. Zero represented less than a high school degree and seven represented an advanced degree above a master's degree. Nearly 30% of the participants had an associate's or lower degree. Just over 38% had a bachelor's degree, and the remaining 31.8% completed a master's or higher degree. The final data set included 279 couples and 26 wives for a total N = 584.

### **Analysis of Data**

Structural equation modeling with Mplus (Muthén & Muthén 2007) was used to assess the links that exist between the latent constructs of relational quality, materialism, financial prudence, and the continuous outcome, retirement savings rate. All latent constructs were measured using items with Likert-type response options. In each variable, responses were not normally distributed (skewed distributions to one side or the other) and so to better approximate the different responses these variables were modeled as ordered categorical variables. Based on the theoretical framework, the continuous variables age, gender, education, and household income were evaluated as part of the model. The data sample contained married couples, yet data for males and females were examined all together (each person had their own row of data in the data set). To account for the non-independence of the spouses in the sample, clustering was used. This design was used for several reasons. First, as noted in Peugh, DiLillo, and Panuzio (2013), the Actor Partner Independence Model (APIM) is used when research questions are evaluating both the intrapersonal and the interpersonal relationship patterns which was not the current focus. Second, Puegh et al. state that the Common Fate (CF) model should be used when your research

questions are evaluating “dyad-level phenomenon”. In addition, Ledermann and Kenny (2012) state that you should not use the Common Fate model if the husband and wife correlations are weak. An evaluation of the husband and wife correlations, found that materialism and financial prudence were both below .40. Third, Payne, Yorgason, and Dew (2013) found that constraining the husband and wife paths did not worsen model fit when evaluating retirement planning and saving patterns. Said another way, due to socialization in marriage, over time husbands and wives may generally begin to respond in a like manner to some issues, so it is not anticipated that there are interpersonal effects occurring between husband and wife in our study. Gender was added as a control variable to confirm spousal effects on the study variables were not occurring. Since the focus of this study was on the intrapersonal patterns that existed for individuals identifying themselves as married, neither the APIM nor the CF designs were deemed appropriate. To account for missing data for all variables, weighted least squares estimation was used (this is equivalent to full information maximum likelihood, using weighted least squares estimation in Mplus; WLSMV).

### **Results**

To determine if the factor loadings accurately reflected the latent constructs (see Table 1) and to evaluate the latent variable correlations (see Table 2), a measurement model was estimated. Absolute model fit indices indicated adequate fit to the data (Chi-square = 444.12,  $df = 228$ ,  $p \leq .001$ ; Comparative Fit Index (CFI) = .997; Root Mean Square Error of Approximation (RMSEA) = .04). Each latent variable in the model demonstrated adequate factor structures (all loadings above .49, with average factor loadings for relationship quality = .94, materialism = .68, and financial prudence = .68).

Insert Tables 1 and 2 about here

Next, correlations in the measurement model were reviewed. Financial prudence and household monthly income were found to be the most highly correlated variables. Other highly correlated variables included age, education, and retirement savings rate. A modest correlation was found between financial prudence and retirement savings rate ( $r = 0.43, p < 0.001$ ). In addition, one strongly correlated relationship was found between financial prudence and household monthly income ( $r = 0.57, p < 0.001$ ).

Next, a structural model was estimated, as identified in the bottom panel of Figure 1. Regression paths were examined between the independent variables (marital quality, materialism, age, gender, household income, and education), the mediating variable (financial prudence), and the outcome variable (retirement savings rate). Exogenous variables were correlated. Model fit indices indicated adequate model fit to the data (Chi-square = 444.12,  $df = 228, p \leq .001$ ; Comparative Fit Index (CFI) = .997; Root Mean Square Error of Approximation (RMSEA) = .04). Non-significant paths were trimmed from the model for parsimony and the DIFFTEST option associated with WLSMV in MPlus was used to determine if model fit worsened significantly when a path was removed. Removing the non-significant paths did not worsen model fit significantly (Chi-square difference = 7.26,  $df = 7, p \leq .40$ ). The final model as shown in Figure 2 did not include non-significant paths. The model fit indices suggested that the final structural model fit the data adequately (Chi-square = 440.16,  $df = 235, p \leq .001$ ; Comparative Fit Index (CFI) = .998; Root Mean Square Error of Approximation (RMSEA) = .039).

Insert Figure 2 about here

Confidence in the indirect effects was increased by using bootstrapping to calculate bias corrected confidence intervals and their associated standard errors. Five-thousand draws were



requested and all draws completed. This is in line with Preacher and Hayes (2008) and Hayes (2009) who noted the number of draws must be in excess of 1,000 but recommend 5,000 to obtain meaningful results. Based on the bootstrapped model, four of the five indirect paths were found to be significant at the  $p \leq .05$  level.

**Hypothesis 1: Direct Associations between Marital Quality, Materialism, Gender, Age, Education, and Household Income and Financial Prudence, and Financial Prudence and Retirement Savings Rate.**

Based on the theoretical framework, direct associations between personal and relational variables and financial attitudes, knowledge, and capabilities were evaluated. All results are reported using the standardized coefficient to allow for comparability. Marital quality ( $b = .21, p \leq .001$ ), materialism ( $b = -.22, p \leq .001$ ), age ( $b = .12, p \leq .01$ ), education ( $b = .09, p \leq .05$ ), and household income ( $b = .53, p \leq .001$ ) were found to be significantly associated with financial prudence in the expected directions. Gender was not found to be a significant predictor of financial prudence which was in line with expectations based on marital socialization. Financial prudence ( $b = .38, p \leq .001$ ) was related to retirement savings rate.

Based on the Gudmunson and Danes (2011) modified theoretical framework all direct paths that were anticipated to be significant were found to be significant at the  $p \leq .05$  level or greater. The model was found to explain 45% of the variance for financial prudence ( $R^2 = .45$ ) and 21% of the variance for retirement savings rate ( $R^2 = .21$ ).

**Hypothesis 2: Indirect Effects of Marital Quality, Materialism, Age, and Household Income on Retirement Savings Rate through Financial Prudence.**

The theoretical framework identifies indirect associations that exist between personal and relational variables and measures of financial well-being such as retirement savings rate. These

variables are anticipated to be mediated by financial attitudes, knowledge, and capabilities. The final model evaluated the indirect effect of marital quality, materialism, age, and household income on retirement savings rate mediated by financial prudence (see Table 3). Marital quality ( $b = .076, p \leq .01$ ) was found to indirectly predict retirement savings rate through financial prudence with a 99% confidence interval (CI Lower = .007 and CI Upper = .146). Materialism ( $b = -.077, p \leq .01$ ) was found to indirectly predict retirement savings rate through financial prudence with a 99% confidence interval (CI Lower = -.145 and CI Upper = -.008). Age ( $b = .046, p \leq .05$ ) was found to indirectly predict retirement savings rate through financial prudence with a 95% confidence interval (CI Lower = .000 and CI Upper = .093). Household income ( $b = .197, p \leq .001$ ) was found to indirectly predict retirement savings rate through financial prudence with a 99% confidence interval (CI Lower = .085 and CI Upper = .310).

Insert Table 3 about here

### **Hypothesis 3: Direct Associations between Marital Quality, Materialism, Gender, Age, Education, and Household Income and Retirement Savings Rate.**

The third hypothesis evaluated whether direct effects not identified in the theoretical framework existed. Among personal and relational predictors only education ( $b = .18, p \leq .001$ ) was found to be a significant direct predictor of retirement savings rates. This finding was included in the final model as an exogenous variable predicting the outcome.

### **Discussion and Implications**

Using data from 584 individuals identifying themselves as married, the purpose of this study was to examine how personal and relational characteristics were linked to financial attitudes, knowledge, and capabilities and financial well-being using the family financial socialization framework (Gudmunson & Danes, 2011). This was accomplished by first

hypothesizing that direct relationships would exist between personal and relational characteristics and financial attitudes, knowledge, and capabilities and between financial attitudes, knowledge, and capabilities and financial well-being. Secondly, it was accomplished by hypothesizing an indirect relationship between personal and relational characteristics and financial well-being. Supporting the first two hypotheses, marital quality, materialism, age, and household income were found to directly predict financial prudence as a measure of financial attitudes, knowledge, and capabilities and to indirectly predict retirement savings rate as a measure of financial well-being. Effects of financial prudence supported the first hypotheses as well by directly predicting retirement savings rate. Education also supported the first hypothesis, in that it directly predicted an individual's measure of financial prudence. The third hypothesis addressed direct relationships that were not identified as part of the family financial socialization framework. In support of the third hypothesis, education was associated with retirement savings rate. Results suggest the importance of considering both financial and non-financial predictors of saving for retirement (See Figure 2 for the final model).

### **Marital Quality**

Results from the current study provide empirical support for the theoretical framework as identified by Gudmunson and Danes (2011) and identified additional benefits that can come from improved marital quality and decreased materialism. Individuals who reported higher marital quality also reported greater prudence as it relates to financial matters, and this in turn was associated with higher levels of retirement savings rates. This finding is consistent with Szinovacz and DeViney's (2000) findings on the timing of retirement. Individuals with higher marital quality tended to retire earlier. One of the challenges to retiring earlier, however, is the availability of sufficient funds to retire. This study adds to Szinovacz and DeViney's by

identifying the influence marital quality has on the amount couples choose to save for their retirement. In general, as an individual's marital quality was higher, so was the percentage of their income they saved for retirement when mediated by their ability to act in financially prudent ways.

Although the current study did not address specific benefits of marital quality, yet the literature provides some possible answers. Specifically, the benefits of marital quality on job satisfaction as found by Rogers and May (2003) could be related to the ability to save more. As was indicated in this study, increased income was a strong predictor of financial prudence and retirement savings rate. Judge, Thoresen, Bono, and Patton (2001) noted the relationship that exists between job satisfaction and job performance. It may be that as marital quality increases, its effects are broad enough to impact job satisfaction, job performance, income, and as demonstrated here financial prudence and retirement savings rate. These findings help to strengthen the empirical support for the myriad of benefits that can come from good marriages and identifies one of the characteristics that may be targeted to assist couples in beginning to save for their retirement earlier in life.

### **Materialism**

Materialism was found to have a negative association with both financial prudence and retirement savings rate. As materialistic attitudes increased, individuals had lower levels of financial prudence and they tended to save a smaller percentage of their income for retirement. This finding supports Payne, Yorgason, and Dew's (2013) finding of materialism's effect on financial strain and saving for retirement. Payne, Yorgason, and Dew's study found that as materialism increased so did financial strain. In addition, they found that as materialism increased, an individual would be less likely to have saved anything for retirement when

mediated by financial strain. The current study's findings add to the previous studies that demonstrate the negative financial impact materialistic attitudes can have over one's life course and lend support to an evaluation of an individual's materialistic attitudes when they are faced with financial difficulties or trying to develop greater financial prudence.

### **Demographic Variables**

While there was no significant difference between married men and married women in their measures of financial prudence and retirement savings rate, age was found to impact both of these variables. Over time individuals tended to exhibit increased abilities to act in financially prudent ways and in turn will save a greater percentage of their income for retirement. This same effect was found for household income which had the largest impact on both financial prudence directly and retirement savings rate indirectly. These findings were in line with other findings on age and income as noted in Xiao, Ford, and Kim (2011). While age and household income were indirectly related to retirement savings rate, they didn't predict what percentage of their income an individual saved for retirement directly. Said another way, simply growing older and increasing ones income does not mean individuals will make the decision to save more for retirement. This appears to only occur as people become more financially prudent in their decision making.

More highly educated individuals tended to be both more financially prudent and tended to save a higher percentage of their income for retirement. This was in line with Topa, Moriano, and Moreno's (2012) findings and education was the only variable that was significantly related to both the mediator and the outcome measures directly.

**Financial Prudence**

The study also provided empirical support for the benefits of being prudent in financial matters. Specifically, the more financially prudent an individual was the higher the percentage of their income they saved for retirement. This finding was consistent with the theoretical framework (Gudmunson & Danes, 2011) and Hibbert, Beutler, and Martin's (2004) findings on the influence of financial prudence on financial behaviors. Individuals that learn to live within their means, pay their bills on time, and focus on debt reduction tend to save more of their income for retirement.

**Study Implications**

There are several implications of this study. First, an important factor to saving sufficiently for retirement is the level of one's financial prudence. This finding demonstrates additional value that can come from teaching and working with individuals to develop skills such as budgeting, living on less than you earn, and debt reduction. Development of these skills will help individuals to become more financially prudent and in turn can assist them in saving more of their income for retirement. While, the value of financial planning knowledge is well supported (Hershey & Mowen, 2000; Jacobs-Lawson & Hershey, 2005; Stawski et al., 2007), this research adds to the current literature by demonstrating the value that can come from the development of even basic financial skills. Second, as prudence increases, attention can be turned from financial skills to an evaluation and focus on the couple's marital quality and materialistic attitudes. By working with financially prudent couple's to improve their marital quality, the probability of them saving more of their income for retirement increases. Also, helping financially prudent couples to evaluate and work to reduce their materialistic attitudes will have about the same impact on their retirement savings rate. Finally, the importance of

education needs to continue to be stressed. Education had a direct impact on the retirement savings rate, illuminating the idea that more educated individuals recognize the value of saving for retirement. Education has a secondary impact as well, however, those with more education tend to have higher household incomes and the higher income was a very strong indicator of an individual's financial prudence and the percentage of their income that they saved for retirement.

### **Limitations and Conclusion**

This study represents a foray into areas not previously evaluated for their influence on financial matters related to retirement. Further study is needed to better understand the impact personal and relational characteristics have on financial socialization processes related to retirement. Looking at other marital indicators and family-of-origin measures would add significantly to these findings. In addition, evaluating personal attitudes and behaviors that have been shown to have an impact in other areas may provide additional understanding of how to motivate individuals to prepare better for their retirement. It would also be beneficial to evaluate these measures longitudinally to determine if these effects are momentary or occur across time.

Although the current sample was randomly selected from individuals living in a large northwestern metropolitan area, the findings may not apply to those living in other geographical areas of the United States or in other areas around the world. The majority of the participants were also from the working middle class, thus they were somewhat more affluent than the general population, and they were generally in their 40s. Younger individuals and those with less means may not respond in the same way. In addition, a significant majority of the sample was Caucasian. All other ethnicities were underrepresented in the sample. In order to generalize these findings, future studies should identify a more representative sample of the population.

Despite these limitations, the current study provides valuable insight into areas that may be targeted by counselors and policy makers to increase the amount of their income individuals save for retirement. Specifically, improving marital quality, reducing materialism, helping individuals to become more financially prudent, and motivating individuals to seek educational opportunities can increase the amount of income that individuals save for retirement. This will allow individuals to be more financially prepared for retirement when they are ready to retire.



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## Tables

Table 1

*Latent variable measurement properties from the measurement model*

Constructs and contents	Factor Loadings
Materialism	
1. I like to have the newest products as soon as they come out.	.51
2. Having a nice car is important to me.	.63
3. Having a home or condo in a nice neighborhood is a priority for me.	.60
4. I want my kids to dress in fashionable clothes.	.71
5. I want my family to have the finer things in life.	.84
6. Having a high salary is an essential part of the lifestyle I want to live.	.81
Couple Relationship Quality	
1. We have a good relationship.	.98
2. My relationship with my partner is very stable.	.97
3. Our relationship is strong.	.99
4. My relationship with my partner makes me happy.	.96
5. I really feel like part of a team with my partner.	.92
6. Degree of happiness in your relationship compared to other relationships.	.84
Financial Prudence	
1. In the past year, we spent more than we earned.	.66
2. In the past year, we paid our bills on time.	.73
3. In the past year, we paid our credit card bill in full.	.73
4. In the past year, we got a payday loan, a cash advance loan, or other type of short-term loan.	.57
5. In the past year, we reduced our personal debt.	.66
6. In the past year, we started or continued to maintain an emergency savings fund.	.76
7. In the past year, did you sell any possessions because of financial difficulties?	.67

Table 2

*Correlations and descriptive statistics of main study variables, taken from the measurement model involving latent variables (N = 584)*

Study Variables	1	2	3	4	5	6	7	8
1. Relationship Quality	1.00							
2. Materialism	-.02	1.00						
3. Financial Prudence	.27***	-.15**	1.00					
4. Participant Gender	.04†	.10**	.02	1.00				
5. Participant Age	-.04	-.10*	.24***	.16***	1.00			
6. Participant Education Level	.02	-.09*	.29***	.06†	.21***	1.00		
7. Household Monthly Income	.12†	.16***	.57***	.04*	.17***	.29***	1.00	
8. Retirement Savings Rate	.09	-.10*	.43***	-.01	.20***	.27***	.26***	1.00
Minimum	0	0	4	0	30	0	5,436	0
Maximum	34	21	25	1	65	7	304,000	43.75
Mean	25.67	6.93	18.16	.48	47.22	4.07	111,165	7.04
Standard Deviation	6.63	4.08	4.35	.50	5.79	1.75	51,871	7.06

*Note:* Gender coded as male = 1, female = 0. †  $p \leq .10$ , \*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$

Table 3

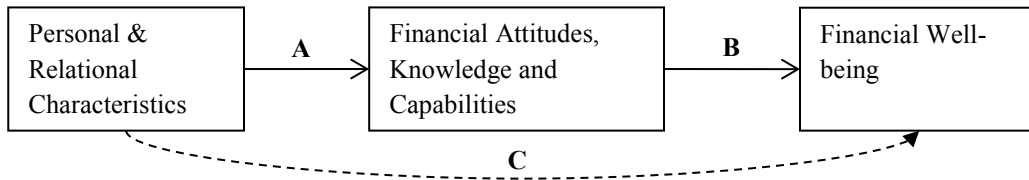
*Standardized estimates of the indirect effects on retirement savings rates through financial prudence*

Mediated Variables	Estimate	SE	<i>p</i>	CI (lower)	CI (upper)
Marital Quality	.076	.027	≤.01	.007	.146
Materialism	-.077	.027	≤.01	-.145	-.008
Age	.046	.024	≤.05	.000	.093
Household Income	.197	.044	≤.001	.085	.310

*Note:* The 99% confidence intervals (CI) were obtained by a bias-corrected bootstrap with 5,000 draws for marital quality, materialism, and household income, and a 95% CI was obtained for age. CI (lower) is equal to the lower bound confidence interval and CI (upper) is equal to the upper bound.

Figures

Top Panel: Path A and B were modified associations from Gudmunson and Danes (2011). Path C was added for the current study.



Bottom Panel: Application of the current study variables

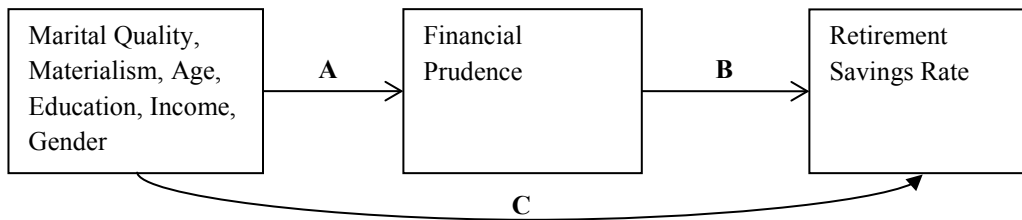


Figure 1. Family financial socialization theory in context of retirement savings rates.

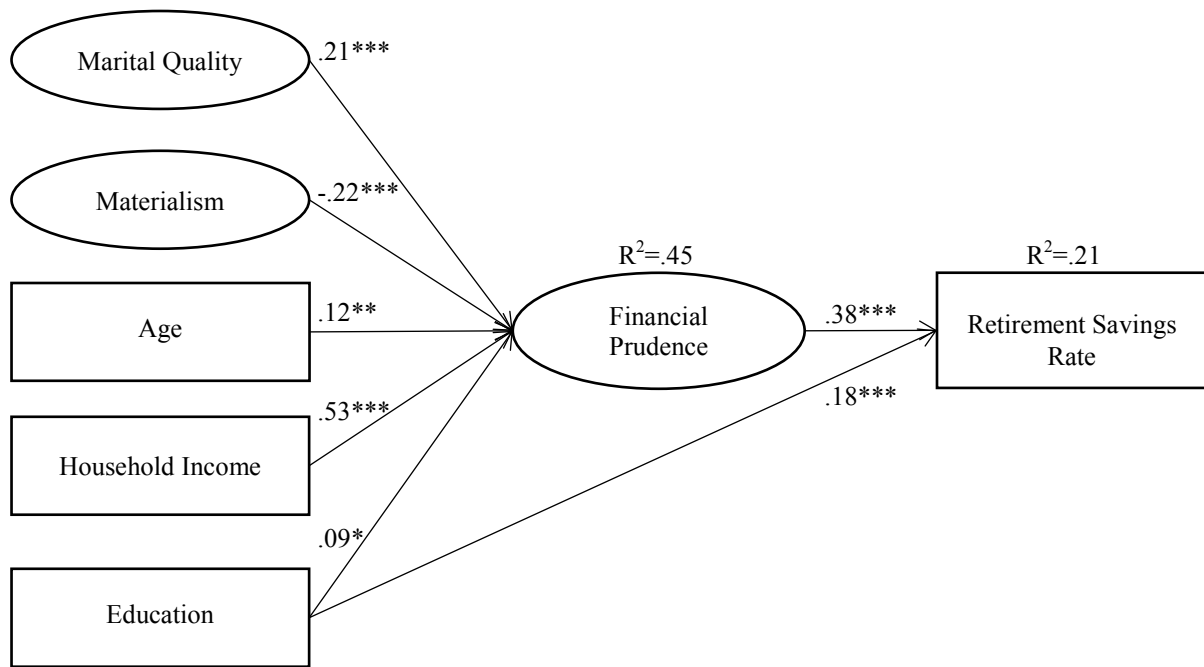


Figure 2. Structural equation model of retirement savings rates predicted by marital quality, materialism, financial prudence, age, household income, and education.

Note: \*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$ ; Standardized regression coefficients are reported in the figure. R<sup>2</sup>= amount of variance accounted for in endogenous variables. Model fit for this model was: Chi-square = 437.01,  $df = 234$ ,  $p \leq .001$ ; CFI = .998; RMSEA = .039.