

# Factors Mediating the Association between Financial Socialization and Well-Being: An African American Perspective

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## Abstract

This study examines the relationship between financial socialization and well-being (financial and subjective) mediated by three motivations: financial knowledge, goal setting, and self-control, either directly on financial behaviors or indirectly through financial skills on financial behaviors of African Americans compared with European Americans. We used an integrated concept derived from Gudmunson and Dane's (2011) Financial Socialization Framework and Fisher and Fisher's (1992) Information Motivation Behavior Model to examine National Financial Well-Being Survey data. We found a significant difference between African Americans and European Americans where "self-control" mediates directly through financial behaviors and indirectly through financial skills. There was also a significant difference in the relationship where "goal setting" mediated the relationship indirectly through skills in financial behaviors. Finally, there was a significant difference when "financial knowledge" directly mediated financial behaviors. The findings from this study imply that self-control is one of the most impactful factors on African Americans' well-being.

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## Introduction

Financial well-being is a holistic view of one's financial life and how one feels and thinks about money (Yakoboski et al., 2019). Specifically, financial well-being is one's ability to meet current and ongoing financial obligations to maintain anticipated and desired living standards,

as well as feeling secure in one's financial future and having the ability to make choices that allow one to enjoy life (Brüggen et al., 2017). According to Kim and Chatterjee (2013), family financial socialization is related to how individuals develop the attitudes, beliefs, knowledge, and skills necessary to manage their

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finances. Financial socialization is associated with financial well-being (Drever et al., 2015), but are there factors within financial socialization that are related to financial well-being more so than others?

Every community within the United States should experience financial well-being at a similar level (Brown & Robinson, 2016). However, some segments of the population lag behind others in terms of financial well-being. Therefore, it is essential to understand what impacts or what limits financial well-being. Wealth has been shown to impact financial well-being (Atalay & Edwards, 2022). Thus, those with enough wealth to cover their day-to-day expenses, as well as enough wealth to accomplish their future goals, are more likely to experience financial freedom than those who do not have an adequate level of wealth (Atalay & Edwards, 2022). Other factors, such as employment status and education, are directly linked to financial well-being (Federal Reserve Board of Governors, 2022). Thus, those who are financially literate most often better manage their money and financial affairs and are more likely to have a higher level of financial well-being than those who do not (Brugger et al., 2017). Also, subjective constructs, such as self-control and confidence, can impact financial well-being (Porto & Xiao, 2022). Those with more confidence in their financial affairs and self-control most likely experience higher levels of financial well-being than those who exhibit under-confidence and less self-control (Porto & Xiao, 2022).

African Americans have experienced financial well-being at a different rate than other racial groups (Cobb, 2022). Numerous studies have examined the Black–White wealth gap, which highlights the reality that African Americans have not generated as much wealth as European Americans<sup>4</sup> (McIntosh et al., 2020). In the context of this observation, it is worth remembering that wealth is associated with financial well-being (Atalay & Edwards, 2022). Discrimination has certainly impacted African Americans' ability to secure and maintain

employment, establish excellent credit histories, and accumulate wealth (Atalay & Edwards, 2022). Financial knowledge and literacy likewise impact African Americans' financial well-being more than that of European Americans (Yakoboski et al., 2019). It is vital for African Americans to experience financial well-being at the same rate as other segments for the United States to be vibrant (Brown & Robinson, 2016). Fan and Park (2021) combined the Theoretical Model of Financial Socialization by Gudmunson and Dane (2011) with Fisher and Fisher's (1992) Information Motivation Behavior Model to develop a new model that examined the impact of financial socialization mediated by financial knowledge, goal setting, and self-control on an individual's well-being (financial and subjective). Fan and Park (2021) used this model on young adults. In contrast, in this study, we used these models to assess the impact of financial socialization on well-being (financial and subjective) to determine if there was a difference in the relationships between African Americans versus European Americans. This study advances the literature related to the Black-White wealth gap by concentrating explicitly on African Americans' financial well-being. This study provides insight into understanding why African Americans have yet to experience financial well-being as much as others.

## Literature Review

### *Financial Socialization*

At what point does a person choose to be better off than they are now? Is it after they fail to pay a bill? Is it when they cannot feed their children? Is it when they are a child observing the family's financial dynamics? Jorgensen and Savla (2010) surveyed college students about the perceived influence of parents on their financial attitudes and behaviors. They found the level of influence was a significant external factor since the degree of impact had magnitude and direction. According to Shim and Serido (2011), parental influence is 1.5 times greater than that of financial education and more than twice that of friends.

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<sup>4</sup> The use of this term aligns with recommendations made by the American Psychological Association (2015).

They showed that students who reported discussing financial matters with their parents and learning about managing money from them also reported healthier financial attitudes.

Financial socialization refers to “acquiring and developing values, attitudes, standards, norms, knowledge, and behaviors” (Danes, 1994, p. 128) that provide the context for one’s financial practices. According to Kim and Chatterjee (2013), financial socialization is related to how individuals develop the attitudes, beliefs, knowledge, and skills necessary to manage finances. Among these financial socialization agents, family influence, especially the influence of parents, is predominant (Danes & Haberman, 2007; Fan & Chatterjee, 2019). In this literature review, we will identify research on the various socialization agents (i.e., family, peers, and financial literacy programs) and their impact on financial behavior ultimately leading to a specific financial well-being status.

It only makes sense that family influences are predominantly based on the typical length of time (birth to age 18) family members have to plant, nourish, and grow the ideas/ideals expected. Most financial literacy materials aimed at children support parental involvement; however, there are not enough such programs, so instances where parents initiate socialization gives young people a tremendous head start. For example, Pliner et al. (1996) found that children whose mothers gave them financial guidance and warmly communicated their economic expectations exhibited positive financial behaviors. Similarly, children whose parents oversaw their spending were more likely to have confidence in their abilities as money managers (Kim & Chatterjee, 2013).

While role modeling is the most prevalent method of parental financial socialization via day-to-day interaction, parental teaching is also a meaningful way to explicitly transfer financial knowledge and skills (Serido & Deenanath, 2016). In the poem, *Live Your Creed* by Langston Hughes (Hughes, n.d.), the following passage, “For I may misunderstand you and the fine advice you give, but there is no misunderstanding how you act and how you live,” emphasizes the effect of explicit education. Not all research is pointed

in the direction of the passage, as mentioned above. According to Van Campenhout (2015), the importance of family financial socialization has been further confirmed, as implicit learning is more prevalent in impacting financial behavior than explicit learning.

The role of peers is also important. Peers often influence college students; however, the influences received during their formative years may generally dominate other sources. Further evidence of a parent’s role in explicit and implicit financial socialization comes from Hibbert et al. (2004) who asked college and graduate students questions about what kind of financial behavior was modeled in their homes while they were growing up. They found that being raised in a financially prudent household, where parents saved and paid their bills on time, resulted in less self-reported engagement in negative financial behaviors, such as misusing credit cards and making unaffordable purchases, even after controlling for socioeconomic background.

Whether in line with explicit or implicit learning, most research indicates that parents play a critical role in enhancing knowledge of economic matters, which can positively affect financial well-being (Agnew et al., 2018). In explicit learning, it is more critical; for example, Sansone et al. (2018) evaluated the relationship between receiving an allowance (pocket money) in childhood and financial confidence in adulthood. They concluded that pocket money given by parents to their children became a crucial informal vehicle for developing a young person’s financial habits in later life. According to Utkarsh et al. (2020), students who discussed their parents’ spending behavior, financial investments, and the importance of savings when growing up were more likely to display a positive attitude toward saving and tracking expenses, resulting in expected improved financial well-being. The work of Utkarsh et al. supports the Family Financial Socialization Theory (FFST) by showing that family financial socialization indirectly affects financial behavior and financial well-being through financial literacy (Zhao & Zhang, 2020). Utkarsh et al. (2020) further emphasized that parents must engage their children in financial discussions, and they added that this socialization at a young age will improve

a child's positive outlook on future financial situations.

### ***Financial Literacy***

Financial literacy<sup>5</sup> refers to understanding finance and the capability to use knowledge to make sound financial decisions (Hogarth & Hilgert, 2002). Financial education facilitates literacy; that is, mastery of finance-related knowledge and expertise is essential in undertaking daily transactions and wealth accumulation investments. It empowers people to manage their finances and provides long-lasting financial security for themselves and their families (Sundarasan et al., 2016). As Sundarasan et al. (2016) highlighted, financial literacy has been linked to savings and portfolio decisions. For example, people with a low level monetary education are more inclined to face issues with financial obligations (Lusardi & Tufano, 2009), less likely to take an interest in value ventures (Christelis et al., 2010; Van Rooij et al., 2007), less apt to pick high performing mutual funds with lower expenses (Hastings & Tejada-Ashton, 2008), less inclined to aggregate and oversee wealth successfully (Hilgert et al., 2003; Stango & Zinman, 2007), and less likely to antedate retirement (Lusardi & Mitchell, 2007). As these studies document, it cannot be denied that financial literacy is a crucial part of sound financial decision-making. Further, and many young people wish they had more money-related information (Lusardi et al., 2009).

Sundarasan et al. (2016) found that financial literacy contributed positively to financial satisfaction. Low financial literacy is associated with poor financial decisions in equity investments, debt financing, and long-term retirement planning (Lusardi & Tufano, 2009). These financial decisions can decrease welfare (Chu et al., 2017). Households with a lower level of financial literacy can also make suboptimal decisions when choosing loans or mortgages (Lusardi & Tufano, 2009; Moore, 2003; Utkus & Young, 2011) and suffer from problems such as debt accumulation (Lusardi & Tufano, 2009),

bankruptcy, and foreclosure (Gerardi et al., 2010).

According to Ammerman and Stueve (2019), characterizing learning as implicit or explicit refers to the degree to which the agent's intentions are made clear. Implicit or vicarious learning occurs when attitudes, beliefs, and behaviors develop through the observation of a social agent rather than from direct experience or instruction. Explicit learning, by contrast, refers to developing attitudes and beliefs through direct experience or intentional instruction (Rettig & Mortenson, 1986). An example of implicit learning would be when a child observes the financial behavior of their parents and compares it against the financial outcomes and well-being of the household. An example of explicit learning would be when a child manages their own money (in the case of an allowance).

Ammerman and Stueve (2019) stated that since financial counseling and literacy programs aim to help clients enhance their financial well-being by adopting healthy financial behaviors, early intervention and socialization would be critical components of these programs. However, many financial literacy programs are grounded in cognitive learning approaches, emphasizing the role of information transmission and knowledge attainment in changing behavior (Lusardi et al., 2015). This approach is not to dismiss financial literacy programs because some financial knowledge is better than none, but it is a necessary critique of the shortcomings of such programs.

The cognitive learning paradigm assumes that individuals with more financial knowledge will better manage their financial resources, resulting in enhanced financial well-being (Efland, 1995; Greenwald, 1968; Huston, 2010). This concept is easily applied to other favorable skill development, which would apply to developing financial behaviors. As discussed by Tatom (2010), two of the most critical and early works on the effectiveness of financial education are

attainment and ignore experiential learning, such as skill attainment through socialization (Ammerman & Stueve, 2019). Thus, academic research has yet to resolve the dichotomy of this philosophy.

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<sup>5</sup> Conceptually, financial literacy includes elements of skill. However, financial literacy programs and measures of financial literacy, grounded in the cognitive paradigm, tend to focus on knowledge

Bernheim et al. (1997) and Bernheim and Garrett (2003).

### ***Self-control***

Zakaria et al. (2012) showed that savings, an indicator of responsible behavior, is also determined by financial literacy. They argued that the finding regarding the relationship between these two variables is conclusive, with all studies finding that having financial knowledge influences individuals to behave more responsibly. Another important variable is self-control. Although it seems intuitive, only some realize the relationship between financial well-being and self-control. One way to define self-control is that it constitutes the ability of one's future self to control their current self. When self-control failure occurs, people act non-optimally. They might, for example, procrastinate in their work, even though they know they would be better off spreading the workload over time (Ariely & Wertenbroch, 2002; Fudenberg & Levine, 2006).

According to Stromback et al. (2017), the behavioral life-cycle hypothesis further states that people's financial behavior throughout life is determined by their ability to control impulses and the costs of exercising such self-control. The ability to control impulses is undoubtedly a key factor for long-term success in many areas of life. Stromback et al. (2017) confirmed that studies that have explored the link between self-control and financial behavior have focused on specific financial decisions, such as retirement planning or credit use. Achtziger et al. (2015) found that people with low self-reported self-control are more likely to engage in compulsive shopping, while Gathergood (2012) found that people with self-control problems in the financial domain are likelier to suffer from credit withdrawals and unforeseen expenses on durables, leading to over-indebtedness. Respondents with good self-control are more likely to save money regularly from their paychecks. This finding means they are better prepared to manage unforeseen expenses and more likely to have enough money for retirement (Stromback et al., 2017).

### ***Summary***

As highlighted in this review, the issue of

financial well-being is a critical policymaking issue. Increasing financial well-being can result in reduced poverty (Iramani & Lutfi, 2021). According to the Consumer Financial Protection Bureau (2015b), financial well-being entails having control over one's day-to-day and month-to-month finances, having the capacity to absorb financial shocks, being on track to meet financial goals, and having the financial freedom to make choices that allow one to enjoy life (Consumer Financial Protection Bureau 2015b). If financial well-being is the ultimate goal, developing a positive attitude toward money (which includes inculcating the habit of savings, tracking expenses, and being prudent with money) is a strong predictor of financial well-being (Utmarsh et al., 2020).

It is reasonable to ask why would financial well-being not be a policy goal? Given the choice between being better off and not, a prudent person should choose to be better off; consequently, they should take the relevant actions to achieve that goal. According to Drever et al. (2015), healthy attitudes about saving and some frugality are necessary for skillful money management—positive views on budgeting support financial goal setting and planning. Thus, a lack of materialism likely leads to an ability to live within one's means.

### **A Conceptual Model of Family Financial Socialization**

The conceptual framework illustrated in Figure 1 proposes interrelationships and relationships that influence parental financial socialization on financial and subjective well-being through three motivators: financial knowledge, goal setting, and self-control, either directly on financial behaviors or indirectly through financial skills on financial behaviors. With this theoretical foundation, we introduce a conceptual model that embeds family financial socialization through Gudmunson and Danes' (2011) processes within personal finance. The model offers a unique perspective on how financial socialization can influence financial and subjective well-being (Fan & Park, 2021; Fisher et al., 2006; Fung, 2017; Gudmunson & Danes, 2011; Limbu, 2017). Additionally, the information motivation behavioral skills model, originally developed to

predict health behavior by Fisher and Fisher (1992), which has been shown to predict and change several behaviors, has been included. Despite being initially developed in different disciplines, these two models provide theoretical support for constructing our conceptual framework.

The literature has documented evidence that parental financial socialization, either explicitly or implicitly, can have long-term influences on individual financial behavior (Fan & Park, 2021; Kim & Chatterjee, 2013; Norvilitis & MacLean, 2010; Tang et al., 2015). Furthermore, financial well-being is achieved by promoting financial knowledge and perceived behavioral control (Shim et al., 2009). The information motivation behavior skills model, originally developed to predict health behavior by Fisher and Fisher (1992), has been shown to describe several behaviors, including financial behaviors (Fan & Park, 2021; Limbu, 2017). However, Fan and Park (2021) evaluated the influences of motivations to learn and perform that were significant predictors of financial behavior. Based on their work, the conceptual framework aims to incorporate the behavioral motivation element into examining financial socialization and extends the current understanding of family socialization into subjective financial well-being as an outcome of family financial socialization.

The theoretical framework (Figure 1) proposes that financial socialization is significantly and positively associated with financial and subjective well-being, mediated by financial knowledge, goal setting, and self-control. These three motivators mediate financial and subjective well-being either directly through financial behaviors or indirectly through financial skills and then through financial behaviors. This study uses this framework to posit that there is a significant difference in this relationship between African Americans and European Americans. Thus, we propose the following hypotheses:

Hypothesis 1. There is a significant difference in the relationship between financial socialization and well-being (financial and subjective), mediated by financial knowledge directly on financial management behaviors for African Americans compared with European Americans.

Hypothesis 2. There is a significant difference in the relationship between financial socialization and well-being (financial and subjective), mediated by financial knowledge indirectly through financial skills on financial behaviors for African Americans compared with European Americans.

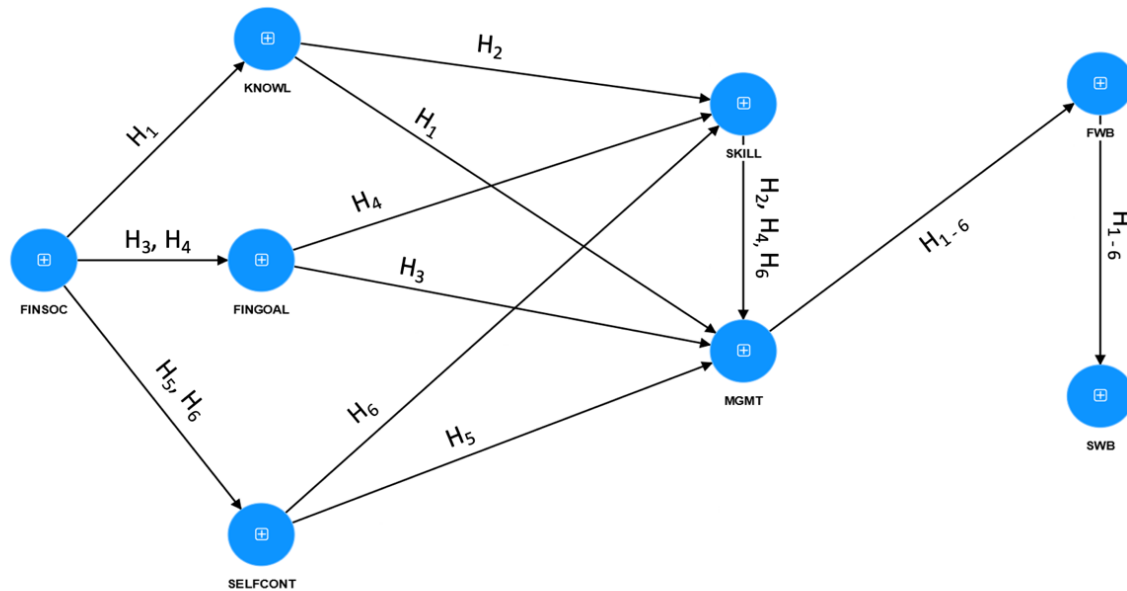
Hypothesis 3. There is a significant difference in the relationship between financial socialization and well-being (financial and subjective), mediated by goal setting directly on financial management behaviors for African Americans compared with European Americans.

Hypothesis 4. There is a significant difference in the relationship between financial socialization and well-being (financial and subjective), mediated by goal setting indirectly through financial skills on financial behaviors for African Americans compared with European Americans.

Hypothesis 5. There is a significant difference in the relationship between financial socialization and well-being (financial and subjective), mediated by self-control directly on financial management behaviors for African Americans compared with European Americans.

Hypothesis 6. There is a significant difference in the relationship between financial socialization and well-being (financial and subjective), mediated by self-control indirectly through financial skills on financial behaviors for African Americans compared with European Americans.

**Figure 1. Conceptual Framework and Hypotheses**



*Note: FINSOC = financial socialization, KNOWL = financial knowledge, FINGOAL = financial goal-setting, SELFCONT = financial self-control, SKILL = financial skills, MGMT = financial management behavior, FWB = financial well-being, SWB = subjective well-being.*

**Methodology**

**Data Analysis**

This study used partial least squares (PLS) path modeling, a variance-based structural equation modeling (SEM) method, to examine the research model empirically (Albort-Morant et al., 2018). This methodology tests and estimates causal relations between latent or unobserved variables using a combination of data measured through observed items or variables. PLS-SEM includes the following multistage analyses. First, measurement model evaluation and second, structural model evaluation (Ringle et al., 2018; Wong, 2013). The measurement model requirement guarantees that the structural model will use only the constructs with reasonable indicator loadings, convergent validity, composite reliability (CR), and discriminant validity. Structural model knowledge evaluation is meant to evaluate path coefficients and test their magnitude through management in the bootstrapping method. Additionally, PLS can readily operate with formative variables (Chin et al., 2003). This study used the Smart PLS 4.0.9.5

software suite (Ringle et al., 2015) to estimate the PLS-SEM model.

**Data**

This study used data from the 2016 National Financial Well-Being Survey (NFWBS), which was designed and administered by the Consumer Financial Protection Bureau (CFPB). The data comprised respondents’ financial attitudes, skills, knowledge, experiences, behaviors, individual characteristics, and household and family financial status hypothesized to affect financial well-being. The NFWBS sample represents the noninstitutionalized adult population in the United States through multiple steps of the design process.

Initially, to represent the U.S. population proportionally, the NFWBS survey targeted 5,000 adults. The 2016 Annual Socioeconomic Supplement of the Current Population Survey (CPS) was used to compare the proportions. Finally, to offset the lower response rates for crucial population segments, the survey oversampled those below 200% of the federal

poverty level, those aged 62 and older, and African Americans, non-Hispanics, or Hispanic Americans (CFPB, 2015a).

Consequently, the total number of respondents who completed the survey was 6,394. The current study follows the CFPB recommendation of using weights to adjust for oversampling issues so that the results represent the total population. In the sample, we used self-identified African American and European American respondents. A final dataset of 4,872 participants was used in this study. Sample weights were applied in the analysis.

### **Variables**

*Financial and subjective well-being variables.* The primary outcome variable in this study was subjective well-being which was created as a latent construct comprising three observed variables that measured respondents' levels of subjective well-being (CFPB, 2015a). The items included were, "I am satisfied with my life," "I am optimistic about my future," and "If I work hard today, I will be more successful in the future." The answers for each item were coded using a 7-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree.

Financial well-being was constructed as a latent variable composed of 10 indicators. Each of the 10 items was on a Likert agreement scale of 1–5, with some items reverse-coded. The items were (a) "Because of my money situation, I feel like I will never have the things I want in life;" (b) "I am just getting by financially;" (c) "I am concerned that the money I have or will save won't last;" (d) "Giving a gift for a wedding, birthday, or other occasion would put a strain on my finances for the month;" (e) "I could handle a major unexpected expense;" (f) "I am securing my financial future;" (g) "I can enjoy life because of the way I'm managing my money;" (h) "I have money left over at the end of the month;" (i) "I am behind with my finances;" and (j) "My finances control my life."

*Financial socialization, financial knowledge, financial goal-setting, financial self-control.* Financial socialization was a latent construct comprising five observed variables regarding how respondents were financially socialized

while growing up (CFPB, 2015a). The items were, (a) "While growing up at home, did your family do any of the following?" (b) "Discussed family financial matters with me," (c) "Spoke to me about the importance of saving," (d) "Discussed how to establish a good credit rating," (e) "Taught me how to be a smart shopper," and (f) "Taught me that my actions determine my success in life." The answers to each item were coded as 1 if respondents had such an experience and 0 otherwise.

Financial knowledge was an observed variable measured by responses to four items using Knoll and Houts' (2012) financial knowledge questions (CFPB, 2015a). The items were (a) "Understanding of long-term returns on investment," (b) "Understanding of stocks vs. bond vs. savings volatility," (c) "Understanding of the possibility of housing market losses," and (d) "Understanding of credit card minimum payments."

Financial goal setting was an observed variable measured by a latent construct comprising four observed variables (CFPB, 2015a) (answers were given dichotomously). The items were (a) "Do you have a current or recent financial goal?," (b) "I set financial goals for what I want to achieve with my money," (c) "I prepare a clear plan of action with detailed steps to achieve my financial goals" (each was on a 5-point Likert scale), and (d) "Confidence in own ability to achieve financial goals" (each was on a 4-point Likert) (CFPB, 2015a).

Self-control was an observed variable measured by two items. The respondents were asked, "I am good at resisting temptation," and "I am able to work diligently toward long-term goals." The answers were coded with a 4-point scale ranging from 1 = not at all to 4 = completely well.

*Financial skills and financial management behavior.* The NFWBS survey provides modules of questions with predefined themes for both financial skills and financial management behavior variables. A latent construct was created for financial skills, comprising nine indicators reflecting respondents' subjective evaluations of their financial skills and capabilities. The items in the survey were self-assessed financial skills, including: (a) "I know how to get myself to



follow through on my financial intentions,” (b) “I know where to find the advice I need to make decisions involving money,” (c) “I know how to make complex financial decisions,” (d) “I am able to make good financial decisions that are new to me,” (e) “I am able to recognize a good financial investment,” (f) “I know how to keep myself from spending too much,” and (g) “I know how to make myself save,” (h) “I know when I do not have enough information to make a good decision involving my money,” and (i) “I know when I need advice about my money” (CFPB, 2015a). Each item was coded on an agreement scale of 1–5, with some items reverse-coded.

Financial management behavior was a latent construct, with four observed variables reflecting positive and desirable financial management behaviors. Respondents were asked to indicate how often they had engaged in the following activities in the past six months: (a) “Paid all the bills on time,” (b) “Stayed within the budget or spending plan,” (c) “Paid off credit card balance in full each month,” and (d) “Checked the statements, bills, and receipts to make sure there were no errors” (CFPB, 2015a). The answers were coded with a 5-point scale ranging from 1 = never to 5 = always.

**Results**

***Respondent Profile***

Table 1 provides descriptive statistics for the survey sample. The weighted percentages reflect the U.S. population profile. The sample was comprised of 84.4% European Americans and 15.6% African Americans. (The race of participants was categorized as European American, African American, Asian American, or Latin American in accordance with the standards established by the American Psychological Association (2015).) Gender identification indicated that the dataset was close to half, with female respondents having a slight advantage (52.4%) with male respondents at 47.6%. Overall, the 35 to 54 age group (32.2%) represented a more significant percentage of the dataset, with the 70 or older age group having the lowest representation at 15.1%. A slightly higher percentage of respondents were married (56.6%). Approximately 67% of participants had some college education or less. Forty-two percent of the sample was employed, 23% was retired, and 35% was unemployed for numerous reasons.

**Table 1. Respondent Profile**

	Variable	Frequency	Percent
Gender	Male	2,317	47.6
	Female	2,555	52.4
Racial Group	African American	758	15.6
	European American	4,114	84.4
Age Group	34 and Younger	1,383	28.4
	35–54	1,571	32.2
	55–69	1,182	24.3
	70 or Older	737	15.1
Marital Status	Married	2,755	56.6
	Not Married	2,268	43.4
Education Level	Some College or less	3,277	67.3
	Bachelor’s Degree	995	20.4
	Graduate Degree	600	12.3
Employment Status	Full-Time	2,057	42.2
	Not Full-Time	1,693	34.8
	Retired	1,121	23.0

### *Measurement Model*

All constructs in the overall model satisfied the requirements for composite reliability (CR), and Cronbach's alpha<sup>6</sup> was greater than 0.60 (Gefen et al., 2000; Nunnally & Bernstein, 2007). Acceptable convergent validity and discriminant validity was noted with each loading being greater than 0.50, average variance extracted (AVE) was greater than 0.50, and the square root of AVE being greater than each correlation coefficient (see Tables 2 and 3 and Bagozzi & Yi, 1988; Chin, 1998; Hair et al., 2011). In order to perform a multigroup analysis according to racial identity in a later stage, convergent validity and discriminant validity for each racial group were also tested to insure the consistency and rigor of the measuring instrument. Table 2 shows the adequate first-order constructs' reliabilities and convergent validities. Values were above the suggested thresholds suggested by Hair and Hult (2017). Although the AVE for financial knowledge of the African American group was below 0.50, the construct was retained due to the acceptable CR and Cronbach's alpha values.

The heterotrait-monotrait (HTMT) ratio of correlations was used to assess discriminant validity. Henseler et al. (2015) argued a strong case for using this approach. In order to distinguish between the two factors, the HTMT should be smaller than 0.90 (Henseler et al., 2016). As Table 3 shows, all correlations complied with this criterion. Discriminant validity was established across all latent variables using the HTMT criterion, as shown in Table 3. The values of HTMT's confidence intervals of the correlations between constructs were less than 0.80 and did not include the value of 1.0 (Hair et al., 2017), which supports the adequacy of discriminant validity.

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<sup>6</sup> Cronbach's alpha reliability coefficient typically ranges from 0 to 1.0. However, there is no lower limit to the coefficient. The closer Cronbach's alpha

coefficient is to 1.0, the greater the internal consistency of the items in the scale.

**Table 2. Measures of Convergent Validity**

Construct	Items	Loadings	Overall			African				European			
			Alpha	CR	(AVE)	Loadings	Alpha	CR	(AVE)	Loadings	Alpha	CR	(AVE)
FGoals	FGoal1	0.523	0.715	0.822	0.542	0.481	0.706	0.817	0.538	0.520	0.718	0.822	0.542
	FGoal2	0.736				0.703				0.752			
	FGoal3	0.855				0.852				0.851			
	FGoal4	0.790				0.837				0.780			
FMBeh	FMBeh1	0.788	0.760	0.847	0.581	0.799	0.779	0.858	0.603	0.775	0.747	0.839	0.567
	FMBeh2	0.804				0.855				0.785			
	FMBeh3	0.750				0.722				0.761			
	FMBeh4	0.701				0.722				0.687			
FSkills	FSkill1	0.847	0.896	0.916	0.551	0.841	0.902	0.921	0.571	0.853	0.894	0.915	0.550
	FSkill2	0.738				0.812				0.739			
	FSkill3	0.780				0.806				0.769			
	FSkill4	0.817				0.867				0.821			
	FSkill5	0.739				0.742				0.746			
	FSkill6	0.777				0.766				0.780			
	FSkill7	0.803				0.835				0.808			
	FSkill8	0.569				0.507				0.549			
	FSkill9	0.552				0.532				0.536			
FSoc	FSoc1	0.668	0.806	0.865	0.563	0.717	0.826	0.877	0.588	0.665	0.796	0.860	0.551
	FSoc2	0.795				0.777				0.789			
	FSoc3	0.718				0.760				0.717			
	FSoc4	0.787				0.816				0.769			
	FSoc5	0.776				0.759				0.767			
FWB	FWB1	0.820	0.870	0.902	0.606	0.772	0.851	0.887	0.569	0.835	0.875	0.905	0.616
	FWB2	0.695				0.577				0.702			
	FWB3	0.733				0.734				0.745			
	FWB4	0.844				0.814				0.847			
	FWB5	0.789				0.823				0.778			
	FWB6	0.781				0.778				0.791			
KHK	KHK1	0.782	0.678	0.802	0.505	0.733	0.622	0.677	0.394	0.781	0.655	0.791	0.489
	KHK2	0.737				0.695				0.711			
	KHK3	0.675				0.742				0.684			
	KHK4	0.641				0.081				0.610			
SCon	SCon1	0.856	0.709	0.872	0.773	0.901	0.814	0.914	0.842	0.839	0.670	0.857	0.750
	SCon2	0.902				0.934				0.893			
SWB	SWB1	0.901	0.792	0.869	0.691	0.943	0.740	0.815	0.602	0.899	0.805	0.878	0.707
	SWB2	0.866				0.690				0.890			
	SWB3	0.715				0.663				0.722			

**Table 3. Discriminant Validity Coefficients**

<b>Race</b>		<b>FGoals</b>	<b>FMBeh</b>	<b>FSkills</b>	<b>FSoc</b>	<b>FWB</b>	<b>KHK</b>	<b>SCon</b>	<b>SWB</b>
Overall	FGoals								
	FMBeh	0.714							
	FSkills	0.761	0.650						
	FSoc	0.330	0.231	0.305					
	FWB	0.416	0.547	0.407	0.157				
	KHK	0.220	0.315	0.209	0.188	0.191			
	SCon	0.603	0.497	0.624	0.326	0.270	0.315		
	SWB	0.454	0.350	0.434	0.241	0.405	0.098	0.377	
African	FGoals								
	FMBeh	0.790							
	FSkills	0.739	0.625						
	FSoc	0.337	0.224	0.316					
	FWB	0.427	0.452	0.292	0.103				
	KHK	0.199	0.177	0.082	0.078	0.276			
	SCon	0.573	0.444	0.485	0.237	0.165	0.280		
	SWB	0.316	0.240	0.438	0.182	0.236	0.075	0.312	
European	FGoals								
	FMBeh	0.717							
	FSkills	0.778	0.681						
	FSoc	0.341	0.237	0.292					
	FWB	0.445	0.621	0.502	0.204				
	KHK	0.296	0.368	0.271	0.205	0.179			
	SCon	0.685	0.593	0.679	0.329	0.379	0.340		
	SWB	0.466	0.379	0.453	0.276	0.480	0.188	0.408	

***Structural Model***

Bootstrapping was used to determine whether the path connections for overall and racial-based models were significant. To estimate the model

for each subsample, a set of 7,000 cases of bootstrapped sub-samples were created for the procedure (Hair et al., 2011). The hypothetical testing and *t* values for each path relationship are shown in Table 4.

**Table 4. Path Coefficient**

Racial Group	Path Relationship	Beta Value	Std. Error	t-value		Decision
Overall	FGoals → FMBeh	0.327	0.023	13.973	***	Supported
	FGoals → FSkills	0.519	0.016	32.860	***	Supported
	FMBeh → FWB	-0.470	0.019	25.258	***	Supported
	FSkills → FMBeh	0.297	0.020	14.903	***	Supported
	FSoc → FGoals	0.250	0.018	13.560	***	Supported
	FSoc → KHK	0.146	0.028	5.142	***	Supported
	FSoc → SCon	0.253	0.026	9.570	***	Supported
	FWB → SWB	-0.377	0.020	18.933	***	Supported
	KHK → FMBeh	0.132	0.017	7.962	***	Supported
	KHK → FSkills	0.038	0.017	2.243	**	Supported
	SCon → FMBeh	0.045	0.021	2.196	**	Supported
	SCon → FSkills	0.262	0.021	12.486	***	Supported
	African	FGoals → FMBeh	0.424	0.048	8.827	***
FGoals → FSkills		0.541	0.038	14.197	***	Supported
FMBeh → FWB		-0.405	0.050	8.015	***	Supported
FSkills → FMBeh		0.260	0.060	4.356	***	Supported
FSoc → FGoals		0.261	0.043	6.064	***	Supported
FSoc → KHK		0.000	0.089	0.002		Not supported
FSoc → SCon		0.203	0.055	3.666	***	Supported
FWB → SWB		-0.241	0.037	6.468	***	Supported
KHK → FMBeh		0.096	0.088	1.088		Not supported
KHK → FSkills		-0.112	0.076	1.475		Not supported
SCon → FMBeh		0.043	0.051	0.839		Not supported
SCon → FSkills		0.207	0.043	4.762	***	Supported
European		FGoals → FMBeh	0.283	0.019	14.663	***
	FGoals → FSkills	0.521	0.016	32.644	***	Supported
	FMBeh → FWB	-0.526	0.024	21.738	***	Supported
	FSkills → FMBeh	0.316	0.021	15.011	***	Supported
	FSoc → FGoals	0.263	0.018	14.537	***	Supported
	FSoc → KHK	0.153	0.026	5.940	***	Supported
	FSoc → SCon	0.247	0.024	10.272	***	Supported
	FWB → SWB	-0.443	0.029	15.215	***	Supported
	KHK → FMBeh	0.122	0.019	6.438	***	Supported
	KHK → FSkills	0.042	0.018	2.408	**	Supported
	SCon → FMBeh	0.086	0.019	4.505	***	Supported
	SCon → FSkills	0.263	0.018	14.291	***	Supported

Notes. \*p < .10, \*\*p < 0.05, \*\*\*p < 0.01.

The most important factors in this study were the cross-validated redundancy (Q2) estimates of the latent construct. A blindfolding procedure was performed to assess the model's predictive capability, given the parameters of PLS-SEM

(Chin, 1998). A Q2 result above 0 indicates predictive relevance in overall and race-based models (Fornell & Cha, 1994). R-squared (R<sup>2</sup>) values for financial socialization, financial goals, financial skills, financial knowledge, self-control,

and financial management behavior ranged from substantial to moderate, respectively (Cohen,

1988). The findings for the models are shown in Table 5.

**Table 5. R<sup>2</sup> and Cross-validated Redundancy**

Racial Group	Constructs	R <sup>2</sup>	Q <sup>2</sup> (Comm)	Q <sup>2</sup> (Red)
Overall	FGoals	0.062	0.266	0.033
	FMBeh	0.393	0.306	0.224
	FSkills	0.471	0.443	0.256
	FWB	0.221	0.450	0.128
	KHK	0.021	0.190	0.011
	SCon	0.064	0.300	0.048
	SWB	0.142	0.393	0.087
African	FGoals	0.068	0.270	0.036
	FMBeh	0.430	0.344	0.250
	FSkills	0.427	0.473	0.240
	FWB	0.164	0.405	0.082
	KHK	0.000	0.010	-0.003
	SCon	0.041	0.446	0.033
	SWB	0.058	0.258	0.022
European	FGoals	0.069	0.266	0.036
	FMBeh	0.409	0.284	0.228
	FSkills	0.495	0.443	0.268
	FWB	0.277	0.463	0.165
	KHK	0.023	0.165	0.011
	SCon	0.061	0.252	0.044
	SWB	0.196	0.422	0.125

To stringently compare the results across two racial groups, *t* statistics were calculated to evaluate the differences in path coefficients across models. As shown below in Figure 2, a

procedure described by Chin et al. (2003) was used to perform a multigroup analysis. As there were two ethnic groups, two separate comparisons were tested in the analysis.

**Figure 2. Formula and Multigroup Analysis**

$$t = \frac{Path_{group_1} - Path_{group_2}}{\left[ \sqrt{\frac{(m-1)^2}{(m+n-2)} * S.E.^2_{group1} + \frac{(n-1)^2}{(m+n-2)} * S.E.^2_{group2}} \right] * \left[ \sqrt{\frac{1}{m} + \frac{1}{n}} \right]}$$

Table 6 compares African and European Americans' financial socialization values based on their *t* value results. The effects of financial socialization, mediated by financial knowledge,

self-control, financial goals, financial management behavior, financial skills, financial well-being, and subjective well-being were significantly different.

**Table 6. Multigroup comparison between African Americans and European Americans**

Relationship	African Americans		European Americans		t Value	
	Beta	Std. Error	Beta	Std. Error		
FSoc → FGoals → FMBeh	0.111	0.024	0.074	0.007	1.462	
FSoc → FGoals → FMBeh → FWB	-0.045	0.011	-0.039	0.004	0.485	
FSoc → FGoals → FMBeh → FWB → SWB	0.011	0.003	0.017	0.002	1.562	
FSoc → FGoals → FSkills	0.141	0.028	0.137	0.010	0.141	
FSoc → FGoals → FSkills → FMBeh	0.037	0.012	0.043	0.004	0.520	
FSoc → FGoals → FSkills → FMBeh → FWB	-0.015	0.005	-0.023	0.002	1.332	
FSoc → FGoals → FSkills → FMBeh → FWB → SWB	0.004	0.002	0.010	0.001	3.155	***
FSoc → KHK → FMBeh	0.000	0.008	0.019	0.004	2.031	**
FSoc → KHK → FMBeh → FWB	0.000	0.003	-0.010	0.002	2.497	**
FSoc → KHK → FMBeh → FWB → SWB	0.000	0.001	0.004	0.001	3.287	***
FSoc → KHK → FSkills	0.000	0.009	0.006	0.003	0.658	
FSoc → KHK → FSkills → FMBeh	0.000	0.003	0.002	0.001	0.770	
FSoc → KHK → FSkills → FMBeh → FWB	0.000	0.001	-0.001	0.000	0.952	
FSoc → KHK → FSkills → FMBeh → FWB → SWB	0.000	0.000	0.000	0.000	1.387	
FSoc → SCon → FMBeh	0.009	0.010	0.021	0.005	1.098	
FSoc → SCon → FMBeh → FWB	-0.004	0.004	-0.011	0.003	1.542	
FSoc → SCon → FMBeh → FWB → SWB	0.001	0.001	0.005	0.001	2.468	**
FSoc → SCon → FSkills	0.042	0.015	0.065	0.007	1.392	
FSoc → SCon → FSkills → FMBeh	0.011	0.005	0.021	0.003	1.610	
FSoc → SCon → FSkills → FMBeh → FWB	-0.004	0.002	-0.011	0.001	2.245	**
FSoc → SCon → FSkills → FMBeh → FWB → SWB	0.001	0.001	0.005	0.001	3.704	***

Notes. \*p < .10, \*\*p < 0.05, \*\*\*p < 0.01.

**Discussion**

***Relations between Financial Socialization, Financial Controls, and Financial Management***

The findings from this study confirm the link between financial socialization effects, financial controls, and financial management abilities in universally determining financial and subjective well-being. All the mediating factors toward

financial well-being and subjective well-being were found to be significantly related to financial socialization toward financial well-being and subjective well-being. As such, subjective financial well-being was also significantly associated with financial well-being. From the five mediating factors, the overall model indicates that financial knowledge, financial goals, financial self-control, financial skills, and financial management behaviors are significant

predecessors to financial well-being. The results correspond to earlier studies conducted in an American context (e.g., Danes, 1994; Danes & Haberman, 2007; Fan & Chatterjee, 2019; Kim & Chatterjee, 2013; Van Campenhout, 2015). It is therefore supposed that African Americans, like the general community, maintain that their financial socialization mainly develops their financial and subjective well-being. The findings relate well to African Americans' concern about the financial socialization process. Moreover, being African American, they generally follow the same path to financial well-being and subjective well-being. Furthermore, they also tended to relate financial well-being to subjective well-being.

The findings generally have a few exceptions with additional details when the overall model is divided into two based on ethnicity. Except for financial knowledge and self-control, the predictors of financial socialization toward financial well-being across ethnic groups were mixed. However, for European Americans, the findings match the overall model supporting financial well-being. It is evident that despite being broadly similar in their financial socialization process, European Americans' financial well-being can be predicted by additional financial control factors. Hence, it is essential to look at the findings of the latter stage.

#### ***Multi-group Comparison According to Racial Identity***

The findings of the multigroup analysis indicate significant differences between African and European Americans' financial socialization when mediated by financial skill and financial management behavior factors. When financial goals mediate financial socialization, only financial skills show significant differences between groups. Financial skills indicate no significant differences when socialization is mediated by financial knowledge. However, financial management behaviors demonstrate significant differences. More surprisingly, financial self-control was a significant factor for financial skills and financial management behaviors in mediating the differences between African and European Americans gaining financial well-being, leading to subjective well-

being. Considering the findings, hypotheses two, three, five, and six were supported and cannot be rejected in this study. The first and fourth hypotheses were not supported and were rejected in the study.

Irrespective of the insightful influence of ethnicity and culture on Americans' financial socialization process, the findings imply that behavior self-control is one of the most impactful ways for African Americans to close the well-being (financial and subjective) gap. In essence, African Americans' financial self-control as a factor affecting well-being differs from that of European Americans. The findings support the theories of earlier studies, which state that self-control influences financial behavior and subjectively perceived financial well-being (Strömbäck et al., 2017; Vuković & Pivac, 2021). Over the years, a drastic increase in financial literacy focus and easier access to financial services have increased the likelihood of developing financial goals (Hudson et al., 2017). However, setting financial goals when considering financial skills remains a significant gap between African and European Americans.

Moreover, the findings suggest that financial knowledge alone cannot overcome financial management behavior changes. Access to financial services remains an issue for African Americans in narrowing the gap with European Americans (Sun et al., 2022). Setting financial goals and following through with the necessary financial skill set continue to separate African and European Americans in terms of their well-being (financial and subjective). As a result, African Americans have continued to be socialized in their inherited cultures and those of European Americans, which sometimes conflicts. This study clarifies some differences between the impact of financial socialization on African American and European Americans' well-being (financial and subjective).

#### **Limitations**

This study has the following limitations that must be considered. First, the results do not imply any causal relationship when studying the cross-sectional dataset. Second, the study focused on financial socialization, which is only one financial and subjective well-being sub-domain.



Other major domains, such as past financial exclusion and health access-related well-being, were not included in this study, but can be examined when applicable datasets are available. Future studies are needed to investigate financial socialization's effect and long-term influences on African Americans' financial behavior and well-being through a lens of historical discrimination. Finally, the findings of this analysis can only be applied to financially excluded Americans, mainly African Americans. Relationships among the variables, including the significant direct influences of generational financial socialization on financial knowledge, goal setting, and self-control and its indirect impact on financial skill and behavior and financial and subjective well-being, may not be generalized to younger generations of African Americans. The influences of financial self-control and behavior undoubtedly require further investigation by other groups of Americans. However, the relationships in this study applied to African Americans can shed light on and provide a starting point for future studies on younger generations of African Americans. Thus, this conceptual framework could be a starting point for future research to understand other groups' financial socialization and financial and subjective well-being.

### **Implications and Conclusion**

Financial socialization is influential in developing and bringing about change in well-being (financial and subjective). At the same time, it provides insights into the reasoning as to what drives well-being (financial and subjective) and why. Consequently, understanding the well-being (financial and subjective) gap between

Americans and their respective financial socialization experiences remains essential to bridging this gap. However, the complexity of the financial services industry and society has directed Americans toward solidifying the well-being gap. Increased focus on the well-being gap may expedite the process of increasing the level of financial literacy across all age groups, enhancing Americans' financial socialization. As such, it is imperative for educators, employers, and policymakers to strategically address what sets ethnic groups apart from and what integrates them into their well-being (financial and subjective).<sup>7</sup>

This study highlights the importance of understanding the financial socialization of Americans' pathways to well-being (financial and subjective). Results also provide insight into ways to improve financial skills development and financial management behaviors for all Americans, despite ethnic diversity. Since African Americans comprise the principal share of low-income Americans (Creamer, 2021), knowing more about their financial inclusion will push financial literacy to the next level to embrace all Americans. Such knowledge will also help to introduce financial literacy at an earlier stage in life, thus reinforcing financial self-control and impacting financial management behaviors later in life. Thus, meticulously implementing financial literacy at different stages of development and having a clear understanding of what makes ethnic groups different will prove pivotal to addressing the well-being (financial and subjective) gap between African and European Americans.

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<sup>7</sup> Although the effects of racism on well-being have been documented in the literature, the models and methodological approach utilized in this study were designed to hold racism constant. The methodological approach was made strategically to enable the exploration of specific impacts of other variables within environments where the level of racial bias or discrimination is assumed to be uniform. This methodology allows for a clearer understanding of how various factors—such as socio-economic status, education, or geographic location—operate independently of the direct effects of racism. By examining outcomes under this controlled condition,

it is possible to identify patterns, disparities, and potential causal relationships that the pervasive influence of racial discrimination might otherwise obscure. This approach is crucial in social science, sociology, psychology, and financial well-being, where isolating the distinct effects of systemic and interpersonal racism from other variables is essential for devising effective interventions and policies. It provides a nuanced understanding of inequality and injustice, facilitating targeted strategies that address specific barriers to equity and inclusion while acknowledging the broader context of racism.

## References

- Achtziger, A., Hubert, M., Kenning, P., Raab, G., & Reisch, L. (2015). Debt out of control: The links between self-control, compulsive buying, and real debts. *Journal of Economic Psychology*, 49, 141–149. <https://doi.org/10.1016/j.joep.2015.04.003>
- Agnew, S., Maras, P., & Moon, A. (2018). Gender differences in financial socialization in the home—An exploratory study. *International Journal of Consumer Studies*, 42(3), 275–282. <https://doi.org/10.1111/ijcs.12415>
- Albort-Morant, G., Leal-Rodríguez, A. L., & De Marchi, V. (2018). Absorptive capacity and relationship learning mechanisms as complementary drivers of Green Innovation Performance. *Journal of Knowledge Management*, 22(2), 432–452. <https://doi.org/10.1108/jkm-07-2017-0310>
- American Psychological Association. (2015). Guidelines for psychological practice with transgender and gender nonconforming people. *American Psychologist*, 70(9), 832–864. <https://doi.org/10.1037/a0039906>
- Ammerman, D. A., & Stueve, C. (2019). Childhood financial socialization and debt-related financial well-being indicators in adulthood. *Journal of Financial Counseling and Planning*, 30(2), 213–230. <https://doi.org/10.1891/1052-3073.30.2.213>
- Ariely, D., & Wertenbroch, K. (2002). Procrastination, deadlines, and performance: Self-control by precommitment. *Psychological Science*, 13(3), 219–224. <https://doi.org/10.1111/1467-9280.00441>
- Atalay, K., & Edwards, R. (2022). House prices, housing wealth, and financial well-being. *Journal of Urban Economics*, 129(C). <https://doi.org/10.1016/j.jue.2022.103438>
- Bagozzi, R., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94. <https://doi.org/10.1007/BF02723327>
- Bernheim, B. D., & Garrett, D. M. (2003). The effects of financial education in the workplace: Evidence from a survey of households. *Journal of Public Economics*, 87(7–8), 1487–1519.
- Bernheim, B. D., Garrett, D. M., & Maki, D. M. (1997). Education and savings: The long-term effects of high school curriculum mandates. *NBER Working Paper*, (6085).
- Brown, C., & Robinson, L. (2016). *Breaking the cycle: From poverty to financial security for all*. PolicyLink. [https://www.policylink.org/sites/default/files/BreakingTheCycle\\_0.pdf](https://www.policylink.org/sites/default/files/BreakingTheCycle_0.pdf)
- Brüggen, E. C., Högreve, J., Holmlund, M., Kabadayi, S., & Löfgren, M. (2017). Financial well-being: A conceptualization and research agenda. *Journal of Business Research*, 79, 228–237. <https://doi.org/10.1016/j.jbusres.2017.03.013>
- Chin, W. (1998). The partial least squares approach for structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business*

- research* (pp. 295–336). Lawrence Erlbaum Associates Publishers.
- Chin, W., Marcolin, B., & Newsted, P. (2003). A partial least squares latent variable modelling approach for measuring interaction effects: Results from a monte carlo simulation study and an electronic-mail emotion/adoption study. *Information Systems Research*, *14*(2), 189–217. <https://doi.org/10.1287/isre.14.2.189.16018>
- Christelis, D., Jappelli, T., & Padula, M. (2010). Cognitive abilities and portfolio choice. *White Economic Review*, *54*(1), 18–38. <https://doi.org/10.1016/j.euroecorev.2009.04.001>
- Chu, Z., Wang, Z., Xiao, J. J., & Zhang, W. (2017). Financial literacy, portfolio choice and financial well-being. *Social Indicators Research*, *132*, 799–820.
- Cobb, A. (2022). Financial literacy education for and its effect of financial well-being. University of South California Proquest Dissertation Publishing 2022, 29325135.
- Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Routledge. <https://doi.org/10.4324/9780203771587>
- Consumer Financial Protection Bureau. (2015a). Measuring financial well-being: A guide to understanding the CFPB financial well-being scale. Retrieved from [https://files.consumerfinance.gov/f/201512\\_cfpb\\_financial-well-being-user-guide-scale.pdf](https://files.consumerfinance.gov/f/201512_cfpb_financial-well-being-user-guide-scale.pdf).
- Consumer Financial Protection Bureau. (2015b). Financial well-being: The goal of financial education. Report, Iowa City, IA: Consumer Financial Protection Bureau.
- Creamer, J. (2021, December 9). Inequalities persist despite decline in poverty for all major race and Hispanic origin groups. Census.gov. <https://www.census.gov/library/stories/2020/09/poverty-rates-for-blacks-and-hispanics-reached-historic-lows-in-2019.html>
- Danes, S. M. (1994). Parental perceptions of children's financial socialization. *Journal of Financial Counseling and Planning*, *5*, 127–149.
- Danes, S. M., & Haberman, H. (2007). Teen financial knowledge, self-efficacy, and behavior: A gendered view. *Journal of Financial Counseling and Planning*, *18*(2), 48–60.
- Drever, A., White, E., Kalish, C., Quest, N., Hoaglan, E., & Nelms, E. (2015). Foundations of financial well-being: Insights into the role of executive function, financial socialization, and experience-based learning in childhood and youth. *The Journal of Consumer Affairs*, *49*(1), 13–38. <https://doi.org/10.1111/joca.12068>
- Efland, A. D. (1995). The spiral and the lattice: Changes in cognitive learning theory with implications for art education. *Studies in Art Education*, *36*(3), 134–153. <https://doi.org/10.2307/1320905>
- Fan, L., & Park, N. (2021). Factors mediating the associations between financial socialization and well-being of young adults: Testing a conceptual framework. *Journal of Financial Planning and Counseling*, *2*(2), 202–

216. <https://doi.org/10.1891/JFCP-20-00056>
- Fan, L., & Chatterjee, S. (2019). Financial socialization, financial education, and student loan debt. *Journal of Family and Economic Issues*, 40(1), 74–85. <https://doi.org/10.1007/s10834-018-9589-0>
- Federal Reserve Board of Governors. (2022). Economic well-being of US households in 2021. Federal Reserve Board Publications. Board of Governors of the Federal Reserve System. <https://www.federalreserve.gov/publications/files/2021-report-economic-well-being-us-households-202205.pdf>
- Fisher, J. D., & Fisher, W. A. (1992). Changing AIDS-risk behavior. *Psychological Bulletin*, 111(3), 455–474. <https://doi.org/10.1037/0033-2909.111.3.455>
- Fisher, J. D., Fisher, W. A., Amico, K. R., & Harman, J. J., (2006). An information-motivation-behavioral skills model of adherence to antiretroviral therapy. *Health Psychology*, 25(4), 462–73. <https://doi.org/10.1037/0278-6133.25.4.462>
- Fornell, C., & Cha, J. (1994). Partial least squares. *Advanced Methods of Marketing Research*, 407, 52–78.
- Fudenberg, D., & Levine, D. K. (2006). A dual-self model of impulse control. *American Economic Review*, 96(5), 1449–1476.
- Fung, M. S. K. (2017). An IMB model testing via endorser types and advertising appeals on young people's attitude towards cervical cancer prevention advertisement in Hong Kong. *Young Consumers*, 18(1), 1–18. <https://doi.org/10.1108/YC-07-2016-00620>
- Gathergood, J. (2012). Self-control, financial literacy and consumer over-indebtedness. *Journal of Economic Psychology*, 33, 590–602. <https://doi.org/10.1016/j.joep.2011.11.006>
- Gefen, D., Straub, D., & Boudreau, M. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications of the Association of Information Systems*, 4(7). <https://doi.org/10.17705/1CAIS.00407>
- Gerardi, K. S., Rosen, H. S., & Willen, P. S. (2010). The impact of deregulation and financial innovation on consumers: The case of the mortgage market. *The Journal of Finance*, 65(1), 333–360. <https://doi.org/10.1111/j.1540-6261.2009.01531.x>
- Greenwald, A. G. (1968). Cognitive learning, cognitive response to persuasion, and attitude change. In A. G. Greenwald, T. C. Brock, & T. M. Ostrom (Eds.), *Psychological Foundations of Attitudes* (pp. 147-170). Academic Press. <https://doi.org/10.1016/B978-1-4832-3071-9.50012-X>
- Gudmunson, C. G., & Danes, S. M. (2011). Family financial socialization: Theory and critical review. *Journal of Family and Economic Issues*, 32(4), 644–667. <https://doi.org/10.1007/s10834-011-9275-y>
- Hair, J., & Hult, G. (2017). *A primer on partial least squares structural*

- equation modeling (PLS-SEM)*. SAGE Publications.
- Hair, J., Ringle, C., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, *19*, 139–151. <https://doi.org/10.2753/MTP1069-6679190202>
- Hastings, J. S., & Tejada-Ashton, L. (2008). Financial literacy, information, and demand elasticity: Survey and experimental evidence. *NBER Working Paper No. 14538*.
- Henseler, J., Hubona, G., & Ray, P. (2016). Using PLS path modeling in new technology research: Updated guidelines. *Industrial Management & Data Systems*, *116*(1), 2–20. <https://doi.org/10.1108/IMDS-09-2015-0382>
- Henseler, J., Ringle, C. M. & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hibbert, J. R., Beutler, I. F., & Martin, T. M. (2004). Financial prudence and next generation financial strain. *Journal of Financial Counseling and Planning*, *15*(2), 51–59.
- Hilgert, M. A., Hogarth, J. M., & Beverly, S. G. (2003). Household financial management: The connection between knowledge and behavior. *Federal Reserve Bulletin*, *89*, 309.
- Hogarth, J. M., & Hilgert, M. A. (2002). Financial knowledge, experience and learning preferences: Preliminary results from a new survey on financial literacy. *Consumer Interest Annual*, *48*(1), 1–7.
- Hudson, C. R., Young, J., Anong, S., Hudson, E., & Davis, E. (2017). African American financial socialization. *The Review of Black Politically Economy*, *44*, (3–4). <https://doi.org/10.1007/s12114-017-9258-9>
- Hughes, L. (n.d.). *Live your creed poem*. Success Minded. <https://successminded.co/live-your-creed-poem/>
- Huston, S. J. (2010). Measuring financial literacy. *Journal of Consumer Affairs*, *44*(2), 296–316. <https://doi.org/10.1111/j.1745-6606.2010.01170.x>
- Iramani, R., & Lutfi, L. (2021). An integrated model of financial well-being: The role of financial behavior. *Accounting*, *7*(3), 691–700. <https://doi.org/10.5267/j.ac.2020.12.007>
- Jorgensen, B. L., & Savla, J. (2010). Financial literacy of young adults: The importance of parental socialization. *Family Relations*, *59*(4), 465–478. <https://doi.org/10.1111/j.1741-3729.2010.00616.x>
- Kim, J., & Chatterjee, S. (2013). Childhood financial socialization and young adults' financial management. *Journal of Financial Counseling and Planning*, *24*(1), 61–79, 91–92.
- Knoll, M. A. Z., & Houts, C. R. (2012). The financial knowledge scale: An application of item response theory to the assessment of financial literacy. *The Journal of Consumer Affairs*, *46*(3), 381–410.

- <https://doi.org/10.1111/j.1745-6606.2012.01241.x>
- Limbu, Y. B. (2017). Credit card knowledge, social motivation, and credit card misuse among college students: Examining the information-motivation-behavioral skills model. *The International Journal of Bank Marketing*, 35(5), 842–856. <https://doi.org/10.1108/IJBM-04-2016-0045>
- Lusardi, A., Michaud, P. C., & Mitchell, O. S. (2015). Using a life cycle model to evaluate financial literacy program effectiveness (Working Paper No. 2015-5). Global Financial Literacy Excellence Center, George Washington University. Retrieved From: <https://gflec.org/wp-content/uploads/2016/08/WP-2015-5-Using-a-Life-Cycle-Model-to-Evaluate-Financial-Literacy-Program-Effectiveness.pdf>
- Lusardi, A., & Mitchell, O. S. (2007). Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth. *Journal of Monetary Economics*, 54(1), 205–224. <https://doi.org/10.1016/j.jmoneco.2006.12.001>
- Lusardi, A., Mitchell, O. S., & Curto, V. (2009). *Financial literacy and financial sophistication among older Americans* (No. w15469). National Bureau of Economic Research. Retrieved from: [https://repository.upenn.edu/prc\\_papers/346/](https://repository.upenn.edu/prc_papers/346/)
- Lusardi, A., & Tufano, P. (2009). Debt literacy, financial experiences, and over indebtedness. NBER Working Paper 14808, National Bureau of Economic Research, Cambridge, MA. Retrieved from: <https://www.nber.org/papers/w14808>
- McIntosh, K., Moss, E., Nunn, R., & Shambough J. (2020). Examining the black-white wealth gap. Upfront. Brookings, Washington, D.C. Retrieved from: <https://www.brookings.edu/blog/upfront/2020/02/27/examining-the-black-white-wealth-gap/>
- Moore, D. L. (2003). *Survey of financial literacy in Washington State: Knowledge, behavior, attitudes, and experiences*. Washington State Department of Financial Institutions.
- Norvilitis, J. M., & MacLean, M. G. (2010). The role of parents in college students' financial behaviors and attitudes. *Journal of Economic Psychology*, 31, 55–63. <https://doi.org/10.1016/j.joep.2009.10.003>
- Nunnally, J. C., & Bernstein, I. H. (2007). *Psychometric theory* (3rd ed.). Nunnally and Bernstein.
- Pliner, P., Freedman, J., Abramovitch, R., & Darke, P. (1996). Children as consumers: In the laboratory and beyond. In P. Lunt & A. Furnham (Eds.), *Economic socialization: The economic beliefs and behaviors of young people* (pp. 35–46). Edward Elgar.
- Porto, N., & Xiao, J. J. (2022). The role of consumer financial confidence on financial well-being. *Consumer Interest Annual. American Council of Consumer Interest*, 68(1), 1–5. <https://www.consumerinterests.org/assets/docs/CIA/CIA2022/PortoNiltonCIA2022.pdf>
- Rettig, K. D., & Mortenson, M. (1986). Household production of financial

- management competence. *Human resources research, 1887-1987: Proceedings/edited by Ruth E. Deacon and Wallace E. Huffman.*
- Ringle, C. M. (2015). Partial least squares structural equation modelling (PLS-SEM) using SmartPLS 3. *Computational Data Analysis and Numerical Methods VII WCDANM, Portugal.*
- Ringle, C. M., Sarstedt, M., Mitchell, R., & Gudergan, S. P. (2018). Partial least squares structural equation modeling in HRM research. *The International Journal of Human Resource Management, 31*(12), 1617–1643. <https://doi.org/10.1080/09585192.2017.1416655>
- Sansone, D., Rossi, M., & Fornero, E. (2018). Four bright coins shining at me: Financial education in childhood, financial confidence in adulthood. *Journal of Consumer Affairs, 53*(2), 630–651. <https://doi.org/10.1111/joca.12207>
- Serido, J., & Deenanath, V. (2016). Financial parenting: Promoting financial self-reliance of young consumers. In J. J. Xiao (Ed.), *Handbook of consumer finance research* (2nd ed.) (pp. 291–300). Springer.
- Shim, S., & Serido, J. (2011). Young adults' financial capability [https://www.nefe.org/\\_images/research/APLUS-Wave-2/APLUS-Wave-2-Final-Report.pdf](https://www.nefe.org/_images/research/APLUS-Wave-2/APLUS-Wave-2-Final-Report.pdf) (accessed 9 March 2020).
- Shim, S., Xiao, J. J., Barber, B. L., & Lyons, A. C. (2009). Pathways to life success: A conceptual model of financial well-being for young adults. *Journal of Applied Developmental Psychology, 30*(6), 708–723. <https://doi.org/10.1016/j.appdev.2009.02.003>
- Stango, V., & Zinman, J. (2007). *Fuzzy math and red ink: When the opportunity cost of consumption is not what it seems.* Working Paper, Dartmouth College.
- Strömbäck, C., Lind, T., Skagerlund, K., Vastfjäll, D., & Tanghog, G. (2017). Does self-control predict financial behavior and financial well-being? *Journal of Behavioral and Experimental Finance, 14*(1), 30–38. <https://doi.org/10.1016/j.jbef.2017.04.002>
- Sun, S., Chen, Y., Ansong, D., Huang, J., & Sherraden, M. S. (2022). Household financial capability and economic hardship: An empirical examination of the financial capability framework. *Journal of Family and Economic Issues, 43*(4), 716–729. <https://doi.org/10.1007/s10834-022-09816-5>
- Sundarasan, S. D. D., Rahman, M. S., Othman, N. S., & Danaraj, J. (2016). Impact of financial literacy, financial socialization agents, and parental norms on money management. *Journal of Business Studies Quarterly, 8*(1), 137. [https://doi.org/10.35484/pssr.2020\(4-1\)56](https://doi.org/10.35484/pssr.2020(4-1)56)
- Tang, N., Baker, A., & Peter, P. C. (2015). Investigating the disconnect between financial knowledge and behavior: The role of parental influence and psychological characteristics in responsible financial behaviors among young adults. *The Journal of Consumer Affairs, 49*(2), 376. <https://doi.org/10.1111/joca.12069>
- Tatom, J. (2010). Financial wellbeing and some problems in assessing its link to

- financial education. John Tatom Networks Financial Institute at Indiana State University 1 October 2010. Retrieved from: [https://mpr.ub.uni-muenchen.de/26411/1/MPRA\\_paper\\_26411.pdf](https://mpr.ub.uni-muenchen.de/26411/1/MPRA_paper_26411.pdf)
- Utkarsh, Pandey, A., Ashta, A., Spiegelman, E., & Sutan, A. (2020). Catch them young: Impact of financial socialization, financial literacy and attitude towards money on financial well-being of young adults. *International Journal of Consumer Studies*, 44(6), 531–541. <https://doi.org/10.1111/ijcs.12583>
- Utkus, S. P., & Young, J. (2011). Financial literacy and 401 (k) loans. *Financial literacy: Implications for retirement security and the financial marketplace*, 59. [https://repository.upenn.edu/cgi/viewcontent.cgi?article=1214&context=prc\\_papers](https://repository.upenn.edu/cgi/viewcontent.cgi?article=1214&context=prc_papers)
- Van Campenhout, G. (2015), Revaluing the role of parents as financial socialization agents in youth financial literacy programs. *Journal of Consumer Affairs*, 49(1), 186–222. <https://doi.org/10.1111/joca.12064>
- Van Rooij, M. C., Kool, C. J., & Prast, H. M. (2007). Risk-return preferences in the pension domain: Are people able to choose? *Journal of Public Economics*, 91(3–4), 701–722. <https://doi.org/10.1016/j.jpubeco.2006.08.003>
- Vuković, M., & Pivac, S. (2021). Does financial behavior mediate the relationship between self-control and financial security? *Croatian Operational Research Review*, 12(1), 27–36. <https://doi.org/10.17535/corr.2021.0003>
- Wong, K. K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, 24, 1–32.
- Yakoboski, P. J., Lusardi, A., & Hesler, A. (2019). *Financial literacy and well-being among African-Americans: New insights from the personal finance (P-Fin) index*. Optimizing financial education utilization. Financial Education. Accesslex Resource Collections. [https://gflec.org/wp-content/uploads/2019/11/TIAA-Institute-GFLEC\\_African-American-P-Fin-Index\\_November-2019.pdf](https://gflec.org/wp-content/uploads/2019/11/TIAA-Institute-GFLEC_African-American-P-Fin-Index_November-2019.pdf)
- Zakaria, R. H., Jaafar, N. I. M., & Marican, S. (2012). Financial behavior and financial position: A structural equation modelling approach. *Middle-East Journal of Scientific Research*, 12(10), 1396–1402. <https://doi.org/10.5829/idosi.mejsr.2012.12.10.79>
- Zhao, H., & Zhang, L. (2020). Talking money at home: The value of family financial socialization. *International Journal of Bank Marketing*, 38(7), 1617–1634. <https://doi.org/10.1108/IJBM-04-2020-0174>