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Direct and Indirect Effects of Subjective Financial Knowledge with Financial Satisfaction

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Direct and Indirect Effects of Subjective Financial Knowledge with Financial Satisfaction

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In this study, we differentiate subjective financial knowledge from objective financial knowledge and propose that subjective financial knowledge relates to financial satisfaction both directly as well as indirectly through financial behavior. This study used data obtained from a multi-stage random sample of household financial officers in Kerala, India (n=450). Results showed that subjective financial knowledge significantly relates to household financial officers' financial satisfaction after controlling for objective financial knowledge and other socioeconomic factors. The relationship between subjective financial knowledge and financial satisfaction could be both direct and indirect through financial behavior. The findings suggest that financial education programs should focus on enhancing not only objective financial knowledge but also subjective financial knowledge for engaging in responsible financial behavior, which in turn relates to financial satisfaction.

Keywords: subjective financial knowledge; objective financial knowledge; financial behavior; financial satisfaction

Financial satisfaction has been a significant area of research for the last several years. Financial satisfaction and its relationship with overall life satisfaction have been researched adequately in prior studies. Evidence shows that financial satisfaction is a central domain of life satisfaction (Bowling & Windsor, 2001; Diener & Diener, 1995; Loewe et al., 2014; Michalos & Orlando, 2006; Oishi et al., 1999; Pavot & Diener, 1993; Xiao et al., 2009). Financial satisfaction contributes to general well-being (Campbell, 1981), and is a crucial element of quality of life (Mugenda et al., 1990). The complex global financial environment indicates that financial knowledge is important for achieving financial satisfaction. In this study, we distinguish subjective financial knowledge (confidence in personal financial knowledge) from objective financial knowledge (actual financial knowledge) and posit that subjective financial knowledge relates to financial satisfaction through financial behavior. The present study focuses on the way through which subjective financial knowledge relates to financial satisfaction of household financial officers in Kerala, India.

ISSN: 1945-7774

Literature Review and Theory

Joo (2008) stated that financial satisfaction is the satisfaction of individuals with their financial conditions. Financial satisfaction includes contentment with material and non-material financial conditions (Joo & Grable, 2004). Zimmerman (1995) suggested that financial satisfaction is the state of being financially happy, healthy, and free from worry. Ali et al. (2015) stated that financial satisfaction is the individuals' perception of their personal financial situation. Financial satisfaction showed the subjective evaluation of financial status (Vera-Toscano et al., 2006). In other words, financial satisfaction refers to the appraisal of individuals' satisfaction with their personal financial condition (Hira & Mugenda, 1998). Prior studies showed that there is no consensus regarding the measurement of financial satisfaction (Godwin, 1994). Researchers like Davis and Schumm (1987), Morgan (1992), and Porter and Garman (1993) have used single-item measures to assess financial satisfaction. Other researchers used multiple-item measures to assess financial satisfaction. Hira and Mugenda (1998) measured financial satisfaction by considering various factors like financial management ability, amount of savings, debt, present financial situation, preparedness for emergencies, and ability to meet long-term goals. Similarly, Lown and Ju (1992) measured financial satisfaction, and Hayhoe and Wilhelm (1998) measured perceived economic well-being by using multiple items.

Research has shown that financially knowledgeable individuals tend to be satisfied with their financial resources by engaging in responsible financial behavior (Ali et al., 2015; Joo & Grable, 2004; Taft et al., 2013; Xiao et al., 2006). Financial knowledge refers to the understanding of financial concepts and products. Lind et al. (2020) suggested that it is the knowledge regarding concepts and products in personal finance. Formal education, practical experience, and consultation with others are the primary ways to achieve financial knowledge. Lusardi and Mitchell (2008) suggested that an individual's financial knowledge can be measured by taking into account the basic numerical ability to do calculations related to interest rates, understanding of inflation, and risk diversification. In other words, it measures the numeracy of an individual to perform calculations in compound interest, understanding about inflation in the financial decision-making perspective, and understanding regarding stocks and risk diversification.

Literature shows that there are two components of financial knowledge – objective financial knowledge and subjective financial knowledge. The former refers to the actual financial knowledge assessed by financial literacy questions, and the latter denotes the self-assessed financial knowledge (perceived financial knowledge) of an individual (Joo & Grable, 2004; Robb & Woodyard, 2011; Woodyard & Robb, 2016; Xiao et al., 2011). Researchers suggested that objective financial knowledge represents an individual's competence in financial knowledge, whereas subjective financial knowledge indicates confidence in personal financial knowledge (Lind et al., 2020). Generally, there is a mismatch between objective financial knowledge and subjective financial knowledge (Lusardi, 2011). For example, individuals having high objective financial knowledge may not necessarily have high subjective financial knowledge (Asaad, 2015; Hadar et al., 2013).

ISSN: 1945-7774

Researchers consistently showed the effect of both objective and subjective financial knowledge on financial satisfaction. Allgood and Walstad (2013) have employed the measure of financial sophistication by classifying individuals into four groups of high or low financial knowledge for both objective and subjective measures. Woodyard and Robb (2016) also measured financial sophistication in a similar way and found that those with low objective- high subjective financial knowledge are satisfied with their financial resources, and those with high objective-low subjective financial knowledge reported the reverse. Researchers (Lind et al., 2020) investigated how financial knowledge (both objective and subjective) related to subjective financial well-being (measured by financial anxiety and financial security). Results showed that financial knowledge confidence (subjective financial knowledge) predicts two facets of subjective financial well-being, whereas actual financial knowledge predicts financial anxiety only. Atlas et al. (2019) found that confidence in personal financial knowledge has direct and indirect effects on financial satisfaction. The indirect effect is through credit card use. Atlas et al. further reported that objective financial knowledge moderates the above relationship. Results from the study among employees at a state university in Ankara, Turkey, revealed a positive relationship between perceived financial knowledge and financial satisfaction (Coskuner, 2016). Joo and Grable (2004) introduced a subjective measure of financial knowledge and established a positive association with financial satisfaction. Adding to the above, Xiao, Chen, and Chen (2014) inferred that confidence in personal financial knowledge has a strong influence on financial satisfaction. Research suggested that, compared to actual financial knowledge, perceived financial knowledge (financial knowledge confidence) is more important in relation to financial satisfaction (Woodyard & Robb, 2016) and subjective financial well-being (Lind et al., 2020).

Researchers have reported a consistent association between knowledge and behavior from a financial perspective. It means that those who have sound financial knowledge tend to be engaged in responsible financial behavior (Chen & Volpe, 1998; Grable et al., 2020; Javed et al., 2017; Lusardi & Mitchell, 2007; Ramalho & Forte, 2019; Robb, 2011; Robb & Woodyard, 2011; Yong et al., 2018). Xiao (2008) stated that financial behavior is the human behavior related to the management of financial resources. Xiao, Chen, and Chen (2014) categorized financial behavior as positive and negative financial behavior or desirable and risky financial behavior. It involves cash management behavior, credit management behavior, savings behavior, and investment behavior. There is a hierarchical relationship between these behaviors, which means each may be the antecedent to the next (Hilgert et al., 2003). Robb and Woodyard (2011) suggested the following six best financial practices: (a) an adequate fund for future emergencies, (b) preparedness for retirement, (c) paying off credit card balances regularly, (d) getting a copy of credit card report, (e) risk management, and (f) not overdrawing a checking account.

Lusardi and Mitchell (2014) suggested that financial knowledge is essential for economic behavior as there is a cause-effect relationship between knowledge and behavior. Hilgert et al. (2003) suggested that household financial behavior in specific areas like cash flow management, credit management, saving, and investment are positively related to overall financial knowledge. Bernheim (1998) found that poor financial knowledge is a constraint on sound saving habits. Individuals who are financially savvy are more likely to

ISSN: 1945-7774

have proper retirement planning (Lusardi & Mitchell, 2011). Those with sound financial knowledge are more likely to engage in stock market activities (van Rooij et al., 2011). Numeracy strongly influences mortgage defaults (Gerardi et al., 2013), and those who are financially less knowledgeable may engage in high-cost methods of borrowing (Lusardi & Tufano, 2015).

Researchers pointed out the effect of objective and subjective financial knowledge on financial behavior. A study conducted among Chinese consumers suggested that objective and subjective financial knowledge are significant determinants of responsible financial behavior (Javed et al., 2017). Similarly, results from the study among young adults in the United States revealed that individuals who have objective financial knowledge and confidence in financial knowledge tend to be engaged in responsible financial practices like planning for retirement, preparing for emergencies, and are less likely to use costly borrowing (de Bassa Scheresberg, 2013). Findings from a nationally representative data set of US adults revealed a positive relationship between subjective financial knowledge and financial behavior (Tang & Baker, 2016). Hadar et al. (2013) revealed the role of subjective financial knowledge on financial decisions. They suggested that the higher the subjective financial knowledge, the higher will be the willingness to enroll in retirement saving strategies and to choose risky investment options. Xiao, Ahn, et al. (2014) reported that the effect of objective and subjective financial knowledge on financial behavior is not the same. Ramalho and Forte (2019) suggested that objective financial knowledge has direct and indirect effects on financial behavior. The indirect effect is through perceived financial knowledge. Specifically, actual financial knowledge (objective financial knowledge) affects perceived financial knowledge (subjective financial knowledge), and perceived financial knowledge affects financial behavior. Even though both objective and subjective financial knowledge have an effect on financial behavior it is shown that subjective financial knowledge is more robust than objective financial knowledge (Robb & Woodyard, 2011). Adding to the above, Xiao, Ahn, et al. suggested that compared to objective financial knowledge, subjective financial knowledge has a strong effect on overall financial behavior and each specific financial behavior.

Furthermore, previous studies (Coskuner, 2016; Joo & Grable, 2004; Loibl & Hira, 2005; Xiao et al., 2006; Xiao et al., 2009) revealed that there is a positive relationship between financial behavior and financial satisfaction. The framework developed by Joo and Grable (2004) suggests that financial behavior is the principal individual determinant of financial satisfaction. Xiao et al. (2009) attempted to test whether domain behavior contributes to domain satisfaction from a financial perspective. Results showed that positive financial behavior contributes to financial satisfaction. The study among the workforce in Jakarta suggested similar findings that financial behavior positively contributes to financial satisfaction (Arifin, 2018b). Those who have engaged in responsible financial behavior tend to be satisfied with their financial resources (Woodyard & Robb, 2016). Xiao, Chen, and Chen (2014) showed that financial satisfaction increases with desirable financial behavior and decreases with risky financial behavior. In a study among retirees and non-retires, Hira and Mugenda (1998) suggested that spending behavior significantly predicts financial satisfaction. Researchers suggested that rational budgeting and saving habits are the desired

ISSN: 1945-7774

financial behaviors that enhance an individual's financial satisfaction (Ünal & Duger, 2015). Individuals who can manage their financial situation effectively, such as maintaining adequate savings, investment, insurance, prompt payment of bills, and being free of debt, tend to be financially satisfied compared to their counterparts (Xiao et al., 2006).

In India, no adequate research was found on subjective financial knowledge and financial satisfaction, whereas objective financial knowledge and financial behavior were researched and reported thoroughly. NCFE (2019) revealed the status of financial literacy through a survey on financial inclusion and financial literacy. The survey reported that 27% of respondents crossed the minimum threshold limit in each component of financial literacy. It includes objective financial knowledge, financial attitude, and financial behavior. Specifically, 49% of the respondents achieved a minimum target score in objective financial knowledge and 53% in financial behavior. An interesting fact is that financial knowledge in the South (64%), North (56%), North-East (56%), and West (52%) is above the country average (49%). Evidence showed that 52% of respondents in the South zone are engaged in desirable financial practices. State-wise distribution reported that 70% and 57% of respondents in Kerala (Southern state in India) achieved minimum target scores in financial knowledge and financial behavior, respectively. As per the report of the RBI Household Finance Committee (2017), average Indian households are very reluctant to invest in financial markets. The wealth allocation of young Indian households differs from the households approaching retirement age. The former holds more gold and durable goods and the latter holds more in land and housing. The investment in physical goods rather than financial products is partly explained by a lack of trust in financial institutions. Results suggest that compared to the international context Indian households are not equipped with adequate retirement savings and insurance products. When they approach retirement age, they continue to accumulate their debt which is mostly in the form of unsecured loans. This shows the overdependence on non-institutional sources like money lenders. Further, it suggests that there is a strong connection between inadequate take-up of insurance products and overdependence on non-institutional sources of unsecured credit. Similarly, the lack of take-up of insurance products is related to the perceived financial management skills of the household head.

Current Study

Since subjective financial knowledge is related to financial satisfaction, the purpose of this study is to gain an understanding of the way through which financial knowledge relates to financial satisfaction among household financial officers in Kerala, India. Household financial officers are the persons who mainly manage finance in their households. A few studies suggested that objective financial knowledge is indirectly related to financial satisfaction through financial behavior (Arifin, 2018a; Falahati et al., 2012). We couldn't find adequate studies focusing on the role of financial behavior in the relationship between subjective financial knowledge and financial satisfaction. From the available evidence, we can assume that subjective financial knowledge is related to financial satisfaction directly and indirectly through financial behavior. On that ground, we formulated the following hypotheses.

ISSN: 1945-7774

H1: Subjective financial knowledge is directly and positively related to financial satisfaction, conditional on objective financial knowledge and other socioeconomic factors.

H2: Subjective financial knowledge is indirectly and positively related to financial satisfaction, through financial behavior, conditional on objective financial knowledge and other socioeconomic factors.

METHODS

1. Participants and procedure

We conducted the study among household financial officers in Kerala, India. Before conducting the final interview, it was pre-tested among 50 respondents for finalizing the interview schedule. On that basis, required changes were made to the instrument. Through multi-stage random sampling, we interviewed 450 respondents and obtained responses from them. We divided the entire Kerala state into three zones: South zone, Central zone, and North zone. One district from each zone was selected randomly. Again, one Panchayat and Municipality were selected from each district. Further, one ward (the smallest administrative unit of Panchayats/Municipalities) was selected from each selected Panchayat and Municipality. Finally, six wards represented the entire Kerala, and 75 households from each ward were selected randomly. From each household, we contacted the household financial officer and obtained responses. Data were collected from 450 participants with no missing observations. This 450 sample consisted of 58.22 % men and 41.78 % women. A consent form was given to the participants explaining the purpose and confidential nature of the study. All participants gave their informed consent.

2. Measurement of variables

2.1 Subjective financial knowledge

We measured respondents' subjective financial knowledge with a one-item scale adapted from Lusardi and Mitchell (2014). Respondents were asked, "How would you assess your overall financial knowledge?" Responses ranged from 1 (*very low) to* 7 (*very high*).

2.2 Financial behavior

The study used ten items from the Financial Management Behavior Scale (Dew & Xiao, 2011) to measure the financial behavior of sample respondents. It includes various components of financial behavior like savings, investment, budgeting, emergency funds, spending, insurance, etc. Responses were measured on a five-point scale ranging from 1 (*never*) to 5 (*always*). The scale offered an adequate level of internal consistency (Cronbach's alpha = .798).

ISSN: 1945-7774

2.3 Financial satisfaction

We used the one-item scale developed by Morgan (1992) to measure the financial satisfaction of the respondents. Respondents were asked, “How satisfied are you with your financial situation?” The present study used the modified seven-point scale instead of the original five-point scale. Responses ranged from 1 to 7, with higher numbers indicating greater degrees of financial satisfaction.

2.4 Covariates

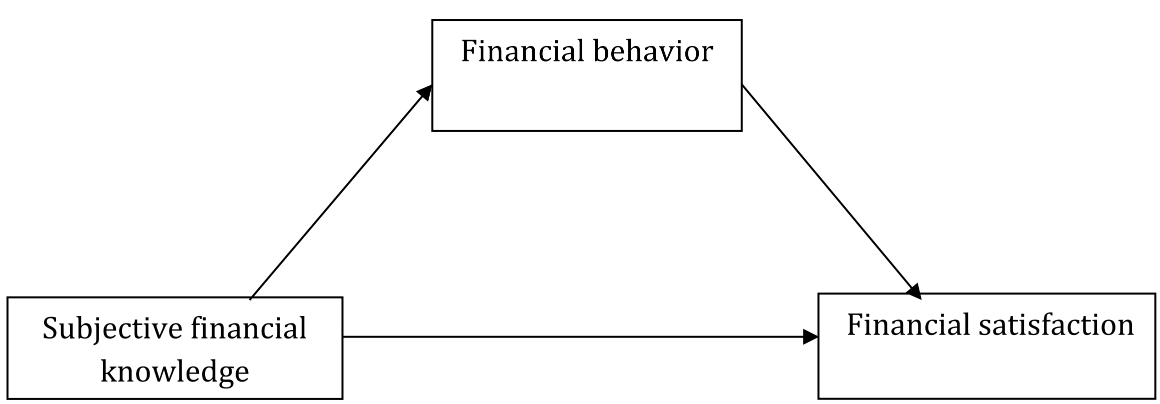
Control variables include respondents’ gender, age, education, monthly family income, employment status, marital status, and objective financial knowledge. The objective financial knowledge of sample respondents was measured by administering a quiz. It consists of ten true-false questions regarding interest rate, inflation, savings and investment, risk diversification, and insurance. The questions related to interest rate, inflation, and risk diversification were derived from the scale developed by Lusardi and Mitchell (2008), and OECD INFE (2011). Questions related to savings and investment, insurance, etc., were derived from the study conducted by Hilgert et al. (2003). The correct answer for each question carried a score of one.

3. Data analysis

We analyzed the data collected from respondents with IBM SPSS software. The use of Cronbach’s coefficient alpha test estimated the internal consistency of scale for financial behavior. There is no problematic multicollinearity between the independent variables as the value of tolerance (.770) is above .1 and the VIF value (1.298) is below 5. We used PROCESS macro version 3.4 (Hayes, 2019) to test the direct and indirect effects of subjective financial knowledge with financial satisfaction. The bootstrap estimation approach tested the significance of the indirect effect. Figure 1 shows the proposed model.

Figure 1.

Direct and Indirect Effects of Subjective financial knowledge with financial satisfaction.



ISSN: 1945-7774

RESULTS

Table 1 shows the summary statistics on all measures as well as covariates. Respondents had an average subjective financial knowledge score of 4.23 out of 7. Their financial behavior score averaged 3.26 out of 5, and their financial satisfaction score averaged 4.11 out of 7. Table 2 shows both Pearson and partial correlations between subjective financial knowledge, financial behavior, and financial satisfaction. Subjective financial knowledge is positively and significantly correlated with financial behavior and financial satisfaction. The relationship between financial behavior and financial satisfaction is also positive and significant. We found that after controlling for covariates, the relationships were still significant.

Table 1.

Summary statistics.

	Mean	SD	Min	Max
Subjective financial knowledge	4.23	1.48	1	7
Financial behavior	3.26	.85	1.30	5
Financial satisfaction	4.11	1.48	1	7
Covariates	**n (%)**			
Gender: Female	188 (41.78)			
Age: >50	215 (47.78)			
Income: <Rs. 20000	285 (63.33)			
Education: College education	145 (32.22)			
Employment status: Have a job	402 (89.33)			
Marital status: Married	397 (88.22)			
Objective financial knowledge	6.92	1.68	3	10

Table 2.

Correlation coefficients between subjective financial knowledge, financial behavior, and financial satisfaction.

	Subjective financial knowledge	Financial behavior	Financial satisfaction
Pearson correlations			
Subjective financial knowledge	1		
Financial behavior	.479**	1	
Financial satisfaction	.619**	.579**	1
Partial correlations (Controlling for covariates)			
Subjective financial knowledge	1		
Financial behavior	.361**	1	
Financial satisfaction	.545**	.446**	1

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

ISSN: 1945-7774

Table 3.

Summary of total, direct, and indirect effects.

Paths	Coefficients	SE	T	P-VALUE
Path c: DV- Financial satisfaction				
R^2 =.4477, F (8, 441) = 44.6887, p = .0000				
Subjective financial knowledge	.5212	.0382	13.6380	.0000
Gender	-.1485	.1120	-1.3250	.1859
Age	-.0095	.0053	-1.7941	.0735
Education	.0468	.0500	.9357	.3499
Monthly family income	.1700	.0630	2.6982	.0072
Employment status	.0187	.0359	.5203	.6031
Marital status	-.1237	.0973	-1.2720	.2040
Objective financial knowledge	.1557	.0339	4.5962	.0000
Path a: DV- Financial behavior				
R^2 =.4266, F (8, 441) = 41.0177, p = .0000				
Subjective financial knowledge	.1829	.0225	8.1293	.0000
Gender	-.2451	.0660	-3.7156	.0002
Age	-.0124	.0031	-4.0021	.0001
Education	.1265	.0294	4.2971	.0000
Monthly family income	.0609	.0371	1.6429	.1011
Employment status	.0025	.0211	.1162	.9075
Marital status	.0591	.0573	1.0317	.3028
Objective financial knowledge	.1485	.0199	7.4452	.0000
Path b and c': DV-Financial satisfaction				
R^2 =.5039, F (9, 440) = 49.6616, p = .0000				
Financial behavior (b)	.5418	.0767	7.0602	.0000
Subjective financial knowledge (c')	.4221	.0389	10.8554	.0000
Gender	-.0157	.1080	-.1450	.8848
Age	-.0027	.0051	-.5357	.5924
Education	-.0217	.0484	-.4492	.6535
Monthly family income	.1370	.0600	2.2844	.0228
Employment status	.0173	.0340	.5092	.6108
Marital status	-.1557	.0924	-1.6854	.0926
Objective financial knowledge	.0753	.0341	2.2064	.0279
Total effect	*(Path c)*			
Direct effect	*(Path c')*			
*Indirect effect (Path a * Path b)*	*Effect = .0991 SE = .0220 Confidence interval: .0594 to .1458*			

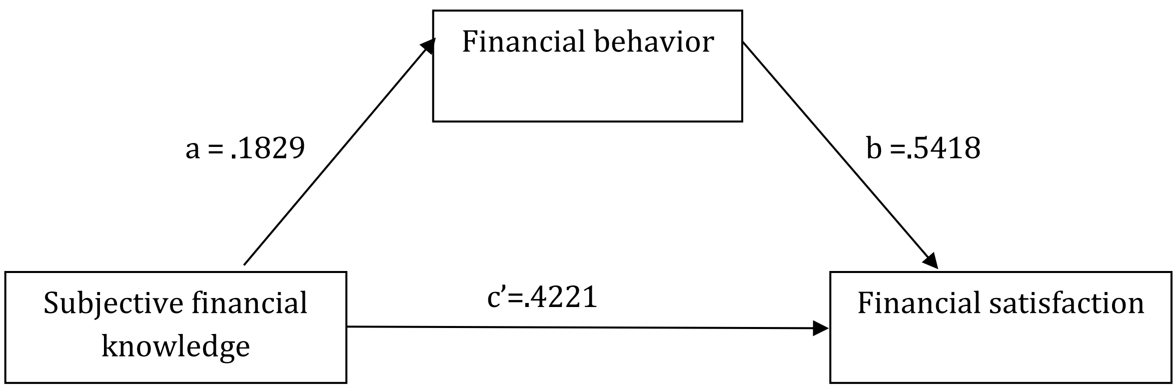
Using ordinary least squares path analysis, it was found that self-assessed financial knowledge is indirectly related to financial satisfaction through its effect on financial behavior. Results indicated that the regression coefficient between subjective financial knowledge and financial behavior was statistically significant **(Path a)**, as was the regression coefficient between financial behavior and financial satisfaction **(Path b).** As can be seen in Table 3, respondents having confidence in their personal financial knowledge tend to engage in responsible financial behavior (a =.1829), and respondents who engaged in responsible

ISSN: 1945-7774

financial practices tend to be satisfied with their financial resources (b =.5418). A bootstrap confidence interval for the indirect effect (ab =.0991) based on 5,000 bootstrap samples was entirely above zero (.0594 to .1458). These results suggest that there is a relationship between self-assessed financial knowledge and financial satisfaction which is explained by financial behavior. Subjective financial knowledge was still a significant predictor of financial satisfaction after controlling for financial behavior **(Path c')**. In other words, subjective financial knowledge is related to financial satisfaction independent of its effect on financial behavior (c'=.4221). These results support both hypotheses. The total effect of subjective financial knowledge on financial satisfaction was also found significant **(Path c).**

Figure 2.

Various paths and their coefficients.



Research revealed that the link between subjective financial knowledge and financial satisfaction could be direct and indirect through financial behavior. The direct effect of subjective financial knowledge on financial satisfaction suggest that household financial officers having more subjective financial knowledge but who is equally engaged in financial practices tend to be more financially satisfied. The indirect effect suggests that household financial officers having more confidence in their personal financial knowledge likely to be engaged in sound financial practices which in turn results in more financial satisfaction.

Furthermore, these results are consistent with prior research regarding the relationship between objective financial knowledge and financial satisfaction. Specifically, objective financial knowledge is related to financial satisfaction through financial behavior. In other words, objective financial knowledge is positively related to financial behavior and financial behavior is positively related to financial satisfaction.

DISCUSSION

The current research has aimed to check whether subjective financial knowledge relates to financial satisfaction through financial behavior. The findings support existing literature, as evidence suggests that confidence in personal financial knowledge and financial behavior plays an essential role in determining their financial satisfaction

ISSN: 1945-7774

(Coşkuner, 2016; Woodyard & Robb, 2016; Xiao, Chen & Chen, 2014). A path analysis indicated that perceived financial knowledge has both direct and indirect effects with financial satisfaction. A particularly noteworthy finding of this study is that the indirect effect of perceived financial knowledge with financial satisfaction is through financial behavior. In addition, the current research supports the existing literature regarding the relationship between objective financial knowledge and financial satisfaction through financial behavior (Arifin, 2018a; Falahati et al., 2012).

The research has implications for financial educators and financial therapists. Since household financial officers' perceived financial knowledge influences their financial satisfaction, financial education programs should focus on enhancing confidence in personal financial knowledge along with objective financial knowledge for engaging in responsible financial behavior (Hadar et al., 2013; Xiao, Chen & Chen, 2014) which in turn leads to financial satisfaction. Imparting objective financial knowledge without developing financial confidence is in vain. The proper blend of both objective and subjective financial knowledge can result in financial satisfaction through positive financial behaviors. As suggested by Hadar et al. (2013), financial knowledge should be imparted in line with the cognitive capacity of individuals for ensuring that there is no paradoxical diminishing in confidence in personal financial knowledge.

These education programs should cover interest rate calculation, understanding of inflation and the time value of money, risk diversification, creation of emergency funds, credit management, etc. Apart from these basic financial education topics, more specific financial knowledge regarding banking, insurance, the stock market, etc., are to be provided. Since the indirect effect of subjective financial knowledge with financial satisfaction is through financial behavior, the goal of financial education programs should be to transmit knowledge into behavior. Financial educators should train household financial officers on how to use financial information to achieve financial satisfaction. They must take efforts to provide subjective knowledge as it determines the confidence in applying objective knowledge (Xiao, Ahn, et al., 2014). Moreover, it should address the consequence of undesirable or risky financial behaviors. Previous research showed that financial education is the best-suited option to improve an individual's financial satisfaction (Bernheim & Garrett, 1996).

Financial therapists can intervene in this effort by providing their clients with financial knowledge and emotional support simultaneously. Therapeutic intervention is useful for reducing feelings (fear, shame, etc.) related to a lack of confidence and forming strong beliefs and behaviors regarding personal finance. As observed in the research, average household financial officers (mean score of 3.26 out of 5) in Kerala are engaged in desirable and undesirable financial behaviors. Financial therapists can provide their clients with an insight into the underlying causes of poor prior choices, which lead to undesirable or problematic behaviors, and suggest alternatives to these choices. Financial therapists can assist their clients by providing financial advice, including forming a comprehensive financial plan with a financial budget and strategies for staying within that budget. Household financial officers who believe that they are financially less knowledgeable should seek help and expert advice to improve their financial decision-making skills.

ISSN: 1945-7774

If financial educators and practitioners can work to improve an individual's financial behaviors, it may likely result in increased financial satisfaction (Joo & Grable, 2004). For achieving the goal of financial satisfaction through desirable financial practices, emphasis should be given to personal financial knowledge – both actual and perceived.

Financial education programs and their delivery should be designed in accordance with the level of recipients. They should address the various target groups rather than adopting a single strategy. Even though there are various initiatives taken by regulatory bodies like the Reserve Bank of India, Securities and Exchange Board of India, etc., the focus is on delivering objective financial knowledge, rather than building confidence. In Kerala, financial education among household financial officers can be imparted effectively through self-help groups (SHGs) which are numerous. SHG meetings serve as a platform for disseminating financial education and providing financial counseling. By integrating financial education into the school curriculum, it is possible that individuals are financially educated at early stages in their life and are better equipped to engage in sound financial practices. The objective financial knowledge acquired by students from their schools and members of SHGs from their sources can be disseminated to their families. Open discussions in the family regarding financial matters enable family members including the household financial officer to obtain an understanding of financial concepts. They also help family members achieve financial confidence and engage in desirable financial practices. Researchers' (Deenanath et al., 2019) evidence supports the role of family financial socialization on financial confidence and financial behavior. Since the government of India has undertaken successful campaigns on various programs, a massive campaign regarding the importance of saving habits, the creation of an emergency fund, and increasing the use of insurance products will help household financial officers to stand with sound financial practices. More customized financial products that match households' financial conditions will enable the household financial officers to purchase these products with more confidence. The finding that financial satisfaction is related to confidence in financial knowledge sheds light on the importance of financial counseling for developing confidence in the mind of household financial officers. Household financial officers' confidence will help them to engage in sound financial practices, which is likely to contribute to financial satisfaction.

The limitations of this research should be acknowledged. Moreover, these limitations are the directions for further research. Firstly, this is a cross-sectional study. Longitudinal studies may give more clear evidence of the relationship between variables. Another limitation of this study is that we used a single-item measure to assess financial satisfaction. Researchers can use more rigorous measures in the future. This model can be used in various domains of life satisfaction.

We believe this research significantly contributes to the existing literature on financial knowledge, financial behavior, and financial satisfaction within a population of household financial officers in Kerala, India. It contributes to the literature on financial knowledge by finding evidence for the direct and indirect effects of subjective financial knowledge with financial satisfaction. It contributes to the literature on financial behavior with evidence for

ISSN: 1945-7774

an indirect effect between subjective financial knowledge and financial satisfaction through financial behavior. It also contributes to the literature on financial satisfaction by exploring the ways through which financial satisfaction is related to self-assessed financial knowledge and financial behavior.

ISSN: 1945-7774

REFERENCES

Ali, A., Rahman, M. S., & Bakar, A. (2015). Financial satisfaction and the influence of Financial Literacy in Malaysia. *Social Indicators Research*, *120*(1), 137–156. https://doi.org/10.1007/s11205-014-0583-0

Allgood, S., & Walstad, W. (2013). Financial literacy and credit card behaviors: A cross-sectional analysis by age. *Numeracy*, *6*(2), Article 3. https://doi.org/10.5038/1936-4660.6.2.3

Arifin, A. Z. (2018a). Influence factors toward financial satisfaction with financial behavior as intervening variable on Jakarta area workforce. *European Research Studies Journal*, *21*(1), 90–103. https://doi.org/10.35808/ersj/932

Arifin, A. Z. (2018b). Influence of financial attitude, financial behavior, financial capability on financial satisfaction. *Proceedings of the 15th International Symposium on Management (INSYMA 2018)*, *186*, 100–103. https://doi.org/10.2991/insyma-18.2018.25

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

Bernheim, B. D. (1998). Financial illiteracy, education, and retirement saving. In O.S. Mitchell & S.J. Schieber (Eds.), *Living with defined contribution pensions* (pp. 38–68). University of Pennsylvania Press.

Bernheim, B. D., & Garrett, D. M. (1996). *The determinants and consequences of financial education in the workplace: Evidence from a survey of households* (NBER Working Paper No. 5667). National Bureau of Economic Research. http://www.nber.org/papers/w5667.pdf

Bowling, A., & Windsor, J. (2001). Towards the good life: A population survey of dimensions of quality of life. *Journal of Happiness Studies*, *2*(1), 55–82. https://doi.org/10.1023/A:1011564713657

Campbell, A. (1981). *The sense of well-being in America: Recent patterns and trends*. McGraw-Hill.

Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. *Financial Services Review*, *7*(2), 107–128. https://doi.org/10.1016/s1057-0810(99)80006-7

Coşkuner, S. (2016). Understanding factors affecting financial satisfaction: The influence of financial behavior, financial knowledge and demographics. *Imperial Journal of Interdisciplinary Research*, *2*(5), 377–385.

Davis, E. P., & Schumm, W. R. (1987). Family financial satisfaction: The impact of reference point. *Home Economics Research Journal*, *14*, 123–131.

de Bassa Scheresberg, C. (2013). Financial literacy and financial behavior among young adults: Evidence and implications. *Numeracy*, *6*(2). https://doi.org/10.5038/1936-4660.6.2.5

ISSN: 1945-7774

Deenanath, V., Danes, S. M., & Jang, J. (2019). Purposive and unintentional family financial socialization, subjective financial knowledge, and financial behavior of high school students. *Journal of Financial Counseling and Planning*, *30*(1), 83–96. https://doi.org/10.1891/1052-3073.30.1.83

Dew, J., & Xiao, J. J. (2011). The financial management behavior scale: Development and validation. *Journal of Financial Counseling and Planning*, *22*(1), 43–59.

Diener, E., & Diener, M. (1995). Cross-cultural correlates of life satisfaction and self-esteem. *Journal of Personality and Social Psychology*, *68*(4), 653–663. https://doi.org/10.1037/0022-3514.68.4.653

Falahati, L., Sabri , M. F., & Paim, L. H. J. (2012). Assessment a model of financial satisfaction predictors: Examining the mediate effect of financial behavior and financial strain. *World Applied Sciences Journal*, *20* (2), 190–197.

Gerardi, K., Goette, L., & Meier, S. (2013). Numerical ability predicts mortgage default. *Proceedings of the National Academy of Sciences, 110*(28), 11267–11271. https://doi.org/10.1073/pnas.1220568110

Godwin, D. D. (1994). Antecedents and consequences of newlyweds' cash flow management. *Financial Counseling and Planning*, *5*, 161–190.

Grable, J. E., Archuleta, K. L., Ford, M. R., Kruger, M., Gale, J., & Goetz, J. (2020). The moderating effect of generalized anxiety and financial knowledge on financial management behavior. *Contemporary Family Therapy*, *42*, 15–24. https://doi.org/10.1007/s10591-019-09520-x

Hadar, L., Sood, S., & Fox, C. R. (2013). Subjective knowledge in consumer financial decisions. *Journal of Marketing Research*, *50*(3), 303–316. https://doi.org/10.1509/jmr.10.0518

Hayes, A. F. (2019). *Process macro* (Version 3.4) [Computer software]. https://www.processmacro.org/download.html

Hayhoe, C. R., & Wilhelm, M. S. (1998). Modeling perceived economic well-being in a family setting: A gender perspective. *Financial Counseling and Planning*, *9*(1), 21–34.

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. (1998). Predictors of financial satisfaction: Differences between retirees and non-retirees. *Journal of Financial Counseling and Planning*, *9*(2), 75–84.

Javed, M. K., Degong, M., & Qadeer, T. (2017). Importance of financial knowledge and self-esteem in determining individuals' financial behavior. *International Journal of Management and Applied Science*, *3*(10), 46–50.

Joo, S. (2008). Personal financial wellness. In J. J. Xiao (Ed.), *Handbook of consumer finance research* (pp. 21-33). Springer.

Joo, S., & Grable, J. E. (2004). An exploratory framework of the determinants of financial satisfaction. *Journal of Family and Economic Issues*, *25*(1), 25–50. https://doi.org/10.1023/b:jeei.0000016722.37994.9f

Lind, T., Ahmed, A., Skagerlund, K., Strömbäck, C., Västfjäll, D., & Tinghög, G. (2020). Competence, confidence, and gender: The role of objective and subjective financial knowledge in household finance. *Journal of Family and Economic Issues*, *41*(4), 626–638. https://doi.org/10.1007/s10834-020-09678-9

ISSN: 1945-7774

Loewe, N., Bagherzadeh, M., Araya-Castillo, L., Thieme, C., & Batista-Foguet, J. M. (2014). Life domain satisfactions as predictors of overall life satisfaction among workers: Evidence from Chile. *Social Indicators Research*, *118*(1), 71–86. https://doi.org/10.1007/s11205-013-0408-6

Loibl, C., & Hira, T. K. (2005). Self-directed financial learning and financial satisfaction. *Journal of Financial Counseling and Planning*, *16*(1), 11–21.

Lown, J. M., & Ju, I-S. (1992). A model of credit use and financial satisfaction. *Financial Counseling and Planning*, *3*, 105–123.

Lusardi, A. (2011). *Americans' financial capability* (NBER Working Paper No. 17103). National Bureau of Economic Research. http://www.nber.org/papers/w17103

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. (2008). Planning and financial literacy: How do women fare? *American Economic Review*, *98*(2), 413–417. https://doi.org/10.1257/aer.98.2.413

Lusardi, A., & Mitchell, O. S. (2011). *Financial literacy and planning: Implications for retirement well-being* (NBER Working Paper No. 17078). National Bureau of Economic Research. http://www.nber.org/papers/w17018

Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, *52*(1), 5–44. https://doi.org/10.1257/jel.52.1.5

Lusardi, A., & Tufano, P. (2015). Debt literacy, financial experiences, and overindebtedness. *Journal of Pension Economics and Finance*, *14*(4), 332–368. https://doi.org/10.1017/s1474747215000232

Michalos, A. C., & Orlando, J. A. (2006). A note on student quality of life. *Social Indicators Research*, *79*(1), 51–59. https://doi.org/10.1007/s11205-005-2404-y

Morgan, J. N. (1992). Health, work, economic status, and happiness. In N. E. Cutler, D. W. Gregg, & M. P. Lawton (Eds.), *Aging, money, and life satisfaction: Aspects of financial gerontology* (pp. 101–133). Springer.

Mugenda, O. M., Hira, T. K., & Fanslow, A. M. (1990). Assessing the causal relationship among communication, money management practices, satisfaction with financial status, and satisfaction with quality of life. *Lifestyles*, *11*(4), 343–360. https://doi.org/10.1007/bf00987345

NCFE-FLIS. (2019). *Financial literacy and inclusion in India- Final report on the survey results*. NCFE.

OECD INFE. (2011). *Measuring financial literacy: Core questionnaire in measuring financial literacy: Questionnaire and guidance notes for conducting an internationally comparable survey of financial literacy.* OECD.

Oishi, S., Diener, E. F., Lucas, R. E., & Suh, E. M. (1999). Cross-cultural variations in predictors of life satisfaction: Perspectives from needs and values. *Personality and Social Psychology Bulletin*, *25*(8), 980–990. https://doi.org/10.1177/01461672992511006

Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. *Psychological Assessment*, *5*(2), 164–172. https://doi.org/10.1037/1040-3590.5.2.164

ISSN: 1945-7774

Porter, N. M., & Garman, E. T. (1993). Testing a conceptual model of financial well-being. *Financial Counseling and Planning*, *4*, 135–165.
Ramalho, T. B., & Forte, D. (2019). Financial literacy in Brazil – do knowledge and self-confidence relate with behavior? *RAUSP Management Journal*, *54*(1), 77–95. https://doi.org/10.1108/rausp-04-2018-0008
RBI Household Finance Committee. (2017). *Indian household finance*. RBI.
Robb, C. A. (2011). Financial knowledge and credit card behavior of college students. *Journal of Family and Economic Issues*, *32*(4), 690–698. https://doi.org/10.1007/s10834-011-9259-y
Robb, C. A., & Woodyard, A. S. (2011). Financial knowledge and best practice behavior. *Journal of Financial Counseling and Planning*, *22*(1), 60–70.
Taft, M. K., Hosein, Z. Z., & Mehrizi, S. M. (2013). The relation between Financial Literacy, financial well-being and financial concerns. *International Journal of Business and Management*, *8*(11), 63–75. https://doi.org/10.5539/ijbm.v8n11p63
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
Ünal, S., & Duger, Y. S. (2015). An empirical analysis on the relation between academics' financial well-being and financial behavior. *The International Journal of Economic and Social Research*, *11*(1), 213–226.
van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. *Journal of Financial Economics*, *101*(2), 449–472. https://doi.org/10.1016/j.jfineco.2011.03.006
Vera-Toscano, E., Ateca-Amestoy, V., & Serrano-Del-Rosal, R. (2006). Building Financial Satisfaction. *Social Indicators Research*, *77*(2), 211–243. https://doi.org/10.1007/s11205-005-2614-3
Woodyard, A. S., & Robb, C. A. (2016). Consideration of financial satisfaction: What consumers know, feel and do from a financial perspective. *Journal of Financial Therapy*, *7*(2), 41–61. https://doi.org/10.4148/1944-9771.1102
Xiao, J. J. (2008). Applying behavior theories to financial behavior. In J.J. Xiao (Ed.), *Handbook of consumer finance research* (pp. 69–81). Springer.
Xiao, J. J., Ahn, S. Y., Serido, J., & Shim, S. (2014). Earlier financial literacy and later financial behavior of college students. *International Journal of Consumer Studies*, *38*(6), 593–601. https://doi.org/10.1111/ijcs.12122
Xiao, J. J., Chen, C., & Chen, F. (2014). Consumer financial capability and financial satisfaction. *Social Indicators Research*, *118*(1), 415–432. https://doi.org/10.1007/s11205-013-0414-8
Xiao, J. J., Sorhaindo, B., & Garman, E. T. (2006). Financial behaviors of consumers in credit counselling. *International Journal of Consumer Studies*, *30*(2), 108–121. https://doi.org/10.1111/j.1470-6431.2005.00455.x
Xiao, J. J., Tang, C., Serido, J., & Shim, S. (2011). Antecedents and consequences of risky credit behavior among college students: Application and extension of the theory of planned behavior. *Journal of Public Policy & Marketing*, *30*(2), 239–245. https://doi.org/10.1509/jppm.30.2.239

ISSN: 1945-7774

Xiao, J. J., Tang, C., & Shim, S. (2009). Acting for happiness: Financial behavior and life satisfaction of college students. *Social Indicators Research*, *92*(1), 53–68. https://doi.org/10.1007/s11205-008-9288-6

Yong, C.-C., Yew, S.-Y., & Wee, C.-K. (2018). Financial knowledge, attitude and behavior of young working adults in Malaysia. *Institutions and Economies*, *10*(4), 21–48.

Zimmerman, S. L. (1995). *Understanding family policy: Theories and applications* (2nd ed.). Sage.

ISSN: 1945-7774

Appendix A

Financial Behavior: Ten-item financial behavior measure.

Sl. No	Items
1.	Comparison shopped when purchasing a product or service.
2.	Paid all your bills on time.
3.	Kept a written or electronic record of your monthly expenses.
4.	Stayed within your budget or spending plan.
5.	Made only minimum payments on a loan.*
6.	Began or maintained an emergency savings fund.
7.	Saved for a long term goal such as a car, education, home, etc.
8.	Bought bonds, stocks, or mutual funds.
9.	Maintained or purchased an adequate health insurance policy.
10.	Maintained or purchased adequate life insurance.

Note. *Reverse coded.

Appendix B

Objective Financial Knowledge: Ten-item objective financial knowledge measure.

Sl. No.	Questions	Correct answer
1.	If you had Rs.100 in your saving account and the interest rate was 2 percent per year. After 3 years, the amount you would have in the account is exactly Rs.102, if you left the money to grow.	False
2.	A loan with maturity of 10 years usually requires higher monthly payments than a 20 year loan, but the total interest over the life of the loan will be lower.	True
3.	Money received today, is more valuable than the same amount of money receive tomorrow.	True
4.	The cost of living rises during the period of inflation.	True
5.	It is better to invest in single avenue for reducing the risk of losing money.	False
6.	An investment with a high return is likely to be high risk.	True
7.	It is better to have an emergency fund that covers two to six months of your expenses.	True
8.	Insurance plans provides protection against the risk of financial losses.	True
9.	It is better to purchase a life insurance policy at early age to reduce the cost of insurance.	True
10.	Delayed payments and default on your loan can make it more difficult to take out a new loan.	True

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