

Information Search, Financial Advice Use, and Consumer Financial Behavior

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This study develops a conceptual framework to investigate the relationship between households' information search behavior and financial management outcomes. Consumers' information search behavior is examined from both internal and external perspectives. The internal information sources include human capital and psychological and attitudinal factors, whereas the external information sources comprise financial professionals from different financial service areas. Financial management behaviors examined in this study consist of consumers' savings and credit-using behavior. This study uses the 2012 National Financial Capability Study and structural equation modeling methodology. The results suggest that (a) both internal and external information sources used by consumers are significantly associated with savings and credit-using behavior, and (b) seeking external financial advice from professionals mediates the relationship between consumers' internal sources and financial management outcomes. The findings of this study provide practical implications for financial professionals when counseling and communicating with clients and challenge policymakers to develop pathways that can enhance the quality and accessibility of internal and external information sources for clients, including customized financial education programs and affordable professional financial services.

Keywords: financial advice use, financial behavior, financial information search, saving and credit-using behavior, structural equation modeling

Research on consumers' saving and borrowing behaviors has a long tradition across a number of disciplines, including financial planning, behavioral finance, economics, and psychology. The most recent economic recession and subsequent recovery in the past decade has created policy- and research-related challenges around navigating ways to improve financial capability and financial outcomes of households worldwide. The increasing sophistication of savings, investments, and credit-related products available in the market also requires consumers to selectively look for and comprehend information obtained from different sources in order to solve everyday financial matters to meet their immediate and long-term financial goals. Retirement planning, investment management, and estate and tax planning have become the most important motivations for people to actively seek more information and advice (Grable & Joo, 2003). There are growing appeals for greater research on consumers' information search processes and their financial management

behaviors. Although a considerable body of literature exists on the value of financial advice in terms of fostering positive financial behaviors, attitude, confidence, and well-being (Goetz, Cude, Nielsen, Chatterjee, & Mimura, 2011; Grable & Joo, 1999, 2001, 2003; Joo & Grable, 2001; Loibl & Hira, 2007; Xiao & Porto, 2016), especially as the baby boomers reach retirement age and the millennials approach their wealth formation life stage, little has been studied about the effects of both internal and external sources that individuals use to access financial information and how those choices could affect financial behavior. Furthermore, there is limited research investigating factors that influence individuals' information source preferences and help-seeking behavior when dealing with financial issues.

Previous studies have shown that financial professionals are important information sources and offer valuable services to consumers (Grable & Joo, 2003; Loibl & Hira, 2007; Robb, Babiarz, & Woodyard, 2012), such as in reducing

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overall wealth volatility (Grable & Chatterjee, 2014), helping clients better manage their debt (Xiao, Sorhaindo, & Garman, 2006), helping clients increase their wealth, preventing financial losses, and smoothing lifetime consumption levels (Hanna & Lindamood, 2010). Researchers have also examined factors that lead to the demand for financial advice such as self-efficacy, financial stressors, financial education, and demographic characteristics (Joo & Grable, 2001; Letkiewicz, Robinson, Domian, & Uborceva, 2015; Lim, Heckman, Letkiewicz, & Montalto, 2014). The literature also suggests that individuals rely more on financial professionals than on other information sources such as friends, relatives, media, employers, and so on, when it comes to financial concerns (Grable & Joo, 2003; Loibl & Hira, 2007; Robb et al., 2012). Moreover, long-term engagement with financial planning professionals can improve consumers' financial situation and various aspects of well-being, along with higher levels of financial regulatory understanding and experience (Newton, Coronas, Irving, & Thomas, 2015).

However, studies on the influence of seeking financial advice on financial behavior should not be disconnected from the effect of individuals' and households' internal characteristics such as financial literacy and financial attitudes, which are underlying and important determinants of financial advice-seeking behavior (Grable & Joo, 2003; Loibl & Hira, 2007; Robb et al., 2012; Xiao & Porto, 2019) and financial management behavior (Asaad, 2015; Parker, Bruin, Yoong, & Willis, 2011; Tang & Baker, 2016). The purpose of this study is to examine savings and credit card-using behavior and their associations with consumer information search sources, including internally retrievable information sources (knowledge possessed, confidence levels, and risk tolerance) and external financial advice-seeking behavior. A conceptual framework of financial information search and financial management practice based on Grable and Joo's (1999) financial help-seeking model and Beales, Mazis, Salop, and Staelin's (1981) information source categorization model is developed in this study. Specifically, the savings and credit-using behavior examined in this study include retirement saving, educational funding, and credit card usage.

The extant research on financial advice-seeking behavior is mainly adapted from the financial help-seeking model developed by Grable and Joo (1999), which depicts

consumers' help-seeking decision-making in stages and confirms the benefits and values that financial professionals can provide in meeting consumers' specific financial goals and objectives. However, previous studies have overlooked the types and sources of financial advice that consumers seek and the characteristics of consumers who utilize such sources. Specifically, consumers' own financial and nonfinancial situations, future needs, and previous financial experience may contribute to their desire to search for financial advice and their financial behavior. Therefore, there is room for further study of the connection between obtaining financial advice from professionals and consumer financial behaviors, which adds significant improvements to current financial advice-seeking models.

The findings of this study add to the literature on consumers' information search behaviors and their financial practices and habits. Financial service providers and professionals can use the findings in this study to identify consumers' significant characteristics that may influence their financial behavior such as consumers' financial knowledge, financial confidence, and preference for seeking financial information and services. Moreover, this study also sheds light on the value of financial professionals and the financial service areas in which consumers seek advice. It can be an opportunity for policymakers and financial educators to emphasize the importance of consumers' internally retrievable sources, such as knowledge and skills gained from education and financial literacy, in shaping positive financial capability and behavior.

Literature Review and Conceptual Framework

Financial help-seeking is defined as the process by which consumers seek assistance to solve financial planning issues or concerns (Grable & Joo, 1999, 2003). The current study examines financial service providers such as financial advisors and financial planners for investment, saving, tax, and insurance purposes who act as external information sources and play significant roles in consumers' information searching and decision-making processes. Financial advisors who manage portfolios for individual investors are more likely to be hired by wealthier, older, and more financially sophisticated individuals, and who also tend to be self-employed and female (Hackethal, Haliassons, & Jappelli, 2012). Potential costs associated with hiring financial experts include commissions and fees, whereas the expected benefits lie

in improvements in financial decision-making, for example, higher net portfolio returns and more appropriate use of risk management and protection products (Finke, Huston, & Winchester, 2011). Wealthier and financially sophisticated households were also found to be more likely to use comprehensive financial planning services. However, the extant literature has suggested that financial services should extend more to lower-income households that have limited access to financial services.

As a result of information overload, consumers may rely more on information intermediaries such as financial advisors, insurance agents, attorneys, and other third-party experts to improve the efficiency of their financial decision-making processes. Previous studies have shown that financial services such as credit counseling can reduce debt and improve clients' overall financial well-being (Bapat, 2019; Kim, Garman, & Sorhaindo, 2003; Staten, Elliehausen, & Lundquist, 2002). Financial advice can also add value in terms of reducing wealth volatility over time, promoting responsible borrowing behavior, and improving financial confidence, literacy, and wellness (Fan & Chatterjee, 2017; Grable & Chatterjee, 2014; Grable & Joo, 2001, 2003; Hira & Mugenda, 1999; Moreland, 2018). Furthermore, those who possessed higher education and higher income were more likely to seek advice from financial professionals (Collins, 2012; Hanna, 2011).

Certain internally retrievable information such as knowledge gained through education, financial knowledge, and numeracy skills are imperative in consumers' financial decision-making process (Bernheim, 1995, 1998; Lusardi, 2008; Lusardi & Mitchell, 2007a; Nicolini, Cude, & Chatterjee, 2013). Additionally, Lusardi (2008) showed that financial literacy varies across different education levels. In particular, consumers with higher financial literacy and higher educational attainment were more likely to engage in positive and responsible financial behaviors (Fan & Chatterjee, 2017; Perry & Morris, 2005). Financial knowledge has been found to have significant relationships with financial behaviors (Hung, Parker, & Yoong, 2009; Lusardi & Mitchell, 2007b; Remund, 2010). Financial knowledge related to cash flow, credit management, savings, and investment also has a significant influence on consumers' financial behavior, and a lack of financial knowledge may result in financial behavioral mistakes (Courchane & Zorn, 2005; Hilgert, Hogarth, & Beverly, 2003).

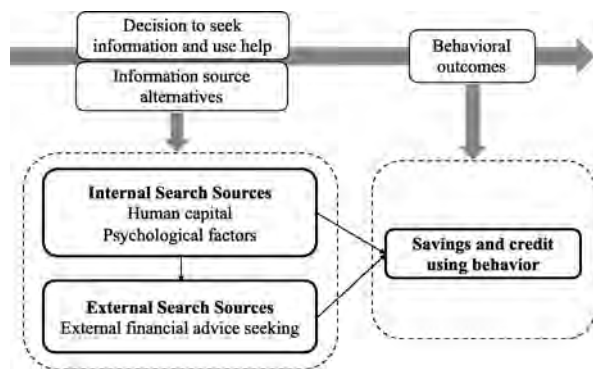
Some consumer-related characteristics, such as risk tolerance and financial confidence, also influence consumers' behavior. There is mixed evidence regarding the relationship between risk tolerance and financial advice seeking. Lee and Cho (2005) found that consumers who are more risk-averse tend to rely on information intermediaries such as financial advisors, whereas other researchers have found that risk tolerance was positively associated with the likelihood of seeking financial help, meaning that risk aversion reduces the likelihood of seeking financial advice (Hanna, 2011; Joo & Grable, 2001). Furthermore, the literature showed that financial confidence is significantly associated with investment and retirement planning behaviors and credit card behaviors (Allgood & Walstad, 2013; Asaad, 2015; Atlas, Lu, Micu, & Porto, 2019; Parker et al., 2011). For example, confidence in financial literacy was negatively associated with costly credit card practices (Allgood & Walstad, 2013) and positively associated with responsible credit card comparison and credit monitoring behavior and retirement preparedness (e.g., Asaad, 2015).

Conceptual Framework

Previous studies have applied the medical help-seeking model developed by Suchman (1966) in the areas of financial decision-making (Goetz et al., 2011; Grable & Joo, 1999, 2001, 2003; Joo & Grable, 2001). Grable and Joo (1999) developed a financial help-seeking framework applying Suchman's (1966) medical help-seeking process to depict and predict individuals' mindset regarding financial help-seeking behavior. Furthermore, Beales et al. (1981) posited that information search sources are composed of internal and external components. Internal information search refers to consumers' retrieval of memory, knowledge from previous searches, experience with products, and information passively acquired through daily activities, whereas external information search sources include consulting with experts and professionals, friends and family, sellers, and the media.

In this study, the framework of consumer savings and credit-using behavior was developed based on the aforementioned theoretical foundations and key findings from the previous literature (see Figure 1). This framework is grounded in previous studies and connects concepts such as consumer savings and credit-using behavior, information search, and advice-seeking behavior into one single model.

Figure 1. Conceptual framework of consumer information search and savings and borrowing behavior.



Adapted from Grable and Joo (1999) and Beales et al. (1981).

In particular, as stated in the Grable and Joo's (1999) financial help-seeking process, the decision to seek information and information alternative comparison stage affects the actual behavioral outcome stage. Moreover, the actual help-seeking behavior can be determined by financial knowledge, financial risk tolerance, educational attainment, and other socioeconomic factors along with financial stressors and homeownership.

Consumers may use both internal and external sources during their information search stage. The current study focuses on internally retrievable information, including knowledge gained from education, objective financial knowledge, and risk tolerance. This study also adds financial confidence as a psychological component of the internal search sources. This study uses Beales et al.'s (1981) categorization of information sources and focused on the role of financial advice-seeking as an external information source, along with other internally retrievable information sources (e.g., knowledge, experience, risk attitudes) in consumers' savings and credit-using behavior. The internal information search sources in this study included variables that have been associated with financial decision-making in the previous literature, including consumers' possessed knowledge gained from formal education, objective financial knowledge, financial confidence, and financial risk tolerance (Fan & Chatterjee, 2017; Montford & Goldsmith, 2016; Robb et al., 2012; Wang & Xiao, 2009). As suggested in the literature, financial practitioners can serve as important financial information sources

(e.g., Fan, 2017; Huang, Lassu, & Chan, 2018). The external sources in the current study included seeking advice from three types of financial professionals: savings and investment services providers, insurance planning providers, and tax planning experts. The outcome variable in this study was savings and credit-using behavior. The detailed measures of internal and external search sources and the financial outcome behavioral variables are discussed in the "Methods" section and are presented in Figure 2.

Hypotheses

H1: Internal information sources such as financial knowledge, educational attainment, financial confidence, and financial risk tolerance are positively associated with savings and credit-using behavior.

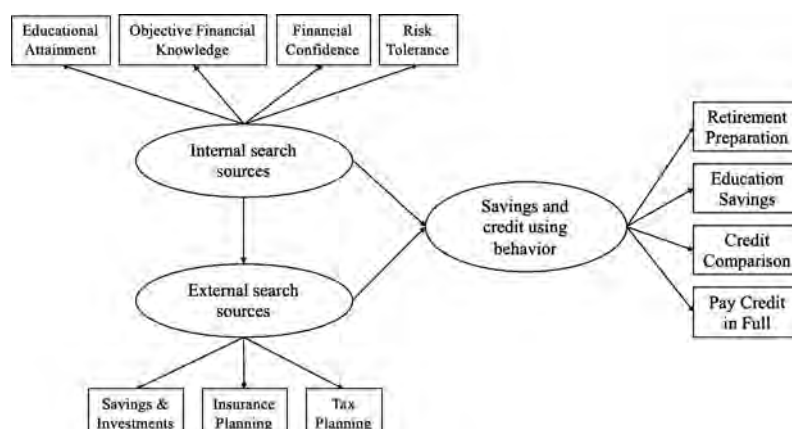
H2: Seeking financial advice from financial professionals mediates the relationship between internal information sources and savings and credit-using behavior.

Methods

Data

This study uses the 2012 state-by-state National Financial Capability Study (NFCS), a U.S.-based national survey of adults 18 years of age or older that includes detailed information on people's financial attitudes and behaviors. The dataset was funded by the Financial Industry Regulatory Authority's (FINRA) Investor Education Foundation with the objective of collecting nationwide information on consumers' financial attitudes, capability, well-being, and decision-making. The dataset consists of 25,509 U.S. adults aged 18 and older. Respondents were randomly selected using nonprobability quota sampling methods. Since the savings for retirement and education and credit-using behaviors are the key financial management behaviors of interest, the sample used in the structural equation modeling (SEM) analysis was restricted to those who had financially dependent children and had credit card accounts at the time of the survey. The total resulting sample used in the statistical analysis had 6,018 observations after accounting for missing values. The differences between the full sample and restricted subsample will be discussed in the Results section.

Figure 2. Path diagram of proposed SEM model of this study.



Measures

Internal Information Sources. Educational attainment was measured as separate binary variables “equal or lower than high school,” “some college,” and “college and beyond.” Objective financial knowledge was a 0 to 5 scale measure based on the total number of respondents’ correct answers to the five questions regarding fundamental understandings of personal finance, including inflation, compounding, bonds, stocks, and mutual funds. Financial confidence was measured on a 1 to 7 scale where 1 = strongly disagree and 7 = strongly agree with the statement “I am good at dealing with day-to-day financial matters, such as checking accounts, credit and debit cards, and tracking expenses.” Finally, financial risk tolerance was measured using a 1–10 scale question where 1 = *lowest risk-tolerant* and 10 = *highest-risk tolerant*.

External Information Sources. Consumers’ financial advice-seeking from financial professionals was a latent variable in the SEM model and was measured by three financial service areas: (a) savings or investments services, (b) insurance planning services, and (c) tax planning services. Participants were asked whether they have sought advice from financial professionals regarding these areas in the past 5 years. Three binary variables were created for these three financial services, where 1 = Yes and 0 = otherwise.

Savings and Credit-Using Behavior. Retirement preparation, education savings, credit comparison, and responsible credit card use were the four observed variables measuring the latent savings and credit-using behavior variable.

Separate binary variables were created for whether the participant (a) calculated for retirement needs (for nonretired households, the survey question was “Have you ever tried to figure out how much you need to save for retirement?” and for retired households, they were asked differently “Before you retired, did you try to figure out how much you needed to save for retirement?”), (b) set aside money for children’s college education (this question was only given to respondents with financially dependent children), (c) collected information about different credit cards in order to compare before applying for a most recent credit card, and (d) always paid credit card balance in full in the past 12 months, with 1 = Yes and 0 = No. Only those who reported having financially dependent children were asked the question of saving for education; those who reported having as least one credit card were asked about their credit card repayment behavior.

Data Analysis

SEM was used as the main statistical analysis method in this study to identify the proposed relationships and has been widely used in psychology, behavioral finance, and sociology, among other areas (Hershberger, 2003; Hox & Bechger, 2007; MacCallum & Austin, 2000). Two types of models were examined using SEM techniques: a measurement model and a structural model. These two analysis methods were combined by Hauser and Goldberger (1971) and have been widely used in many disciplines such as econometrics, psychometrics, and other social science subjects. The measurement model identifies the relationships between a latent variable (unobserved construct) and observed variables, and the structural model estimates the

relationships among latent variables. The latent variables are not examined directly in the dataset but can be inferred by two or more observed or directly examined variables that share commonalities. Each observed indicator has its own measurement error. The relationship between the latent variable and its observed variables is determined based on the existence of covariance between the observed variables. SEM techniques and maximum likelihood estimations were used for the analyses. The software used was Stata/SE version 15.

The proposed relationships are shown in Figure 2. First, the internal information search source was composed of human capital and psychological factors. These variables were: (a) educational attainment, (b) objective financial knowledge, (c) financial confidence, and (d) risk tolerance. The second latent variable, financial advice-seeking behavior, which was also the mediator in the model, was inferred by three observed variables, consisting of three external information search sources: (a) savings or investments services, (b) insurance planning services, and (c) tax planning services. Lastly, the outcome latent variable of savings and credit-using behavior was measured by four observed financial behaviors, including (a) retirement preparation, (b) education savings, (c) credit comparison, and (d) responsible credit card usage. An additional multigroup SEM analysis was run as a robustness check for the model to compare the proposed relationships by age and income groups.

Results

Descriptive Statistics

The descriptive statistics for the restricted subsample used in this study are shown in Table 1. Internal information sources included educational attainment, objective financial knowledge, financial confidence, and risk tolerance. Of all of the subsamples, 44.98% had college degrees and above. The average objective financial knowledge was 3.25 (on a 0–5 scale). The average financial confidence was 5.85 (on a 1–7 scale), and average risk tolerance was 5.40 (a 1–10 scale). The external information sources included the three areas of financial services: 37.50% had asked for advice from a financial professional for savings and investments, 42.94% asked for professional advice on insurance planning, and 26.12% on tax planning. For the four financial behaviors of savings and credit-using, 51.58% of respondents had calculated their retirement needs, 42.02% had saved for education purposes, 36.38% had compared credit

TABLE 1. Descriptive Statistics of the Restricted Subsample of this Study (N = 6,018)

Variable	Proportion/Mean
Internal search sources	
Educational attainment	
High school and lower	23.18%
Some college	31.84%
College degree and beyond	44.98%
Objective financial knowledge (0–5)	3.25
Financial confidence (1–7)	5.85
Financial risk tolerance (1–10)	5.40
External search sources	
Savings and investments	37.50%
Insurance planning	42.94%
Tax planning	26.12%
Savings and credit using behavior	
Retirement preparation	51.58%
Education savings	42.02%
Credit comparison	38.68%
Pay credit in full	41.26%
Sociodemographic characteristics	
Age	
18–24	4.59%
25–34	21.95%
35–55	30.06%
45–54	26.45%
55–64	12.40%
65+	4.55%
Gender	
Male	44.62%
Female	55.38%
Race	
White (non-Hispanic)	69.13%
Non-White	30.87%
Income	
Less than \$15,000	3.26%
At least \$15,000 but less than \$25,000	6.02%
At least \$25,000 but less than \$35,000	8.94%
At least \$35,000 but less than \$50,000	13.79%
At least \$50,000 but less than \$75,000	23.70%
At least \$75,000 but less than \$100,000	17.02%
At least \$100,000 but less than \$150,000	16.68%
\$150,000 or more	10.60%

cards before the application process, and 41.26% had paid off their credit cards in full. Table 1 also shows the subsample's demographic and socioeconomic characteristics such as age, gender, race/ethnicity, income, and marital status. Income and age were used in the multigroup SEM analysis. The other sociodemographic factors, although not directly used in the SEM analysis, provide background information for the restricted sample. Compared to the full sample in 2012 NFCS, the restricted sample used in this study held relatively higher educational attainment, was clustered to ages 25 to 55, and reported higher likelihood of using external search sources and showing better savings and credit-using behavior (The descriptive statistics of the full sample of 2012 NFCS are available from the author upon requests). The correlation between internal and external information sources was .286; the correlation between internal sources and savings and credit-using behavior was .358; and the correlation between external sources and savings and credit-using behavior was .391.

Structural Equation Modeling Results

The standardized estimates for each proposed relationship (path) in the model are presented in Figure 3. The SEM model was established with the purpose of examining the relationships between consumers' internal retrieval of information and external applications of professional advice providers and their savings and credit-using behavioral outcomes. The model goodness of fit indices of this study showed that the SEM model had statistical significance (RMSEA = 0.056, CFI = 0.906, SRMR = 0.04; Hu & Bentler, 1999; MacCallum, Browne, & Sugawara, 1996). The standardized estimates of the path coefficients (factor loadings) are illustrated in Figure 3. Risk tolerance and educational attainment were the two strong positive predictors of the underlying latent internal search sources variable, with factor loadings of 0.472 and 0.4721, while objective financial knowledge and financial confidence had relatively lower associations with the latent variable. Savings and investments service (0.757), insurance planning (0.595), and tax planning (0.603) had large positive loadings on the latent external search sources variable. Lastly, retirement preparation and education savings showed higher factor loadings on the savings and credit-using behavior latent variables than the credit comparison and paying credit card in fully observed items. A description of the SEM path estimations is provided in the following paragraphs.

As previously stated, SEM examined two models. The measurement model specified the relationship of the latent to the observed variables. First, educational attainment, objective financial knowledge, financial confidence, and financial risk tolerance significantly measured the first latent variable of internal search sources. All four elements showed significant and positive factor loadings. Second, the three advice-seeking areas of savings and investments, insurance planning, and tax planning had significant factor loadings measuring the external search sources latent construct. Finally, the latent construct of savings and credit-using behaviors was measured by four observed financial behaviors: retirement preparedness, education funding, credit comparison, and credit usage, with each of them showing significant factor loading.

The second model examined by SEM procedures was the structural model that depicts the relationships among the three latent variables. The direct, indirect, and total effects of the proposed relationships are shown in Table 2. Specifically, retrieving internal search sources was positively associated with external advice-seeking behavior and directly promoted savings and credit-using behavior. The external financial advice from professionals was positively associated with savings and credit-using behavior. Moreover, retrieving internal information sources also showed a significant and indirect effect on savings and credit-using behavior through the mediation of external financial advice-seeking behavior.

Additional SEM analyses were conducted to examine income and age effects on the path coefficients of the proposed relationships. The multigroup SEM analysis showed that the significance of factor loadings among the three latent constructs were robust across age and income groups (Detailed results are available from the author upon requests). Specifically, an income group comparison was conducted to test the structural model, followed by an age group comparison. Without controlling for age, the direct association between internal sources and external sources was stronger among the lower income group (<\$75,000; $n = 3,352$), whereas the direct association between internal sources and saving and credit-using behavior was stronger among the higher income group ($\geq \$75,000$; $n = 2,666$). Moreover, the indirect effect from internal sources on saving and credit-using behavior through external sources was more powerful among the lower income group (*std path coef*

Figure 3. Path diagram and standardized estimates for the proposed SEM model.

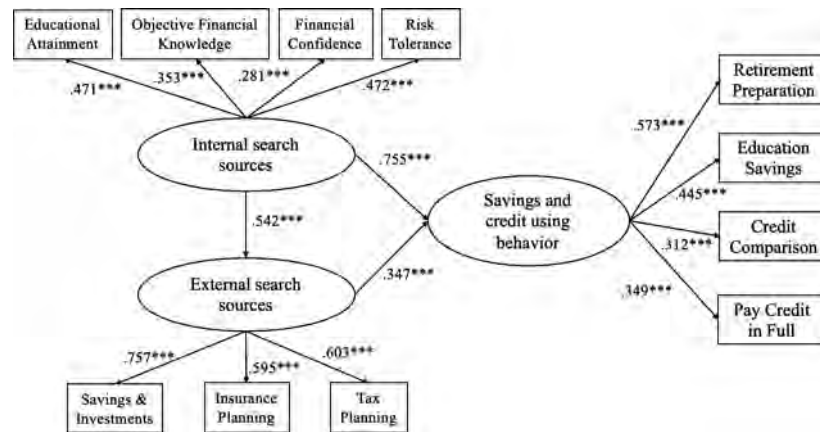


TABLE 2. Standardized Estimates for the Proposed SEM Model

Structural Relations	Direct Effect			Indirect Effect		Total Effect	
	Coef.	Std. Err.	Sig.	Coef.	Sig.	Coef.	Sig.
Internal information sources-> savings and credit using behaviors	0.755	0.037	***	0.188	***	0.943	***
Internal information sources-> external information sources	0.542	0.021	***	No path		0.542	***
External information sources-> savings and credit using behaviors	0.347	0.034	***	No path		0.347	***

Note. Chi-square (df) = 808.158(41), $p < .001$; RMSEA = 0.056; CFI = 0.906; SRMR = 0.04.

*** $p < .001$.

= 0.25, $p < .001$) compared to the higher income group ($std\ path\ coef = 0.17$, $p < .001$).

When only controlling for age, although the relationships among the latent constructs were consistently significant, there were some differences in the path coefficients between the younger and older age groups. For example, the direct relationship between internal and external search sources was stronger among the younger group ($\leq age\ 44$; $n = 3,406$; $std\ path\ coef = 0.56$, $p < .001$) than the older group ($\geq age\ 45$; $n = 2,612$; $std\ path\ coef = 0.48$, $p < .001$). Additionally, the internal search sources showed a stronger indirect effect on savings and credit-using behavior among the younger group ($std\ path\ coef = 0.21$, $p < .001$) than among the older group ($std\ path\ coef = 0.19$, $p < .001$).

The last multigroup SEM analysis was conducted with both age and income taken into account. After the sample was first divided into younger and older groups, each group was further divided into lower income versus higher income groups to control for age and income effects. The results showed the following nuances. First, among the

younger group, the indirect effect of internal search sources on savings and credit-using behavior was higher for the lower-income younger adults ($n = 2,064$; $std\ path\ coef = 0.25$, $p < .001$) than for their higher-income peers ($n = 1,342$; $std\ path\ coef = 0.17$, $p < .001$). The lower-income younger group had a higher indirect effect of internal sources on savings and credit-using behavior. Among the older group, the income comparison revealed a similar pattern between the lower-income group ($n = 1,288$) and the higher-income group ($n = 1,324$). Among the four groups, younger-lower income, younger-higher income, older-lower income, and older-higher income, the direct relationship and the direct associations between external sources on savings and credit-using behavior were very consistent across groups. However, the strength of the direct associations between internal sources and external sources were highest among the younger lower income group ($std\ coef = 0.60$, $p < .001$), followed by the older- and lower-income group ($std\ coef = 0.48$, $p < .001$), the older higher-income group ($std\ coef = 0.34$, $p < .001$), and then the younger higher-income group ($std\ coef = 0.34$, $p < .001$). The strength of the four groups' indirect relationships

between the internal sources and savings and credit-using behavior through the mediating external sources was that the younger lower-income group showed the highest strength ($std\ coef = 0.25, p < .001$), followed by the older lower-income group ($std\ coef = 0.21, p < .001$), the younger higher-income group ($std\ coef = 0.17, p < .001$), and the older higher-income group ($std\ coef = 0.16, p < .001$).

Discussion, Limitations, and Implications

Discussion

The goal of this study was to examine the potential explaining power of two types of information search sources that consumers often use when dealing with day-to-day financial issues. Using a restricted sample of 2012 NFCS, Hypothesis 1 was supported by the results. Consistent with findings from previous studies (Kim & Hanna, 2015; Lee & Cho, 2005; Lim et al., 2014), consumers' human capital and psychological characteristics, including education, possessed financial knowledge, financial confidence, and risk tolerance were positively associated with savings and credit-using behavior. In other words, the findings of this study showed that getting higher education, having more financial knowledge, being more financially confident, and having a higher financial risk tolerance are associated with more responsible household savings and credit-using behavior. The SEM results also supported Hypothesis 2. The results showed that seeking advice from financial professionals significantly mediated the relationship between internal search sources and certain positive financial behaviors. Specifically, those who had higher educational attainment, financial knowledge, financial confidence, and risk tolerance were more likely to seek financial advice and, in turn, these internally possessed characteristics and the reliance on external sources were positively associated with responsible financial behaviors. These findings are consistent with the findings from previous studies that found associations between risk tolerance, financial confidence, and financial advice-seeking behavior (e.g., Chatterjee & Zahirovic-Herbert, 2010; Grable & Joo, 2001).

The empirical findings from this study contribute to the literature by providing evidence for an overarching conceptual framework that links consumers' financial information-searching, advice-seeking, and savings and credit-using behavior. Findings from this study also contribute to the financial decision-making and information-searching literature by highlighting the significance of consumers'

internally possessed characteristics, such as human capital and financial perspectives, while also underscoring the value of financial advisors and planners in terms of encouraging positive financial behaviors among consumers. According to the information search models developed by Beales et al. (1981), consumers' prior financial experience and attitudes may have a positive influence on processing new information. However, more experienced consumers may decide to rely on their own capabilities rather than search for more information from external sources. Therefore, this study highlights the importance of internal information sources such as financial knowledge and educational attainment. It is also possible that for some consumers, financial needs and financial constraints usually come simultaneously; therefore, if external sources are not attainable, they can still apply internal knowledge and related skills to resolve financial issues related to savings, investment, and other financial planning areas.

This study also reaffirmed the importance of financial practitioners as significant external financial information providers. First, the results confirmed the value of external information sources (i.e., financial practitioners) that provide investment, savings, insurance, and tax services to consumers. Previous studies have shown that financial practitioners had a positive influence on consumers' financial behaviors (e.g., Grable & Joo, 2001, 2003; Kim et al., 2003); however, the efforts made internally by consumers were not included in these models. This study found that consumers' knowledge, skills, and attitudes can directly promote positive financial behaviors. These findings are consistent with those related to the association between knowledge, skills, attitude, and financial behavior from the previous literature (Huston, 2012; Lusardi, 2008; Lusardi & Mitchell, 2007a). Moreover, the significant mediating effect of the external financial advice providers showed that when consumers encounter financial problems and concerns, those who actively search internally and externally are significantly associated with having better financial behaviors than those who have fewer sources of internal and external information.

Limitations

This study used a restricted sample of those who had financially dependent children and have credit card accounts at the time of the survey. Therefore, the findings from this study are inferred to the subsample and may not be

representative of the full sample or the population. Regarding other limitations of the study, it could be argued that the information search and decision-making process was partially explored because, according to Suchman (1966) and Grable and Joo (1999), individuals would be aware of a specific need before searching for information. Due to a lack of observable information on households' awareness in the dataset, this study used a restricted sample of those with financially dependent children and credit cards because these two restrictions could imply a need for educational saving and credit-searching and may trigger the internal and external information-gathering process in order to perform better financially. Moreover, more research is needed to further examine debt and credit counseling services as an external information source to provide more implications for financial counselors and a deeper understanding of consumers in need of debt and credit management counseling services.

Another limitation involves the interpretations of the latent variables in this study. To avoid potential confusion, the construction of the SEM model and the latent variables in this study were closely based on previous literature and the conceptual framework. Furthermore, the significance of the observed measuring variables in the model was discussed along with the discussion of the latent constructs. The use of SEM has some embedded limitations, including the factor loadings, relationships between latent constructs, and the model's goodness-of-fit being sensitive to the sampling methodology. Although a significant percentage of the population did not participate in the desirable financial behaviors examined in this study (e.g., the ratio of respondents who did not have a retirement account to those who had a retirement account was 0.93, and the ratio of respondents who did not compare information when applying for the most recent credit cards to those who did the comparison was 1.58), financial education and seeking the services of a financial advisor were positively associated with desirable savings and credit-using behaviors. It is a limitation of this study that it could not conclusively determine whether those who either did not plan well for their retirement or manage their credit cards well would change their behavior upon receiving better financial education or greater access to professional financial advice. However, previous studies suggested that professional financial advice and counseling do help in improving financial behaviors among financially burdened individuals (e.g., Disney, Gathergood,

& Weber, 2015; Elliehausen, Lundquist, & Staten, 2007; Kim et al., 2003). Similarly, Sherraden (2017) found that the increase of financial education and other resources can help low-income Individual Development Account (IDA) participants increase their savings. Therefore, from a policy and research perspective, it is worth exploring in future studies whether increasing financial education and access to professional advice can improve the financial management behavior of the more financially challenged households across time.

Implications

One of the primary goals of financial counseling and advice should be to foster the positive financial behavioral habits of consumers so they can behave independently, responsively, and successfully to resolve their own financial concerns. Helping the consumer gain knowledge and increasing their financial literacy are vital in terms of promoting positive financial behavior and financial wellness. Furthermore, the findings also showed that other internal sources, including financial confidence and risk tolerance, were positively associated with seeking advice from financial planners and behaving better financially. Financial risk tolerance is a widely used tool among financial planners for providing investment advice to their clients primarily because measuring a client's risk tolerance before providing investment advice is required by the Investment Advisers Act of 1940 (Loomis Jr., 1959). However, since this study also found that financial knowledge and confidence were positively associated with financial advice-seeking and desired savings and credit-using behavior, there is an opportunity for financial advisors and planners to explore and implement client communication strategies into their best practices that help build consumers' knowledge and confidence, and that can be useful for better management of their personal financial issues.

The findings of this study also urge policymakers at both the state and federal levels to make financial professional services more accessible and affordable to consumers. While the goals of increasing financial literacy and financial capability are important at the federal level, increasing access to high-quality financial education also requires implementation at the state level. Moreover, when debating a policy for creating greater access to professional financial advice, more can be done at both the federal and state levels. Due to the limited nature of internal search sources, those who have

low financial literacy and with lower educational attainment may need more external financial advice to avoid destructive financial behaviors. Moreover, it is necessary to enhance the current financial education programs because human capital is such an important internal financial information source. Consumers with greater stocks of fundamental financial knowledge and skills are better equipped to cope with financial shocks and can eventually reach financial wellness.

The findings from the additional multigroup comparison should be of interest to financial advisors and planners when working with clients with different income and age characteristics. This study found that lower-income households with greater internal resources were more likely to seek external help from financial professionals, and in turn, the mediating role of external help sources was stronger for these lower-income households, compared to wealthier households. On the other hand, with the help of financial professionals, wealthier households may more effectively apply internally retrievable sources, including financial knowledge, education gained from school, financial confidence, and risk tolerance to guide their credit and saving behavior compared to lower-income households. This study further revealed a strong relationship between internal and external sources among the younger generation with lower income. Therefore, those who have more internal financial information sources at their younger ages but with some financial constraints may need the external help the most. Furthermore, the significant mediating effect of external help on credit use and saving behavior was also found among this group of individuals, implying the effectiveness of financial planners and counselors in promoting financial behaviors of the younger clients with lower economic resources. This finding is also consistent with findings from Lim et al.'s (2014) study, which found that minority households with greater levels of financial stress, but greater financial confidence were significantly more likely to seek help from professional financial planners and counselors.

References

Allgood, S., & Walstad, W. (2013). Financial literacy and credit card behaviors: A cross-sectional analysis by age. *Numeracy*, 6, 1–26. <https://doi.org/10.5038/1936-4660.6.2.3>

- Asaad, C. T. (2015). Financial literacy and financial behavior: Assessing knowledge and confidence. *Financial Services Review*, 24(2), 101–117.
- Atlas, S. A., Lu, J., Micu, P. D., & Porto, N. (2019). Financial knowledge, confidence, credit use, and financial satisfaction. *Journal of Financial Counseling and Planning*, 30(2), 175–190. <https://doi.org/10.1891/1052-3073.30.2.175>
- Bapat, D. (2019). Exploring antecedents to financial management behavior for young adults. *Journal of Financial Counseling and Planning*, 30(1), 44–55. <https://doi.org/10.1891/1052-3073.30.1.44>
- Beales, H., Mazis, M. B., Salop, S. C., & Staelin, R. (1981). Consumer search and public policy. *Journal of Consumer Research*, 8(1), 11–22. <https://doi.org/10.1086/208836>
- Bernheim, D. (1995). Do households appreciate their financial vulnerabilities? An analysis of actions, perceptions, and public policy. *Tax Policy and Economic Growth*, 3, 11–30.
- Bernheim, D. (1998). Financial illiteracy, education and retirement saving. In O. S. Mitchell & S. Schieber (Eds.), *Living with defined contribution pensions* (pp. 38–68). Philadelphia, PA: University of Pennsylvania Press.
- Chatterjee, S., & Zahirovic-Herbert, V. (2010). Retirement planning of younger baby-boomers: Who wants financial advice? *Financial Decisions*, 5, 1–12.
- Collins, J. M. (2012). Financial advice: A substitute for financial literacy? *Financial Service Review*, 21(4), 307–322. <https://doi.org/10.2139/ssrn.2046227>
- Courchane, M., & Zorn, P. (2005). *Consumer literacy and credit worthiness. Federal reserve system conference, promises and pitfalls: As consumer options multiply, who is being served and at what cost*. Retrieved from <https://www.chicagofed.org/>
- Disney, R., Gathergood, J., & Weber, J. (2015). Credit counseling: A substitute for consumer financial literacy? *Journal of Pension Economics & Finance*, 14(4), 466–491. <https://doi.org/10.1017/S1474747215000219>
- Elliehausen, G., Lundquist, C. E., & Staten, M. E. (2007). The impact of credit counseling on subsequent borrower behavior. *Journal of Consumer Affairs*, 41(1), 1–28. <https://doi.org/10.1111/j.1745-6606.2006.00066.x>
- Fan, L. (2017). *The influences of financial help-seeking and other information sources on consumer's*

- financial management behavior*. Doctoral dissertation. University of Georgia, Athens, GA. Retrieved from <https://www.libs.uga.edu/etd>
- Fan, L., & Chatterjee, S. (2017). Borrowing decision of households: An examination of the information search process. *Journal of Financial Counseling and Planning*, 28(1), 95–106. <https://doi.org/10.1891/1052-3073.28.1.95>
- Finke, M. S., Huston, S. J., & Winchester, D. D. (2011). Financial advice: Who pays. *Journal of Financial Counseling and Planning*, 22(1), 18–26.
- Goetz, J. W., Cude, B. J., Nielsen, R. B., Chatterjee, S., & Mimura, Y. (2011). College-based personal finance education: Student interest in three delivery methods. *Journal of Financial Counseling and Planning*, 22(1), 27–42.
- Grable, J. E., & Chatterjee, S. (2014). Zeta estimates of wealth volatility and financial planning horizon. *Ewha Journal of Social Sciences*, 30(2), 5–24. <https://doi.org/10.16935/ejss.2014.30.2.001>
- Grable, J. E., & Joo, S. H. (1999). Financial help-seeking behavior: Theory and implications. *Journal of Financial Counseling and Planning*, 10(1), 14–25.
- Grable, J. E., & Joo, S. H. (2001). A further examination of financial help-seeking behavior. *Journal of Financial Counseling and Planning*, 12(1), 55.
- Grable, J. E., & Joo, S. H. (2003). A snapshot view of the help-seeking market. *Journal of Financial Planning*, 16(3), 88–94.
- Hackethal, A., Haliassons, M., & Jappelli, T. (2012). Financial advisors: A case of babysitters? *Journal of Banking & Finance*, 36(2), 509–524. Retrieved from <https://doi.org/10.1016/j.jbankfin.2011.08.008>
- Hanna, S. D. (2011). The demand for financial planning services. *Journal of Personal Finance*, 10(1), 36–62.
- Hanna, S. D., & Lindamood, S. (2010). Quantifying the economic benefits of personal financial planning. *Financial Services Review*, 19(2), 111–127.
- Hauser, R. M., & Goldberger, A. S. (1971). The treatment of unobservable variables in path analysis. *Sociological Methodology*, 3, 81–117. <https://doi.org/10.2307/270819>
- Hershberger, S. L. (2003). The growth of structural equation modeling: 1994–2001. *Structural Equation Modeling*, 10(1), 35–46. https://doi.org/10.1207/S15328007SEM1001_2
- Hilgert, M. A., Hogarth, J. M., & Beverly, S. G. (2003). Household financial management: The connection between knowledge and behavior. *Federal Reserve Bulletin*, 89, 309–322.
- Hira, T. K., & Mugenda, O. M. (1999). The relationships between self-worth and financial beliefs, behavior, and satisfaction. *Journal of Family and Consumer Sciences*, 91(4), 76–82.
- Hox, J. J., & Bechger, T. M. (2007). An introduction to structural equation modeling. *Family Science Review*, 11, 354–373.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Huang, E. J., Lassu, R. A., & Chan, K. K. (2018). User-source fit and financial information source selection of millennials. *Journal of Financial Counseling and Planning*, 29(2), 272–289. <https://doi.org/10.1891/1052-3073.29.2.272>
- Hung, A., Parker, A. M., & Yoong, J. (2009). *Defining and measuring financial literacy*. RAND Working Paper Series WR-708. Retrieved from https://papers.ssrn.com/Sol3/Papers.Cfm?Abstract_Id=1498674
- Huston, S. J. (2012). Financial literacy and the cost of borrowing. *International Journal of Consumer Studies*, 36(5), 566–572. <https://doi.org/10.1111/j.1470-6431.2012.01122.x>
- Joo, S.-H., & Grable, J. E. (2001). Factors associated with seeking and using professional retirement-planning help. *Family and Consumer Sciences Research Journal*, 30(1), 37–63. <https://doi.org/10.1177/1077727X01301002>
- Kim, J., Garman, E. T., & Sorhaindo, B. (2003). Relationships among credit counseling clients' financial wellbeing, financial behaviors, financial stressor events, and health. *Journal of Financial Counseling and Planning*, 14(2), 75–87.
- Kim, K. T., & Hanna, S. D. (2015). Does financial sophistication matter in retirement preparedness? *Journal of Personal Finance*, 14(2), 9–20.
- Lee, J., & Cho, J. (2005). Consumers' use of information intermediaries and the impact on their information search behavior in the financial

- market. *Journal of Consumer Affairs*, 39(1), 95–120. <https://doi.org/10.1111/j.1745-6606.2005.00005.x>
- Letkiewicz, J., Robinson, C., Domian, D. L., & Uborceva, N. (2015). *Behavioral and wealth considerations for seeking professional financial planning help*. Retrieved from <https://ssrn.com/abstract=2666727>
- Lim, H., Heckman, S. J., Letkiewicz, J. C., & Montalto, C. P. (2014). Financial stress, self-efficacy, and financial help-seeking behavior of college students. *Journal of Financial Counseling and Planning*, 25(2), 148–160.
- Loibl, C., & Hira, T. K. (2007). New insights into advising female clients on investment decisions. *Journal of Financial Planning*, 20(3), 68–75.
- Loomis, P. A., Jr. (1959). Securities exchange act of 1934 and the investment advisers act of 1940. *George Washington Law Review*, 28(1), 214–249.
- Lusardi, A. (2008). *Financial literacy: An essential tool for informed consumer choice?* CFS Working Paper, No. 2008/19. Retrieved from <http://nbn-resolving.de/urn:nbn:de:hebis:30-56927>
- Lusardi, A., & Mitchell, O. S. (2007a). Financial literacy and retirement preparedness: Evidence and implications for financial education. *Business Economics*, 42(1), 35–44. <https://doi.org/10.2145/20070104>
- Lusardi, A., & Mitchell, O. S. (2007b). *Financial literacy and retirement planning: New evidence from the RAND American Life Panel*. MRRC Working PaperNo. 2007-157. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1095869
- MacCallum, R. C., & Austin, J. T. (2000). Applications of structural equation modeling in psychological research. *Annual Review of Psychology*, 51(1), 201–226. <https://doi.org/10.1146/annurev.psych.51.1.201>
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1(2), 130–149. <https://doi.org/10.1037/1082-989X.1.2.130>
- Montford, W., & Goldsmith, R. E. (2016). How gender and financial self-efficacy influence investment risk taking. *International Journal of Consumer Studies*, 40(1), 101–106. <https://doi.org/10.1111/ijcs.12219>
- Moreland, K. A. (2018). Seeking financial advice and other desirable financial behaviors. *Journal of Financial Counseling and Planning*, 29(2), 198–207. <https://doi.org/10.1891/1052-3073.29.2.198>
- Newton, C., Coronos, S., Irving, K., & Thomas, D. (2015). *The value of financial planning advice: Process and outcome effects on consumer well-being [Time 1 and 2 survey summary results]*. Retrieved from eprints.qut.edu.au
- Nicolini, G., Cude, B. J., & Chatterjee, S. (2013). Financial literacy: A comparative study across four countries. *International Journal of Consumer Studies*, 37(6), 689–705. <https://doi.org/10.1111/ijcs.12050>
- Parker, A. M., Bruin, W. B., Yoong, J., & Willis, R. (2011). Inappropriate confidence and retirement planning: Four studies with a national sample. *Journal of Behavioral Decision Making*, 25(4), 328–389. <https://doi.org/10.1002/bdm.745>
- Perry, V. G., & Morris, M. D. (2005). Who is in control? The role of self-perception, knowledge, and income in explaining consumer financial behavior. *Journal of Consumer Affairs*, 39(2), 299–313. <https://doi.org/10.1111/j.1745-6606.2005.00016.x>
- Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *Journal of Consumer Affairs*, 44(2), 276–295. <https://doi.org/10.1111/j.1745-6606.2010.01169.x>
- Robb, C. A., Babiarz, P., & Woodyard, A. (2012). The demand for financial professionals' advice: The role of financial knowledge, satisfaction, and confidence. *Financial Services Review*, 21(4), 291.
- Sherraden, M. (2017). *Can the poor save?: Saving and asset building in individual development accounts*. New York, NY: Routledge.
- Staten, M. E., Elliehausen, G., & Lundquist, E. C. (2002). The impact of credit counseling on subsequent borrower credit usage and payment behavior. *Credit Research Center Monograph*, 36, 1–38.
- Suchman, E. A. (1966). Health orientation and medical care. *American Journal of Public Health*, 56, 97–105. <https://doi.org/10.2105/AJPH.56.1.97>
- Tang, N., & Baker, A. (2016). Self-esteem, financial knowledge and financial behavior. *Journal of Economic Psychology*, 54, 164–176. <https://doi.org/10.1016/j.joep.2016.04.005>
- Wang, J., & Xiao, J. J. (2009). Buying behavior, social support and credit card indebtedness of college students. *International Journal of Consumer Studies*, 33(1), 2–10. <https://doi.org/10.1111/j.1470-6431.2008.00719.x>
- Xiao, J. J., & Porto, N. (2016). Which financial advice topics are positively associated with financial satisfaction?

Journal of Financial Counseling and Planning, 29(7), 52–60.

Xiao, J. J., & Porto, N. (2019). Financial education and insurance advice seeking. *Geneva Papers on Risk and Insurance- Issues and Practice*, 44(1), 20–35. <https://doi.org/10.1057/s41288-018-0108-1>

Xiao, J. J., Sorhaindo, B., & Garman, E. T. (2006). Financial behaviors of consumers in credit counseling. *International Journal of Consumer Studies*, 30(2), 108–121. <https://doi.org/10.1111/j.1470-6431.2005.00455.x>

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