Family Matters: Examine the Role of Family Financial Socialization to Improve Consumer Financial Well-Being

Shirley Ye Sheng
Barry University

Wei Feng
Lynn University

David Spohn
Lynn University

This paper compares family financial socialization with school financial education in their roles to improve consumer financial well-being. Using a national sample of US adult respondents (at the age of 18 and above) from the 2016 National Financial Well-Being Survey, this study proposes a structural equation model. It shows that family socialization and school education play equally important and distinctively separate roles in elevating financial well-being. Family socialization functions through a mediating factor in helping people cultivate good financial habits in saving, planning, and budgeting. This study contributes to the research of the direct and indirect relationship between family financial socialization, financial literacy, financial habits, and financial well-being.

Keywords: consumer financial well-being, family financial socializing, financial literacy, financial habits, structural equation modelling

INTRODUCTION

The prolonged COVID-19 pandemic has caused economic repercussions across the world. The unfolding pandemic recession has led to a re-focus on the importance of consumer financial well-being (e.g., Vieira et al., 2021; Friedline et al., 2021). According to the Consumer Financial Protection Bureau (CFPB 2015, p18), "Financial well-being can be defined as a state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow enjoyment of life." There have been many suggestions on how to improve financial well-being. They include actions to get to know your financial habits, create a budget, work on paying off your debt, increase your income, spend less than you earn, prepare for the unexpected, establish a savings plan, and save sufficiently to maintain one's lifestyle in retirement (Lee et al., 2020). Above all, it is essential to manage, plan and budget ahead and be prepared to deal with the unexpected, such as loss of income or sudden illness.

In the United States, there have been several rounds of economic stimulus funds available to alleviate the immediate problem during the COVID-19 pandemic. However, they can only temperately lessen Americans' financial pressure. A more effective way to help Americans—now and in the future—is to improve their financial literacy, which is the ability to understand and effectively use various financial skills, including personal financial management, budgeting, and investing. A state of financial literacy allows individuals and families to live the quality of life they desire in a primarily anxiety-free manner.

Financial education and training programs aim to elevate people's financial well-being (CFPB, 2015). While people can learn ideas and knowledge quickly from various sources, it takes time to build and practice good habits. Previous studies have focused on developing educational programs to help students gain financial knowledge, as measured with financial literacy. Numerous research and survey practices have been conducted to measure financial literacy, as reviewed by Lusardi and Mitchell (2014). Studies such as Robb and Woodyard (2011) show that financial knowledge influences financial behavior. Another equally essential yet sometimes less-appreciated factor is family socialization. School teaching is more toward a concrete understanding of financial terms and reasoning, while family socialization is more about values and principles. Family is usually regarded as the most important agent of socialization. As infants, we are completely dependent on others to survive. Our parents teach us to function and care for ourselves. Along with the rest of our family, they teach us about close relationships, group life, and how to share resources. Additionally, they provide us with our first system of values, norms, and beliefs. Parents are found to play a great influence on their children's future financial decisions and financial well-being (Danes and Yang, 2014; Gudmunson and Danes, 2011; Rea et al., 2018; Fessler et al., 2020).

We explore the effectiveness of family socializing in elevating financial well-being, both directly and indirectly through building financial habits. We further study whether such a family role is replaceable by school education. Our study shows that both school teaching and family socialization help cultivate financial habits. Those good habits, in turn, improve financial well-being. Family socialization, though related, plays an independent role from school teaching.

The study is organized as follows. We first review the literature on financial well-being and family role in personal finance. Then, we introduce the research questions and hypothesis. Data and tests are described in the following section. The final section concludes.

LITERATURE REVIEW

Financial literacy has been advocated as an important means to elevate people's financial well-being. Many studies have taken the survey approach to measure people's financial literacy and evaluate its impact on financial decisions. For example, Lusardi and Mitchell (2008) designed a standard set of questions to measure a person's financial literacy around several fundamental concepts. Those questions include: (i) numeracy and capacity to do calculations related to interest rates, such as compound interest; (ii) understanding of inflation; and (iii) understanding of risk diversification. Such a survey approach has been implemented in the United States and abroad (e.g., Bucher-Koenen and Lusardi, 2011; Lusardi and Mitchell, 2011b & 2011c) and on broader topics including financial markets, retirement planning, etc. (e.g., Lusardi and Mitchell, 2011a & 2014).

Several studies explore the association between financial literacy and financial behaviors. For example, Hilgert et al. (2003) reveal a strong correlation between financial literacy and financial management skills. De Bassa Scherebe rg (2013) shows financial literacy is related to holding precautionary savings. Furthermore, people with better numeric and financial literacy are more likely to participate in financial markets (Christelis et al., 2010; Lusardi and Mitchell, 2011b; Van Rooij et al., 2011).

Well-informed, financially educated consumers are better able to make good decisions for their families and thus are in a position to increase their economic security and well-being (Hilgert et al., 2003). According to Lusardi (2019), financial literacy, coupled with proper financial behavior, improves people's financial well-being.

The financial literacy programs aim to build a concrete understanding of financial topics, ranging from compounding interest to the knowledge of stock markets. Family socialization involves the subjective matters of principles and values. For example, CFPB (2015) survey includes questions on whether family members "discussed family financial matters with me", "spoke to me about the importance of saving", "discussed how to establish a good credit rating", "taught me how to be a smart shopper", and "taught me that my actions determine my success in life." While related to finance, those questions measure aspects different from the focus of financial literacy surveys.

According to the family financial socialization theory (FFST, Gudmunson and Danes, 2011), parents perform family socialization through both direct and indirect communications. Direct communications involve explicit spoken instructions. Indirect communications refer to implicit financial socializations such as parents' patterned financial behaviors as a guideline for children to follow (Lachance and Choquette-Bernier 2004). Children's cognitive interpretations of finance are the foundation to develop their financial attitudes, knowledge, and capabilities. Such a development significantly impacts financial behavior and consequently affects financial well-being (Danes and Yang, 2014; Gudmunson and Danes, 2011). Prior studies of family financial socialization have shed light on studying multiple age groups ranging from teens to married couples (e.g., Payne et al. 2014). College-aged are mostly studied (e.g., Solheim et al., 2011; Jorgensen et al., 2017). Jorgensen and Salva (2010) noted that 67% of college students viewed parents as their teachers of financial knowledge.

While acknowledging their importance as in previous studies, this paper compares family socialization with school financial literacy education. It shows that while related, family socializing plays a distinct role in improving financial well-being, which is irreplaceable by school education.

Hypothesis

The importance of financial literacy and family teaching is evident. This study explores the roles those two approaches play in shaping financial behavior and further improving financial well-being. We test the following hypothesis to study the relationships between family socializing, school teaching, financial habits, and financial well-being.

H1: *Good financial habits in saving, planning, and budgeting (HABIT) improve financial well-being (FWB).*

Once a behavior becomes a habit, it is easier for an individual to keep performing that action since it requires less effort of thoughts and self-control. Lamas and Murphy (2021) discussed the importance and effectiveness of habit formation to drive behavior and found financial well-being is related to the frequency and automaticity of financial habits. Lee et. al. (2020), Lusardi (2019), and Feng and Reich (2021) show that financial well-being is closely associated with good financial habits in financial planning and management.

H2: *Financial literacy gained from school financial education improves financial well-being directly (FINLIT → FWB) and indirectly through mediating factors of cultivating good financial habits (FINLIT → HABIT → FWB).*

Financial literacy measures the outcome of school education in finance. Studies have shown a positive association between financial literacy and financial well-being (Hilgert et al., 2003; Lusardi, 2019; Lusardi and Mitchell, 2011a, 2014; Sohn et al.,2012). Further studies (e.g. Feng and Reich, 2021) show a complementary mediation of financial habit upon the relation between financial literacy (FINLIT) and financial well-being (FWB).

H3: *Family financial socializing improves financial well-being directly (FAMILY → FWB) and indirectly through a mediating factor of financial habits (FAMILY → HABIT → FWB).*

Studies (Dane and Yang, 2014; Gudmunson and Danes, 2011; Lachance and Choquette-Bernier 2004) show that parents have a significant role in their children's future financial decisions through financial interaction. Further, some studies on college-age students (Jorgensen et al.'s, 2017; Jorgensen and Salva, 2010) indicate that family financial instructions will influence outcomes in their engagement in more sourced financial behavior. This study extends the analysis to a larger sample covering multi-age groups at age 18 and above. As in Hypothesis 2, we believe that the effect of family socialization on financial well-being also functions through cultivating good financial habits. Thus, we introduce financial habit as a mediating factor between family financial socialization (FAMILY) and financial well-being (FWB).

***H4:** Family financial socializing (FAMILY) leads to better financial literacy (FINLIT).*

Gudmunson and Danes's (2011) family financial socialization theory (FFST) indicates that financial attitudes, knowledge, and capabilities are the outcomes of family socialization. Eventually, these outcomes lead to financial well-being. We include the association between family socialization (FAMILY) and financial literacy (FINLIT) to examine whether the survey respondents with better family financial socialization tend to have better financial knowledge.

Figure 1 illustrates the conceptual framework for the relationship between family financial socialization (FAMILY), financial literacy (FINLIT), financial habits (HABIT), and financial well-being (FWB). The model suggests that both FAMILY and FINLIT have a direct association with FWB (FAMILY → FWB and FINLIT → FWB). Their relations are mediated through cultivating good financial habits (HABIT), which suggests the alternative paths of FAMILY → HABIT → FWB and FINLIT → HABIT → FWB. The model also includes a direct association of FAMILY → FINLIT. We use partial least square path modeling (PLS-SEM) to test those relationships in the framework.

FIGURE 1
STRUCTURE MODEL

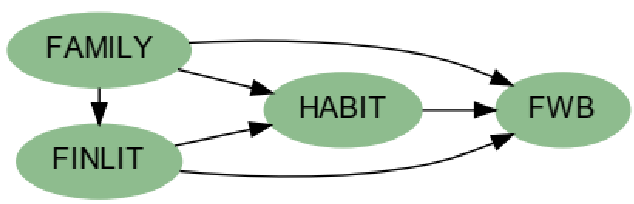

Figure 1 illustrates the Structure Equation Model between latent variables of family financial socializing (FAMILY), financial literacy (FINLIT), financial habit (HBIT), and Financial Well-being (FWB). The model suggests FAMILY and FINLIT affect FWB both direct and indirectly through cultivating good habits.

DATA AND MODELLING

Data

Data used for analysis is publicly available through the 2016 National Financial Well-Being Survey (NFWBS) designed and collected by the Consumer Financial Protection Bureau (CFPB).

The Dodd-Frank Act of 2010 recognized that consumers of financial products and services need both a safe, transparent marketplace, and more importantly, the financial capability to navigate the marketplace effectively. Numerous provisions of the Dodd-Frank Act charged the CFPB with working to improve the financial literacy of consumers in America. Building on the development and validation of the financial well-being scale, the CFPB fielded the National Financial Well-Being Survey. The 2016 National Financial Well-Being Survey is a representative survey of 6,394 adults ages 18 and older across the 50 States and Washington DC. in the United States. The survey questions covered a wide range of topics hypothesized to influence a person's level of financial well-being. These topics included financial knowledge, skills, attitudes, and behaviors; individual characteristics; household and family characteristics; income and employment characteristics; savings; safety nets; and financial experiences. The data allows further research of the association between financial well-being and the above topics.

Structure Equation Modeling

We propose a PLS-SEM model for the analysis. In particular, the structural model describes the relations between latent constructs of FAMILY, FINLIT, HABIT, and FWB. The measurement model explains the relations between those latent constructs and observable responses to related questions. This technique is appropriate for this study as "PLS is primarily intended for causal-predictive analysis in situations of high complexity but low theoretical information" (Joreskog, 1982). We follow the PLS-SEM procedures recommended in Hair et al. (2017). The empirical analysis is conducted with R programing (Monecke and Leisch, 2012; Sanchez, 2013).

Measurement Model

The responses to relevant questions from the CFPB survey were used as reflective indicators for the proposed latent constructs of FAMILY, FINLIT, HABIT, and FWB. The appendix lists the detailed questions for each construct. We employ the same terminology used in the CFPB report for convenience.

Feng and Reich (2021) have a detailed discussion on the measurement of FINLIT and FWB. The measurement questions to gauge FINLIT include ones like (i) Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow? (ii) When an investor spreads his or her money among different assets, does the risk of losing money increase, decrease or stay the same? The responses to the group of questions, while correlated, are designed to measure different aspects of the same construct. Similarly, financial well-being (FWB) is evaluated based on the questions like "I could handle a major unexpected expense", "I am securing my financial future", and "I can enjoy life because of the way I'm managing my money", etc.

In this study, we introduce constructs of family financial socialization (FAMILY) and financial habits (HABIT). The latent variable of FAMILY derives from questions such as "discussed family financial matters with me", "spoke to me about the importance of saving", etc. Those questions, while important, feature a different focus from the quantitative measure of financial knowledge in FINLIT. The measurement of latent variable HABIT derives from questions like, "putting money into savings is my habit", "paid all your bills on time", and "stayed within your budget or spending plan." The validity and reliability of the latent construct depend on the effectiveness of the common construct to explain the individual indicators.

Structural Model

Using the PLS-SEM algorithm, we derive the latent constructs of FINLIT, FAMILY, HABIT, and FWB as the common component shared by those relevant indicators. Such an approach alleviates the issue of multicollinearity among the correlated variables (Hair Jr et al., 2017). The framework also allows us to explore how FINLIT and FAMILY help to cultivate good financial habits and further improve FWB.

Results and Analysis

Figure 2 summarizes the PLS-SEM test results. The structure model includes regression coefficients with their p-value to demonstrate the relations between latent variables of FAMILY, FINLIT, HABIT, and FWB. The measurement model consists of the loadings of latent constructs for measurement variables or the responses to related questions.

FIGURE 2
RESULTS OF STRUCTURAL MODEL ANALYSIS

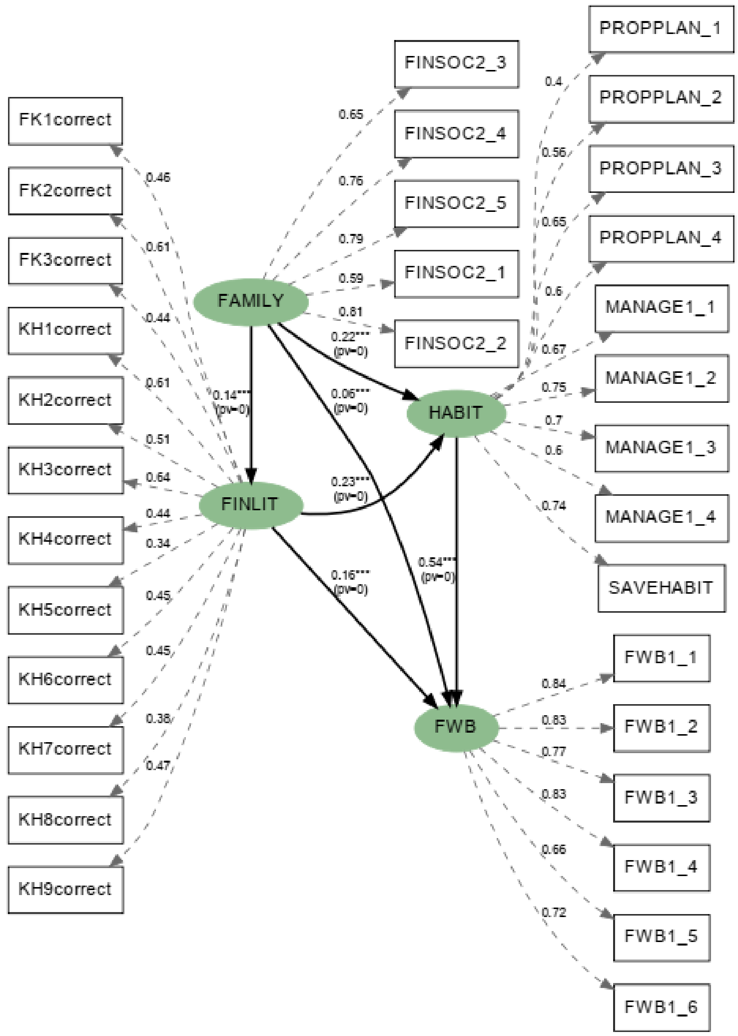

Figure 2 summarizes the test results for both the structural model and measurement model. For the structure model between constructs, regression coefficients with their p-values are reported. For the measurement model, loadings of constructs for each indicator are reported.

The test suggests that both FAMILY and FINLIT have a significant positive association with FWB. Since all constructs are standardized, the size of coefficients also demonstrates the effectiveness of those relations. While the constructs FAMILY and FINLIT each has a positive direct relation with FWB (0.08 for FAMILY → FWB and 0.17 for FINLIT → FWB), the alternative indirect path through HABIT plays equally important role to elevate the FWB (0.2 x 0.49 = 0.098 for FAMILY → HABIT → FWB and 0.22 x 0.49 = 0.108 for FINLIT → HABIT → FWB). In addition, FAMILY has a positive influence over FINLIT (0.14 for FAMILY → FINLIT). The bootstrapping results show that the estimation falls in the 95% interval. Table 1 presents the statistics details of the test.

TABLE 1
SUMMARY OF ANALYSIS RESULTS

Regression	Estimate	Std	t-value	p-value
Structure model - 1	$FINLIT = a_0 + a_1 * FAMILY$			
Intercept	0.0000	0.0126	0.0000	1.0000
FAMILY	0.1350	0.0126	10.8000	0.0000
Structure model - 2	$HABIT = b_0 + b_1 * FAMILY + b_2 * FINLIT$			
Intercept	0.0000	0.0119	0.0000	1.0000
FAMILY	0.2230	0.0120	18.5000	0.0000
FINLIT	0.2280	0.0120	18.9000	0.0000
Structure model - 3	$FWB = c_0 + c_1 * FAMILY + c_2 * FINLIT + c3 * HABIT$			
Intercept	0.0000	0.0099	0.0000	1.0000
FAMILY	0.0597	0.0103	5.8100	0.0000
FINLIT	0.1580	0.0103	15.3000	0.0000
HABIT	0.5440	0.0105	51.7000	0.0000

Correlation	FAMILY	FINLIT	HABIT	FWB
FAMILY	1.0000	0.1350	0.2540	0.2190
FINLIT	0.1350	1.0000	0.2580	0.3060
HABIT	0.2540	0.2580	1.0000	0.6000
FWB	0.2190	0.3060	0.6000	1.0000

Summary	Type	R^2	Block Community	Mean Redundancy
FAMILY	Exogenous		0.5270	0.0000
FINLIT	Endogenous	0.0182	0.2400	0.0044
HABIT	Endogenous	0.1153	0.4080	0.0470
FWB	Endogenous	0.3883	0.6020	0.2337

Total Effects	Direct	Indirect	Total
FAMILY → FINLIT	0.13500	0.00000	0.13500
FAMILY → HABIT	0.22280	0.03080	0.25400
FAMILY → FWB	0.05970	0.15940	0.21900
FINLIT → HABIT	0.22790	0.00000	0.22800
FINLIT → FWB	0.15790	0.12410	0.28200
HABIT → FWB	0.54440	0.00000	0.54400

To summarize, the results of this study illustrate the significant direct association between FAMILY, FINLIT, and FWB. Further, both FAMILY and FINLIT function through the mediation of cultivating HABIT to improve FWB.

H1: *Good financial habit (HABIT) improves financial well-being (FWB). The analysis demonstrates a significant positive relation from HABIT → FWB.*

H2: *There is a significant association over the direct path of FAMILY → FWB and the alternative path of FAMILY → HABIT → FWB. The significance of the alternative path shows the complementary mediation of HABIT over FAMILY → FWB.*

H3: *There is a significant association over the direct path of FINLIT → FWB and the alternative path of FINLIT → HABIT → FWB. The significance of the alternative path shows the complementary mediation of HABIT over FINLIT → FWB.*

H4: *There is a weak association between FAMILY and FINLIT. The correlation between FAMILY and FINLIT is only 0.14. In addition, Mode 1 has a low R^2 of only 0.018. Theses results show that the two factors, FAMILY and FINLIT, while related, function rather independently.*

CONCLUSIONS

Financial education programs have been developed and implemented both in the US and globally, with the intent to help people build good financial habits and elevate financial well-being. This study contributes to the literature on financial well-being in two-folds. First, we explore and compare the contributions of family financial socialization and school financial education to increase financial well-being. While school education has been the focus, our analysis illustrates the importance of family financial socialization. Our study shows that family financial socialization and school financial study are related, and further, we demonstrate that traditional family financial socialization plays an equally important role as the often advocated school teaching. More importantly, we show that though related, family socialization and school education function rather independently to improve financial well-being. The lessons we learned from family socialization, however simple, still have a long-lasting benefit over financial well-being. Such a finding also suggests that educating parents on finance would improve the well-being of children.

Second, we introduce financial habits as a mediating factor and show how school teaching and family socialization improve financial well-being through cultivating good financial habits. This study reinforces the finding of previous studies (e.g., Feng and Reich, 2021) that despite the direct positive relationship between financial literacy and financial well-being, the benefit of financial well-being is more effectively realized when consumers implement their knowledge through financial habits. This finding is significant for educators and parents to raise their awareness of the importance of cultivating their students' or children's financial habits.

Limitation and Future Studies

Although the current study contributes to the literature of FWB, a few limitations exist and areas to expand our study are worth mentioning. First, we rely on the 2016 CFPB survey data. The scale and questions, though widely used and accepted in the field, could be refined and expanded upon. Detailed research into the demographic variations can lend additional important insights on how school teaching and parenting could be more effectively conducted. These include such as age, gender, family size, etc. Second, in this study, we are not considering some other factors that might affect FWB which may include situational factors such as income and financial shock. Third, the extensive body of literature on FWB exists across different domains including economics, finance, psychology, and marketing. Future studies may focus on cross-discipline and cross-cultural studies of FWB by examining cultural comparisons of consumer financial attitudes, behaviors, and resilience.

REFERENCES

Bucher-Koenen, T., & Lusardi, A. (2011). *Financial literacy and retirement planning in Germany* (0898–2937). National Bureau of Economic Research.

Christelis, D., Jappelli, T., & Padula, M. (2010). Cognitive abilities and portfolio choice. *European Economic Review*, *54*(1), 18–38.

Consumer Financial Protection Bureau (CFPB). (2015). *Financial well-being: The goal of financial education*. Retrieved from https://files.consumerfinance.gov/f/201501_cfpb_report_financial-well-being.pdf

Consumer Financial Protection Bureau (CFPB). (2016). *National Financial Well-Being Survey*. Retrieved from https://www.consumerfinance.gov/data-research/financial-well-being-survey-data/

Danes, S.M., & Yang, Y. (2014). Assessment of the use of theories within the journal of financial counseling and planning and the contribution of the family financial socialization conceptual model. *Journal of Financial Counseling and Planning*, *25*(1), 53–68.

de Bassa Scheresberg, C. (2013). Financial literacy and financial behavior among young adults: Evidence and implications. *Numeracy*, *6*(2), 5.

Feng, W., & Reich, R. (2021). Practice Improves Performance: The Mediating Interaction of Active Management on Financial Literacy and Financial Well-being. *Journal of Applied Financial Research*, *10*(1), 60–86.

Fessler, P., Silgoner, M., & Weber, R. (2020). Financial Knowledge, attitude and behavior: Evidence form the Austrian survey of financial literacy. *Empirica*, *47*, 929–947.

Friedline, T., Chen, Z., & Morrow, S. (2021). Families' Financial Stress & Well-Being: The Importance of the Economy and Economic Environments. *Journal of Family and Economic Issues*, *42*, 34–51.

Gudmunson, C.G., & Danes, S.M. (2011). Family financial socialization: Theory and critical review. *Journal of Family and Economic Issues*, *32*, 644–667.

Hair Jr, J.F., Sarstedt, M., Ringle, C.M., & Gudergan, S.P. (2017). *Advanced issues in partial least squares structural equation modeling*. Sage Publications.

Hilgert, M.A., Hogarth, J.M., & Beverly, S.G. (2003). Household financial management: The connection between knowledge and behavior. *Federal Reserve Bulletin*, *89*, *309*.

Joreskog, K.G. (1982). The ML and PLS techniques for modeling with latent variables: Historical and comparative aspects. *Systems under indirect observation*, part I, 263–270.

Jorgensen, B.L., & Savla, J. (2010) Financial literacy of young adults: The importance of parental socialization. *Family Relations*, *59*, 465–478.

Jorgensen, B.L., Rappleyea, D.L., Schweichler, J.T., Fang, X., & Moran, M.E. (2017a). The Financial Behavior of Emerging Adults: A Family Financial Socialization Approach. *Journal of Family and Economic Issues*, *38*(1). New York.

Jorgensen, B.L., Rappleyea, D.L., Schweichler, J.T., Fang, X.M., & Moran, M.E. (2017b). The Financial Behavior of Emerging Adults: A Family Financial Socialization Approach. *Journal of Family and Economic Issues*, *38*, 57–69.

Lachance, M.J., & Choquette-Bernier, N. (2004). College students' consumer competence: A qualitative exploration. *International Journal of Consumer Studies*, *28*(5), 433–442.

Lamas, S., & Murphy, R.O. (2021). Simple Decision-Making Rules of Thumb and Financial Well-Being. *Journal of Personal Finance*, *20*(2), 22–39.

Lee, J.M., Lee, J., & Kim, K.T. (2020). Consumer Financial Well-Being: Knowledge is Not Enough. *Journal of Family and Economic Issues*, *41*(2), 218–228.

Lusardi, A. (2019) Financial literacy and the need for financial education: Evidence and implications. *Swiss Journal of Economics and Statistics*, *155*(1).

Lusardi, A., & Mitchell, O.S. (2008) Planning and financial literacy: How do women fare? *American Economic Review*, *98*(2), 413–417.

Lusardi, A., & Mitchell, O.S. (2011a). *Financial literacy and planning: Implications for retirement well-being*, pp. 898–2937. National Bureau of Economic Research.
Lusardi, A., & Mitchell, O.S. (2011b). *Financial literacy and retirement planning in the United States*, 0898–2937. National Bureau of Economic Research.
Lusardi, A., & Mitchell, O.S. (2011c). *Financial literacy around the world: An overview* (pp. 0898–2937). National Bureau of Economic Research.
Lusardi, A., & Mitchell, O.S. (2014) The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, *52*(1), 5–44.
Monecke, A., & Leisch, F. (2012). *SEM-PLS: Structural equation modeling using partial least squares*.
Payne, S.H., Yorgason, J.B., & Dew, J.P. (2014). Spending Today or Saving for Tomorrow: The Influence of Family Financial Socialization on Financial Preparation for Retirement. *Journal of Family and Economic Issues*, *35*, 106–118.
Rea, J.K., Danes, S.M., Serido, J., Borden, L.M., & Shim, S. (2019). Being Able to Support Yourself: Young Adults' Meaning of Financial Well-Being Through Family Financial Socialization. *Journal of Family and Economic Issues*, *40*, 250–268.
Robb, C.A., & Woodyard, A.S. (2011). Financial Knowledge and Best Practice Behavior. *Journal of Financial Counseling and Planning*, *22*(1).
Sanchez, G. (2013). *Pls path modeling with R*. Retrieved from https://www.gastonsanchez.com/PLS_Path_Modeling_with_R.pdf
Sohn, S.H., Joo, S.H., Grable, J.E., Lee, S., & Kim, M. (2012). Adolescents' financial literacy: The role of financial socialization agents, financial experiences, and money attitudes in shaping financial literacy among South Korean youth. *Journal of Adolescence*, *35*(4), 969–980.
Solheim, S.A., Zuiker, V.S., & Levchenko, P. (2011). Financial socialization family pathways: Reflections from college students' narratives. *Family Science Review*, *16*(2), 97–112.
Van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. *Journal of Financial Economics*, *101*(2), 449–472.
Vieira, K.M., Potrich, A., Bressan, A., & Klein, L. (2021). Loss of financial well-being in the COVID-19 pandemic: Does jobstability make a difference? *Journal of Behavioral and Experimental Finance*, *31*.

APPENDIX

Questions of financial habit in saving, planning, and budgeting

1. I consult my budget to see how much money I have left.
2. I actively consider the steps I need to take to stick to my budget.
3. I set financial goals for what I want to achieve with my money.
4. I prepare a clear plan of action with detailed steps to achieve my financial goals.
5. Paid all your bills on time.
6. Stayed within your budget or spending plan.
7. Paid off credit card balance in full each month.
8. Checked your statements, bills and receipts to make sure there were no errors.
9. Putting money into savings is a habit for me.

Questions of financial literacy

1. Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?

2. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?
3. Do you think the following statement is true or false? “Buying a single company’s stock usually provides a safer return than a stock mutual fund.”
4. Considering a long time period (for example 10 or 20 years), which asset described below normally gives the highest return?
5. Normally, which asset described below displays the highest fluctuations over time?
6. When an investor spreads his or her money among different assets, does the risk of losing a lot of money increase, decrease or stay the same?
7. Do you think the following statement is true or false? “If you were to invest $1,000 in a stock mutual fund, would it be possible to have less than $1,000 when you withdraw your money?”
8. Do you think the following statement is true or false? “’Whole life’ insurance has a savings feature while ‘term’ insurance does not.”
9. Do you think the following statement is true or false? “Housing prices in the US can never go down.”
10. Suppose you owe $3,000 on your credit card. You pay a minimum payment of $30 each month. At an Annual Percentage Rate of 12% (or 1% per month), how many years would it take to eliminate your credit card debt if you made no additional new charges?
11. If interest rates rise, what will typically happen to bond prices?
12. Do you think the following statement is true or false? “A 15-year mortgage typically requires higher monthly interest paid over the life of the loan will be less payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less.”

Questions on family socialization

1. Discussed family financial matters with me.
2. Spoke to me about the importance of saving.
3. Discussed how to establish a good credit rating.
4. Taught me how to be a smart shopper.
5. Taught me that my actions determine my success in life.

Questions on Financial well-being

1. I could handle a major unexpected expense.
2. I am securing my financial future.
3. Because of my money situation, I feel like I will never have the things I want in life.
4. I can enjoy life because of the way I’m managing my money.
5. I am just getting by financially.
6. I am concerned that the money I have or will save won’t last.