



Impact of financial literacy on financial well-being: a mediational role of financial self-efficacy

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Received: 24 August 2021 / Revised: 21 July 2022 / Accepted: 11 September 2022
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Abstract

The purpose of this paper is to explore the impact of financial literacy on financial well-being among the business school faculties. Both the variables (financial literacy and financial well-being) are operationalized as multi-dimensional constructs to undertake the study. Moreover, the paper also endeavored to examine the mediating role of financial self-efficacy between financial literacy and financial well-being. The paper adopts a survey by questionnaire method to gather data from 203 business school faculty members through the simple random sampling (SRS) technique. Confirmatory factor analysis was used for scale validation, and structural equation modeling was used for hypotheses testing. Mediation was tested using percentile bootstrap with a 95% confidence interval. The study found a significantly positive impact of financial literacy as well as its dimensions on financial self-efficacy and financial well-being. It was also found that financial self-efficacy partially mediates the effect of financial literacy on financial well-being. Measurement of the constructs was done on subjective measures, and the study is limited to business school faculties only. The present research findings could be employed in crafting educational programs for business schools. These programs shall guide such institutions in imparting the knowledge and skills among students regarding their personal finances in terms of savings and retirement planning. The study was focused on the business school faculties of the Jammu and Kashmir region, who are less exposed to the financial literacy programs due to factors like frequent lockdown and internet shutdowns. Moreover, it is generally witnessed that salaried class people in Jammu and Kashmir pay less attention to long-term financial planning for retirement, which makes the present study more relevant. Therefore, this study will prove beneficial to all the employees, especially the business school faculties, to understand the importance of financial literacy and its subsequent effect on financial well-being.

Keywords Financial literacy · Financial self-efficacy · Financial well-being · Financial awareness · Financial skill · Financial knowledge

Introduction

Personal financial decisions and money management have been highly valued in the present economic scenario (Sinha et al. 2021). The instability of the global economy has given rise to diverse and complex financial products, which has

brought in new challenges thereby forcing people to face these complex financial decisions (Philippas and Avdoulas 2020). As a result, the importance of personal financial management skills has amplified and, as such, has caught the attention of academia and policymakers more recently. Moreover, employees face numerous financial challenges ranging from overwhelming financial information, products, and services to financial responsibility (van Rooij et al. 2011; Agarwalla et al. 2012). Further, on account of complex financial products as well as structural reforms in social protection and pension schemes, people are forced to assume greater responsibilities to make difficult financial decisions for securing their own financial well-being (van Rooij et al. 2011). Also, with an increasing number of working-class approaching retirement and most importantly, a changing focus on individual responsibility for personal

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finances, financial literacy has evolved into a necessary skill that everyone must possess in everyday life (van Rooij et al. 2011). Consequently, this has led to the diminishing role of governments and other employers in managing finances on behalf of employees (Agarwalla et al. 2012). Additionally, the recent global financial crisis has underscored the implication of financial literacy and the need to be financially educated to make reasoned financial decisions. Further, financial literacy gives rise to the financial attitude, which results in financial well-being (Philippas and Avdoulas 2020).

In the light of the above perspective, an individual who is financially literate can plan, borrow, invest, spend more wisely and take risk mitigation measures (Attridge 2009; Atkinson and Messy 2012; Moulton et al. 2013; Grohmann et al. 2014; Lusardi and Mitchell 2017). In other words, a financially literate people are able to make sound financial decisions which are critical for financial well-being. Pahlevan Sharif et al. (2020) argued that financial literacy is required for successful financial resource management to achieve financial well-being. Chijwani (2014) supporting the previous studies state that a low degree of financial literacy has the potential to result in poor financial decisions that will adversely affect the financial condition of people. In this context, financial challenges, like personal bankruptcies, health issues, early retirement, job losses, debt repayment stress, and failing to meet savings targets, will be dealt more efficiently and smoothly by those persons who are financially prepared compared to those who are ill-prepared. Thus, financially prepared persons will achieve more financial well-being than financially ill-prepared (Kamakia et al. 2017).

Given the significance of financial literacy in the overall improvement of financial well-being, there is scarce research in the extant literature across the discipline (Bruggen et al. 2017). In this context, the present study is an attempt to expand the existing literature more broadly by considering the business school faculties. Therefore, two different approaches can be used to understand the changing dynamics of an association between financial literacy and financial well-being. First, a direct relationship between financial literacy and financial well-being can be investigated. Second, the relationship between the two can be understood indirectly through financial self-efficacy. Because of its increased predictive potential, financial self-efficacy influences individual tasks or decisions directly when it is domain-specific and to perceive favorable results indirectly that people frequently expect (Noor et al. 2020). Moreover, individually desired behavior can be attained and controlled based on financial self-efficacy in order to achieve a specific result (Bandura 1977, 2005). As a result, it is critical to have knowledge and confidence in order to make decisions (Danes and Haberman 2007).

Further, individuals with appropriate financial knowledge and information are also self-assured in their ability to complete successful deals (Noor et al. 2020). In this context, financial self-efficacy (in terms of behavioral skills) can play a vital role as an intervening factor in the relationship between financial literacy and financial well-being. Business school faculty is considered financially more aware and literate; thus, they feel more confident in their ability to make sound personal finance decisions, which in turn may lead to improved financial well-being. However, there is very little empirical evidence to back this proposition. Therefore, the present study intends to fill this gap by investigating the mediating role of financial self-efficacy in the relationship between financial literacy and financial well-being among business school faculty. The target population of the present study included business school faculties of the Jammu and Kashmir region. It is noteworthy that Jammu and Kashmir is an erstwhile state of India, which was recently downgraded to a Union Territory (UT) status post the dilution of Article 370 of the Indian Constitution in August, 2019. The borders of the UT of Jammu and Kashmir to the east are bounded with the Union Territory of Ladakh and to the South with the states of Himachal Pradesh and Punjab. Moreover, borders of Jammu and Kashmir to the southwest are bounded with Pakistan and to the northwest with the Pakistan-administered part of Kashmir. The UT of Jammu and Kashmir is fundamentally and greatly service-based economy and to some extent agriculture-oriented. Thus, analyzing the relationship between financial literacy and financial well-being is more relevant especially in the business school faculty group. This is fundamentally because this population segment is less exposed to the financial literacy programs due to certain factors such as frequent lockdown and internet shutdowns. Moreover, it is generally witnessed that salaried class people in Jammu and Kashmir pay less attention to long-term financial planning for retirement which makes the present study more relevant (Gopalakrishnan et al. 2017). Further, they rely on their savings mostly in their bank accounts and usually do not take loan from the banks. Also, they have less exposure to the investment avenues like retirement funds, pension funds, stock market investment or mutual fund investments compared to the rest of India. Finally, on account of the recent decision by the Government of India to change the status of Jammu and Kashmir from state to union territory, more centrally sponsored schemes are now available in Jammu and Kashmir. Thus, business school faculties based on their background, area of specialization and knowledge, they have been preferred over other population groups of the Jammu and Kashmir region. Therefore, this study shall prove beneficial to all the employees especially the business school



faculties to understand the importance of financial literacy and its impact on their financial well-being.

Theoretical background and literature

There is a large body of existing literature that links financial literacy with financial well-being. Hogarth (2006) and Shim et al. (2009) have established that financial literacy, financial fragility and financial behavior have an impact on financial well-being. Moreover, financial literacy fosters a positive financial attitude leading to financial well-being. These studies have established that financial literacy has a strong positive influence on financial well-being. Confirming the results of previous studies, Joo and Grable (2004) observe that increased levels of financial literacy result in financial contentment and eventually financial well-being. Xiao et al. (2014) opine that people possessing higher financial literacy are more financially satisfied. Similarly, Ali et al. (2015) postulate that financial literacy is the significant determinant of financial satisfaction which helps people in planning their spending and saving patterns. Likewise, Chu et al. (2017) state that the households that are more financially literate enjoy higher financial well-being as measured in terms of positive investment returns. Hilgert and et al. (2003) suggest that financial management skills have a strong association with financial literacy. As a result, it is not surprising that retirement planning and the growth in retirement money is a primary pathway through which financial literacy influences financial well-being. People in many countries around the world are expected to assess and organize their savings to ensure that they have sufficient funds to cover for their old age and do not outlast their wealth. In order to do that, one must possess the working knowledge of basics of mathematical finance. In this context, the studies by Lusardi and Mitchell (2005, 2007) have used basic mathematical finance concepts to evaluate whether an individual's financial literacy influence his retirement planning and consequently his financial well-being. These authors have clearly established a significant positive impact of financial literacy on financial well-being. The study of Agnew et al. (2012) corroborating the views established by these results states that people with less financial understanding are more inclined to draw out from their pension funds. These findings have been confirmed by several other studies including Alessie et al. (2011), Fornero and Monticone (2011), Klapper and Panos (2011), and Sekita (2011).

Similarly, there are other strands of extant literature which have linked financial literacy to other dimensions of financial well-being. Studies like Stango and Zinman (2009), Behrman et al. (2012), van Rooij et al. (2012), Chu et al. (2017) have demonstrated that higher wealth accumulation is a result of higher financial literacy, which in turn results

in the financial well-being of an individual. Studies like Lusardi and Tufano (2009), Santos and Abreu (2013), Tsai et al. (2016) have established that lower levels of financial literacy often result in excessive debt loads, credit problems, bankruptcy and over-indebtedness which eventually affects financial well-being negatively. Moreover, Scheresberg (2013) and Lusardi et al. (2011) have found that increased levels of financial knowledge lead to more precautionary savings and a greater ability to deal with financial emergencies. As a result, people feel more secure and thus achieve financial well-being. Additionally, several other studies have linked financial literacy to the financial costs of households. In this context, studies like Moore (2003), Lusardi and Tufano (2009), Gerardi et al. (2010), Mottola (2013), and Lusardi and Scheresberg (2013) have demonstrated that higher borrowing and mortgage costs, higher credit card costs, and increased mortgage defaults result from lower levels of financial literacy. All these financial costs and mortgage defaults are detrimental to financial well-being.

In addition to the above discussions, Bruggen et al. (2017) have observed that increased financial literacy leads to financial self-efficacy, and that is an essential factor for financial well-being. These authors identify financial self-efficacy as being able to control one's finance which reflects an individual's skill and ability to influence his/her financial matters. So, financial self-efficacy can be understood as the confidence of an individual stemming from his/her financial knowledge which eventually results in financial well-being. However, there is scanty literature available pertaining to this relationship, and it is even non-existent when viewed from the perspective of business school faculties. So, the present study will empirically analyze how the relationship between financial literacy and financial well-being is being mediated by financial self-efficacy.

On the basis of the above-discussed literature, the present study identifies financial preparedness for emergency, current money management stress and perceived financial security as constructs of financial well-being (endogenous variable), financial self-efficacy as intervening or mediating variable and financial awareness, financial experience and financial skill as constructs of financial literacy (exogenous variable).

Financial well-being

Financial well-being is conceptualized as the belief in one's ability to maintain current and predicted ideal living standards as well as financial freedom (Bruggen et al. 2017). Moreover, CFPB¹ defines financial well-being as "a state of

¹ https://files.consumerfinance.gov/f/documents/201705_cfpb_financial-well-being-scale-technical-report.pdf.



being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow them to enjoy life.” Therefore, a person who is financially insecure leads a precarious life, which has an impact on his economic mobility and as a result, a trivial financial issue might quickly escalate into a long-term financial limitation (Gennetian and Shafir 2015). The comprehensive study by Bruggen et al. (2017) presents the multifaceted, complex and dynamic construct framework of financial well-being, which calls for further investigation into different perspectives. However, on the basis of the extant literature and need of the present study, the following three constructs have been identified and analyzed vis-à-vis financial literacy and financial self-efficacy. In the following sub-sections, the identified constructs of financial well-being are operationalized in the light of existing literature.

Financial preparedness for emergency

Financial preparedness for an emergency is conceptualized as an individual’s state of being financially prepared to deal with a financial shock that may hinder him or her from carrying out routine activities (Abrantes-Braga and Veludo-de-Oliveira 2019). Therefore, people who have financial stability and the security of meeting their financial obligations are more likely to experience more financial well-being in such a situation (Hagerty and Veenhoven 2003). The concept of financial well-being suggests that individuals must have the ability to withstand a financial interruption in order to attain financial well-being (Consumer Financial Protection Bureau, 2015)². The concept of ‘financial preparedness for emergency’ captures this perspective of financial well-being and is likely to act as a driver for financial well-being. The previously stated concept of financial preparedness for an emergency is similar to what Bruggen et al. (2017) call “stimulating financially sound behavior.”

Current money management stress

Current money management stress is conceptualized as feelings of stress or worry about one’s financial situation and inability to effectively manage money in order to meet financial obligations and live the desired life (Netemeyer et al. 2018). Despite the fact that the majority of research studies reveal a negligible relationship between income and financial well-being (Ng and Diener 2014), however, there is a growing body of research linking current money management stress and financial well-being (Brown et al. 2005;

Johnson and Krueger 2006; Ruberton et al. 2016). In this context, Netemeyer et al. (2018) establish a negative relationship between the two. Therefore, people with enough cash in hand for meeting current requirements are most likely to have satisfied life (Ruberton et al. 2016). Similarly, Brown et al. (2005) observe that current money management stress in terms of excessive indebtedness results in psychological distress, a finding similar to the observation made by Ruberton et al. (2016).

Perceived financial security

Perceived financial security is understood as the individuals’ subjective appraisal of their economic resources and situations (Haines et al. 2009). It involves beliefs about having a financially secure future and achieving financial objectives (Netemeyer et al. 2018). Individual perceptions of economic problems and strains have been identified as one of the most severe chronic stresses that people face on a daily basis (Lynch et al. 2010; Kahn and Pearlin 2006). Therefore, perceived financial security captures the individuals’ level of satisfaction regarding their financial security. In this context, Netemeyer et al. (2018), while analyzing the causes and effects of perceived financial well-being, find perceived financial security one of the critical causes. The study establishes a positive relationship between the two. People who save/invest responsibly for future needs are significantly more satisfied than people with the same amount of income who save/invest less (Chancellor and Lyubomirsky 2011).

Financial literacy

Financial literacy is defined in this study as the understanding of basic economic and financial concepts required for the proper management of financial resources in order to achieve financial well-being (Hung et al. 2009). Financial well-being, on the other hand, as defined previously, is the belief in one’s ability to maintain current and predicted ideal living standards as well as financial freedom (Bruggen et al. 2017). In this context, financial literacy is believed to have a significant effect on people’s financial well-being since financially literate people are more inclined to handle their personal resources, develop effective ways to save, invest and accumulate wealth over time (Nejad and Javid 2018). Therefore, people with proper financial knowledge have the potential to make reasonable financial decisions which will lead to the achievement of financial well-being. It can be inferred that as people gain more and more financial literacy, they tend to save and invest more and may even become more skillful about making daily financial choices (Lusardi and Mitchell 2007; Lusardi and Tufano 2008). Consequently, they achieve financial self-efficacy which eventually results in higher financial well-being (Netemeyer et al. 2018).

² https://files.consumerfinance.gov/f/201511_cfpb_report_fiscal-year-2015.pdf.



On the basis of the review of extant literature and also the need for the present study, the following three constructs of financial literacy have been found to be more relevant. The following subsections present their conceptualization, their links with financial well-being and financial self-efficacy.

Financial awareness

Financial awareness is conceptualized as the general understanding of budgeting, knowledge about financial products and services offered by financial institutions, and basic concepts of finance to manage one's personal finance and achieve his/her financial goals (Beal and Delpachitra 2003; Nga et al. 2010; Remund 2010; Chowdhry and Dholakia 2020). Financial awareness, as part of financial literacy, is an essential component of financial stability since it influences financial knowledge, which in turn drives decision-making (Mason and Wilson 2000; Khan 2015; Priyadharshini 2015). The antecedents of financial awareness in terms of both general awareness and product awareness have been ascribed to demographic factors (Nga et al. 2010). So, financially aware people will make reasoned financial decisions which will boost their confidence or financial self-efficacy and eventually feel more satisfied, i.e., higher level of financial well-being (van Rooij et al. 2012; Khan 2015; Priyadharshini 2015). Moreover, Guiso and Jappelli (2005) state that individuals that lack financial awareness limits financial knowledge related to financial products and services which ultimately influences decision-making and investment in financial markets. So, people with no or limited financial awareness will result in low financial self-efficacy and thus a low level of financial well-being. Based on the above-discussed literature, the following hypothesis is formulated:

H1a Financial awareness has a significantly positive impact on financial self-efficacy.

Financial experience

Financial experience is understood as the experience of owning a financial product or sharing the experience of the same with others and is believed to improve financial literacy (Dewi et al. 2020). Moreover, financial experience is conceptualized as the engagement or participation in financial education programs that influence and improve financial literacy and eventually the financial behavior (Frijns et al. 2014). So, financial experience invariably induces an individual's motivation to become financially literate (Frijns et al. 2014). Moreover, Mandell (2008) states that financial literacy programs in high schools which incorporate stock market games have resulted in a considerable increase in financial literacy scores of 6–8 percent. This is because stock market games are considered as experimental

learning giving controlled exposure to markets without the fear of financial loss in real terms (Frijns et al. 2014). Further, financial experience and behavior have an impact on an individual's degree of financial knowledge, which leads to financial competency (Moore 2003). So, people with a great degree of financial competency by default develop financial self-efficacy which improves their financial well-being. On the basis of above discussion, the following hypothesis is proposed:

H1b Financial experience has a significantly positive impact on financial self-efficacy.

Financial skill

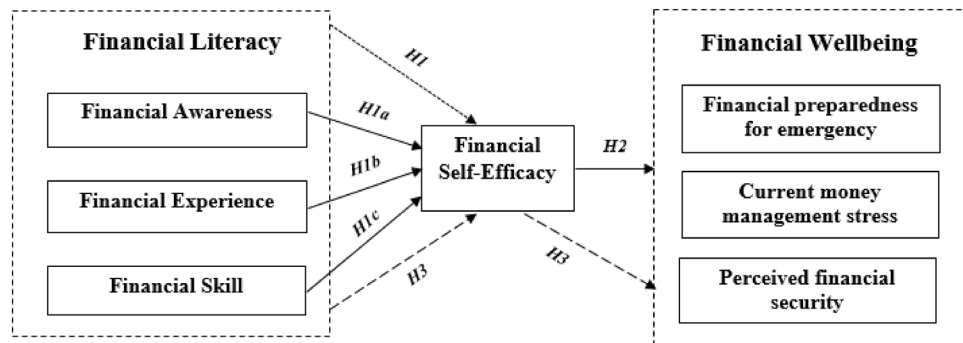
Financial skill is conceptualized as the numerical and cognitive abilities of individuals, which may encourage them to analyze information, gain new skills, and even search the market for what is available (Lusardi 2012; Mitchell and Lusardi 2015). Moreover, Priyadharshini (2015) states that financial skills refer to the individuals' ability to make information-based decisions to minimize the chances of entrapping themselves in financial complications. Further, people possessing financial skills help them to avail services like internet and mobile banking which eventually aid in the management of personal finances (Nejad and Javid 2018). Also, individuals relying on financial skills are less likely to contact customer services to resolve their issues (Nejad and Javid 2018). This indicates that financially literate people in terms of possessing necessary financial skills, make informed and effective financial decisions (Starcek and Trunk 2013; Lusardi and Mitchell 2017). Additionally, one of the underlying causes of the global financial crisis was the lack of basic financial skills in terms of the inability of understanding credit, complex financial products or investment instruments or the utilization of the existing banking system (Lusardi and Mitchell 2011). Further, budgeting, saving, borrowing, and investing are the four pre-requisites of financial literacy, which emphasize the importance of the capacity to apply knowledge and skills to manage money (Remund 2010). In this context, possessing necessary financial skills makes an individual gain financial self-efficacy which helps him/her eventually improve his/her financial well-being. On the basis of the literature discussed above, the following hypotheses are proposed:

H1c Financial skill has a significantly positive impact on financial self-efficacy.

H1 Financial literacy has a significantly positive impact on financial self-efficacy.



Fig. 1 Conceptual model



Financial self-efficacy

Financial self-efficacy is conceptualized as the confidence of an individual in his/her ability to acquire information for making effective financial decisions (Netemeyer et al. 2018). Therefore, the greater one's belief in one's financial capacity, the more favorable future results accumulate (Hadar et al. 2013; Bruggen et al. 2017). Moreover, financial self-efficacy helps in avoiding adverse financial behavior, and consequently, the financial anxiety accompanying that behavior (Hadar et al. 2013). Also, financial self-efficacy is believed to reinforce responses to challenging present events by making individuals to remain motivated to face obstacles (Kammeyer-Mueller et al. 2009). Therefore, financial self-efficacy should have positive association with the financial well-being. Further, it is believed that financial self-efficacy evokes a behavior to be disciplined to achieve long-term financial goals (Chen et al. 2001; Chowdhry and Dholakia 2016). Additionally, people with a high degree of financial self-efficacy have a belief that the financial decisions taken based on financial knowledge will eventually help them to secure their financial future (Netemeyer et al. 2018). This will resultantly enhance their perceived financial security level and will nurture their financial well-being. Based on the discussion of existing literature, the following hypotheses have been proposed:

H2 Financial Self-efficacy has a significantly positive impact on financial well-being.

H3 Self-efficacy mediates the impact of financial literacy on financial well-being.

Proposed model

The conceptual model has been developed on the basis of above-discussed literature pertaining to financial well-being and its various determinants. The present study has put forward a model that contains seven constructs in which financial well-being is depicted as endogenous variable (measured with

three constructs, namely financial preparedness for emergency, current money management stress and perceived financial security). Financial literacy is exogenous variable (measured with three constructs, namely financial awareness, financial experience and financial skill) and financial self-efficacy represents a mediating variable measured with a single construct (Fig. 1). Both financial literacy and financial well-being are second order latent constructs developed from their dimensions. Overall impact of the second-order financial literacy construct as well as the individual impact of its latent constructs was observed in the financial self-efficacy. However, financial well-being was observed as second-order latent construct only.

Materials and methods

Measures

The items measuring the various constructs have been adopted from previous research studies in the areas of financial literacy, financial self-efficacy, and financial well-being. Financial literacy is expressed in terms of three sub-dimensions viz., financial awareness, financial experience and financial skill and the items measuring these dimensions were borrowed from prior research studies of van Rooij et al. (2011) and Dewi et al. (2020). Financial self-efficacy is a unidimensional construct, and the items measuring it have been derived from the research studies of Mindra et al. (2017) and Losada-Otalora and Alkire (2019). Lastly, financial well-being is also expressed in terms of three dimensions viz., financial preparedness for an emergency, current money management stress, and perceived financial security. The items measuring these dimensions have been adopted from the research studies of Gutter and Copur (2011), Howell et al. (2013), Chatterjee et al. (2019), Abrantes-Braga and Veludo-de-Oliveira (2019). The scale items measuring different constructs undertaken in the study are shown in the Appendix I. Some of the scale items have been modified slightly in order to suit the requirements of the present study. The responses from the respondents were collected



on a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Target population, sampling process, and data collection

The target population for the study comprises business school faculties of the Jammu and Kashmir region which approximately constitute 300 faculty members (both contractual and permanent). The business school faculties have mostly been selected from higher educational institutions (running post-graduate courses) and universities in the region. The underlying reason for the selection of business school faculties as the target population stems from the fact that they are believed to possess a basic knowledge about personal finance compared to other faculties in specific and to the overall population in general. The data collection from respondents was conducted via an online survey. There are two primary reasons for adopting an online survey. Firstly, on account of the COVID-19 pandemic, all educational institutions were closed and thus offline mode could not be availed. Secondly, the online mode is considered as the efficient and most acceptable approach to data collection (Hsiao et al. 2010; Lin and Wang 2015). The study used various different digital platforms such as messenger (like WhatsApp etc.) and e-mailing services to approach the respondents by constructing an online questionnaire. The questionnaire-link was sent to the respective respondent using above-mentioned digital platforms. The contact details of the respondents were obtained from the official websites of the different institutions, friends, acquaintances and peers (in case digital address was not available).

Further, to draw a required sample from the population, an itemized sampling procedure was used. In this procedure, 5–10 respondents are enough for each item in the questionnaire to avoid sampling error (Hinkin 1995; Hair et al. 1998). Subsequently, the current questionnaire has 30 items; therefore, a sample of 150–300 is adequate for the study. Since the current study has used simple random sampling, therefore, an effort was made to reach the maximum population and a total of 203 responses were recorded which forms around 67% of the ideal sample size under itemized sampling criteria.

Sample characteristics

Table 1 presents the sample characteristics in terms of the socio-demographic features of respondents. It is presented in the table that female respondents account for the highest percentage (72.4%) and male respondents account for the lowest percentage (27.6%). Age is categorized into three groups viz., 25–35, 36–45, 46–55 and above 56 (Table 1). So, in terms of age group, the highest percentage of responses is

Table 1 Sample profile (N=203)

Sample categories	Frequency	Percentage
Gender		
Male	56	27.6
Female	147	72.4
Age (Years)		
25–35	128	63.1
36–45	51	25.1
46–55	16	7.9
Above 56	8	3.9
Specialization		
Finance	72	35.5
Human Resource (HR)	18	8.8
Information Technology (IT)	20	9.9
Marketing	86	42.4
Tourism	7	3.4
Monthly family income (INR)		
25,000 – 50,000	105	51.7
50,000 – 1,00,000	49	24.1
1,00,000 – 1,50,000	19	9.4
1,50,000 – 2,00,000	9	4.5
Above 2,00,000	21	10.3

observed for the respondents falling in the group range of 25–35 (63.1%) and the lowest percentage of responses is observed in the case of respondents falling in the category above 56 (3.9%). Further, specialization acts as the course-teaching specialization of the respondents categorized into five areas viz., finance, human resource, information technology, marketing and tourism. The respondents possessing marketing specialization account for the highest responses (42.4%) and the lowest responses are observed in the case of respondents having human resource specialization (8.8%). Moreover, income has been taken as economic variable categorized into five groups viz., 25,000 – 50,000; 50,000 – 1,00,000; 1,00,000 – 1,50,000; 1,50,000 – 2,00,000 and above 2,00,000 (Table 1). The respondents in the monthly income group of 25,000 – 50,000 account for the highest percentage of responses (51.7%) and the lowest percentage is observed for the respondents falling in the monthly income range of 1,50,000 – 2,00,000.

Pilot study

Face validity and content validity of the questionnaire were evaluated during the pilot study, which initially consisted of 30 items measuring seven constructs. Face validity and content validity were evaluated by seeking feedback from research experts, personal finance experts, and psychometric experts regarding order, content, wording, sentence structure and layout of the questionnaire (Malhotra, 2010).



Table 2 Results of confirmatory factor analysis and reliability/validity estimates

Constructs	Items	Std. Factor loadings	AVE	MSV	CR	Discriminant validity							
						FA	FE	FS	SE	FPE	CMMS	PFS	
Financial Awareness (FA)	F2	.786	.752	.038	.923	.867							
	F3	.802											
	F4	.887											
	F5	.979											
Financial Experience (FE)	FE8	.812	.779	.205	.913	.187	.883						
	FE9	.874											
	FE10	.956											
Financial Skill (FS)	FS12	.873	.670	.138	.890	.195	.334	.819					
	FS13	.845											
	FS14	.767											
	FS15	.785											
Financial Self-efficacy (FSE)	SE16	.929	.822	.049	.949	.038	.027	.221	.907				
	SE17	.912											
	SE18	.944											
	SE19	.838											
Financial Preparedness for Emergency (FPE)	FPE20	.849	.693	.138	.900	.015	.230	.372	.130	.833			
	FPE21	.824											
	FPE22	.812											
	FPE24	.845											
Current Money Management Stress (CMMS)	CMMS25	.768	.603	.114	.884	.083	.197	.319	.048	.146	.777		
	CMMS26	.781											
	CMMS27	.815											
	CMMS29	.773											
	CMMS30	.745											
Perceived Financial Security (PFS)	PFS32	.786	.654	.205	.850	.179	.453	.095	.079	.071	.338	.809	
	PFS33	.807											
	PFS34	.832											

AVE- Average Variance Extracted, MSV- Maximum Shared Squared Variance, CR- Composite Reliability; The figures diagonally represent the square root of AVE;

Model fit indices include: Chi-square/df = 1.72; CFI = 0.922; RMR = 0.090; RMSEA = 0.074; Source: AMOS Output

The questionnaire was revised in light of various suggestions received from the experts. The expert evaluation of the questionnaire resulted in the omission of three items namely FA6, FE11 and CMMS28. Inputs regarding the content of the questionnaire were also collected from respondents, resulting in minor changes in few questions. After the qualitative evaluation, empirical testing of the questionnaire was carried out by drawing a sample of 63 respondents from the population. Respondents were approached through online mode only by sending email/instant messages that contain a link to a questionnaire. In order to validate the instrument, confirmatory factor analysis (CFA) was conducted on the data set. CFA results are discussed in the next section.

Data analysis

Confirmatory factor analysis (CFA)

A measurement model was developed in AMOS 22 and CFA was applied to the pilot study data of 63 respondents to evaluate its reliability and validity. CFA results were gauged on the basis of model fit indices, standardized CFA loadings, composite reliability, average variance extracted and discriminant validity (Hair et al. 1998). MLE (maximum likelihood estimation) has been employed to conduct CFA for the 7 constructs designated in the study. The initial model fit indices were observed to be $\chi^2/df = 1.88$; CFI = 0.842; RMR = 0.096; RMSEA = 0.094 (Hair et al. 2003). These model fit indices were slightly out of the acceptable range because of the poor loading of some items (below the threshold of 0.70). The items FA1, FE7,



Fig. 2 (SEM – I). Model fit indices include: Chi-square/df = 1.56; CFI = 0.910; RMR = 0.069; RMSEA = 0.053; Source: AMOS Output

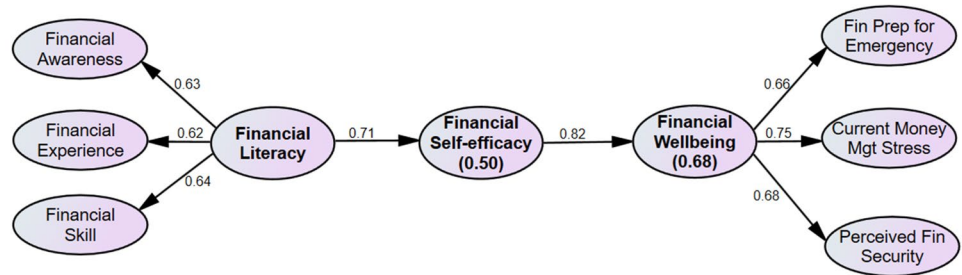
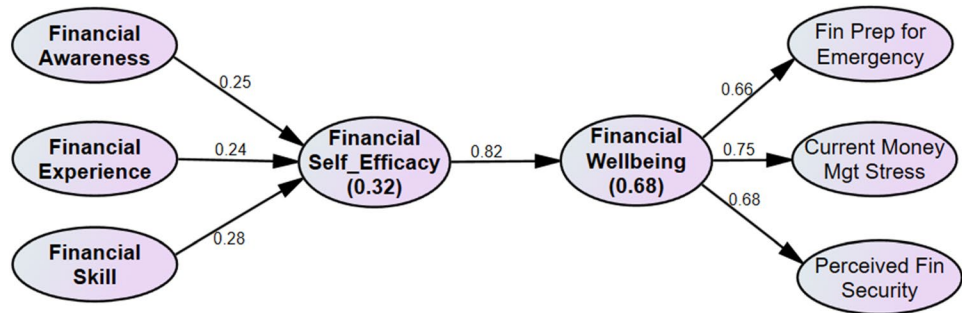


Fig. 3 (SEM – II). Model fit indices include: Chi-square/df = 1.57; CFI = 0.910; RMR = 0.068; RMSEA = 0.053; Source: AMOS Output



FPE23, CMMS31, and PFS35 were dropped on the ground of factor loading below the standard threshold of 0.70 (Byrne 2006). These items were successively removed from the CFA model, and model fitness was rechecked at each dropout. It took five iterations to clean the CFA model from items with poor loadings. The model fit indices after dropping all the poorly loaded items were found to be $\chi^2/df = 1.72$ ($\chi^2 = 527.54$ & $df = 303$); CFI = 0.922; RMR = 0.090; RMSEA = 0.074 (appended as footnote to Table 2).

The reliability and validity of the constructs were determined through composite reliability (CR), convergent validity and discriminant validity. CR was employed to determine the internal consistency, and its value was found to be above the acceptable threshold of 0.70 for all the 7 constructs as shown in Table 2 (Nunnally and Bernstein 1994). Convergent validity was established through AVE, which was found to be above the acceptable limit of 0.50 for all constructs (Table 2). Discriminant validity was determined by using Fornell–Larcker’s criterion (Fornell and Larcker 1981; Bagozzi and Yi 1988), which depicts that correlation among the different pairs of constructs should be lower than square root of AVE (Hair et al. 2010). The results of discriminant validity are presented in Table 2. It is depicted from the Table that the inter-construct correlation coefficient of all the constructs is below the square root of AVE (diagonally in bold figures), thus providing evidence for DV (Hair et al. 2010).

Table 3 Results of SEM

Hypotheses	Paths	Std. reg. estimates	Critical ratios	Decision	R ²
H1	FL - FSE	0.71	4.47*	Supported	0.50
H1a	FA - FSE	0.25	2.69*	Supported	0.32
H1b	FE - FSE	0.24	2.42*	Supported	
H1c	FS - FSE	0.28	3.09*	Supported	
H2	SE - FWB	0.82	5.83*	Supported	0.68

*Indicates significant at 0.05; FL- Financial Literacy; FSE- Financial Self-efficacy; FA- Financial Awareness; FE- Financial Experience; FS- Financial Skill; FWB- Financial Well-being Source: AMOS Output

Results and discussion

SEM

The proposed research framework has been gauged by developing a structural model in AMOS graphics and was subsequently performed on the final data set of 203 through the MLE approach. To accomplish the objective of the study and test the various hypotheses, two structural models were developed. In the first structural model, financial literacy was treated as a higher-order latent construct (consisting of 3 dimensions, namely financial experience, financial awareness, and financial skill) and its impact was determined on financial self-efficacy and financial



Table 4 Mediation analysis results

S. No	Relationships	Direct estimate	Indirect estimate	Total estimate	Results
	FL - FWB	0.887*			
	FSE - FWB	0.768*			
H3	FL - SE - FWB	0.643*	0.234*	0.877*	Partial mediation

*Indicates significant at 0.05; FL- Financial Literacy; FWB- Financial Well-being; FSE- Financial Self-efficacy Source: AMOS Output

well-being (Fig. 2). The model fit indices of the first structural model were found to be in the acceptable ranges indicating that data fits the model ($\chi^2/df = 1.56$ ($\chi^2 = 495.5$ & $df = 316$); CFI=0.910; RMR=0.069; RMSEA=0.053). In the second structural model, impact of the dimensions of financial literacy (financial awareness, financial experience and financial skill) was directly determined on financial self-efficacy and financial well-being (Fig. 3). The model fit indices of the second structural model were found to be in the acceptable ranges indicating that data fits the model ($\chi^2/df = 1.57$ ($\chi^2 = 494$ & $df = 314$); CFI=0.910; RMR=0.068; RMSEA=0.053).

The SEM results (of both the structural models) presented in Table 3 show standardized path estimates, critical ratios and R^2 estimates. It is depicted from the table that financial literacy has a significant impact on financial self-efficacy. Thus, hypothesis H1 is supported with standardized regression estimates (SRE) of 0.71 (critical ratio of 4.47 significant at 0.05). Further, the results illustrate that the R^2 of 0.50 (shown in brackets in Fig. 2) indicates that financial literacy explains 50 percent of the variance in financial self-efficacy. Table 3 results reveal that financial awareness, financial experience and financial skill significantly impact financial self-efficacy. Therefore, hypotheses H1a, H1b and H1c are supported with SRE of 0.25 (critical ratio of 2.69), 0.24 (critical ratio of 2.42); and 0.28 (critical ratio of 3.09), respectively. From the SEM results, it is observed that financial awareness has the highest effect among the three constructs of financial literacy. The underlying reason for such highest effect stems from the fact that unless an individual becomes aware of personal financial matters, it is difficult to have proper knowledge about such things and, as such, will not be able to develop relevant skills. Moreover, financial skill is seen to have a higher effect than financial experience vis-à-vis financial self-efficacy, which points to the fact that more skillful people feel more confident compared to those who only have financial experience. This means that financial experience acts only as an impetus for financially literate people (Frijns et al. 2014). However, developing skills out of such experience is more important because it is a financial skill that ultimately facilitates one's sail into increased confidence (Nejad and Javed 2018). Therefore, individuals

with greater financial skills are more likely to make effective financial decisions (Starcek and Trunk 2013; Lusardi and Mitchell 2017). This indicates that business school faculties that possess higher financial knowledge in terms of financial awareness, financial experience and financial skill are more likely to feel confident about that and, as such, achieve higher financial self-efficacy.

The results further reveal that R-square value of 0.32 (shown in brackets in Fig. 3) indicates that financial awareness, financial experience and financial skill explain 32 percent of the variance in financial self-efficacy. Further Table 3 illustrates that financial self-efficacy has a significant impact on financial well-being. Thus, hypothesis H2 is supported with an SRE of 0.82 (critical ratio of 5.83). This is explained by the fact that people with higher financial self-efficacy elicit a response to self-discipline, which helps to overcome challenges and eventually accomplishes long-term financial goals (Kammeyer-Mueller et al. 2009; Chen et al. 2001; Chowdhry and Dholakia 2016). Moreover, financial self-efficacy induces a strong belief in an individual regarding financial decisions, when based on sound financial knowledge, will help to secure future financially (Netemeyer et al. 2018). Consequently, an improvement is evidenced in one's perceived financial security which gets manifested into improved financial well-being. In this context, business school faculties who have attained greater financial self-efficacy feel more motivated and are able to make sound personal finance decisions like retirement planning, cash management, debt management. Such people are more satisfied and result in their increased financial well-being. It is noteworthy that financial well-being becomes more important when an individual belonging to the Jammu and Kashmir region is facing numerous challenges which threaten his well-being. The challenges in the form of political and security situation in the said region have been volatile on account of hostilities between three nuclear-armed countries including India, Pakistan and China. The results further reveal that R-square value 0.68 (shown in brackets in Fig. 3) indicates that financial self-efficacy explains 68 percent of the variance in financial well-being.



Mediation analysis

Mediation hypothesis H3 was tested by employing one of the empirical approaches given by Nitzl et al. (2016). According to this approach, mediation analysis is performed using percentile bootstrap confidence interval method (with 3000 bootstraps resample) to obtain standardized direct, indirect and total effects at 95 percent CI in AMOS (Preacher and Hayes 2008; Hayes and Scharkow 2013). The results obtained are shown in Table 4 which reveal that the direct relationship between financial literacy & financial well-being and financial self-efficacy & financial well-being is significant. However, in the presence of financial self-efficacy (mediator), the direct effects are still significant and the ratio of indirect to total effects is less than 50 percent. These results provide strong support to our predicted relationship between financial literacy and financial well-being both directly and indirectly through the mediation effect of financial self-efficacy. From the results, it is deciphered that financial literacy is an underlying cause of financial well-being as the highest direct effect estimate was reported. These findings are consistent with the findings of Lusardi and Mitchell (2007) and Lusardi and Mitchell (2008). Thus, an individual's financial knowledge does not alone guarantee him improved financial well-being; instead, an induced behavior manifested in greater self-belief about managing personal finances is also evidenced (Netemeyer et al. 2018). It is important to note that the overall sample population of business school faculties (which include finance, marketing, human resource, information technology and tourism) validate the results. One possible and important reason for such validation seems to be that nowadays faculties undergo FDPs (faculty development programs) wherein not only subject-related issues are discussed rather issues pertaining to personal finance are also highlighted. Thus, on the basis of direct, indirect and total effects, given in Table 4, hypothesis H3 is partially supported.

Contribution and implications

The present study contributes to existing research on determinants of financial well-being in multiple ways. While the prior research works focused on the students, women, and other salaried class people, this study is exclusively related to business school faculties, virtually non-existent in the literature. Moreover, the present study analyzes the impact of financial literacy on the financial well-being of business school faculties through a mediator, i.e., financial self-efficacy. Financial self-efficacy is seen to develop

self-assuredness in an individual which can enhance personal finance management skills. In addition to financial literacy, financial self-efficacy plays an important role in magnifying the financial well-being of an individual. This finding has not received much attention in the existing literature. Finally, the present study employs subjective measures for all the constructs instead of objective measures. The underlying reason for such a choice was necessitated by the fact that subjective measures address the inherent limitations of objective measures. They provide insight into how the individuals perceive financial literacy, financial self-efficacy and perceived impact on financial well-being from an individual's perspective.

The findings of the study have implications for policy-makers, educational institution administrators, financial analysts, financial planners, and most importantly the business school faculties themselves. The findings could be employed to develop financial education programs that will help business school faculties to impart the knowledge and skills to manage their personal finances in terms of savings and retirement planning and thus improve their overall financial well-being. Moreover, people with low levels of financial literacy are most vulnerable to online frauds, internet phishing scams and financial cybercrimes. All such activities are aimed at credit card thefts, capturing user credentials and gaining illegal access to bank accounts of individuals. So, business school faculties can disseminate the financial knowledge to other people, who can become financially literate, which can help them to protect themselves from such frauds. Additionally, students who are the beneficiaries of the educational loans have little experience in servicing such loans properly. The dissemination of financial knowledge from business school faculties to students has the potential to become a life-long pursuit for financial education. Thus, students, by virtue of being financially literate, can develop personal financial management skills which can increase their financial well-being.

The mediating role of financial self-efficacy has been partially established in the study which also holds important implications for managers and policymakers. Individuals that possess a greater sense of self-assuredness in their personal finance management skills are more likely to deal with any financial hardships as a 'challenge to be mastered, rather than threats to be avoided.' In this context, individuals that have a greater sense of self-belief in their capabilities have more appetite for taking risks and have stronger likelihood of making stock market investments or taking loans. However, those individuals that are low on financial self-efficacy exhibit financially risk-averse behavior and are more likely to go for a savings account. Apart from financial literacy that has an important implication for managers and policymakers



for financial programs, financial self-efficacy in itself has an important role in personal finance behavior. The managers and policymakers can use the results related to mediating role of financial self-efficacy to devise their strategies and policies for better outcomes.

Limitations and directions for future research

There are certain limitations of the present study which deserve attention and could potentially become areas for future research. First, the survey sample is restricted to business school faculties of the Jammu and Kashmir region only; thus, future researchers need to be cautious while generalizing the results of this study. Moreover, the business schools operate in an environment where there is constant threat to their personal well-being, which emanates from the political and security instability of the region. In order to increase the generalizability of the current theme, more coverage to the sample should be given beyond business school faculties by considering other adult population. As depicted from the R-square results, financial self-efficacy and financial well-being is only 32 and 68 percent explained by financial literacy, respectively. Therefore, there is scope for more factors that could explain financial self-efficacy and financial well-being of an individual. Finally, the present has used financial self-efficacy as a unidimensional construct. Thus, future research could identify more dimensions for financial self-efficacy so that policies to improve financial well-being could be more effectively designed and implemented.

Conclusion

In an economic environment characterized by rapid changes with increased financial uncertainty, the ability to make effective and sound personal financial decisions has gained importance. An individual who is financially more literate has the ability to spend wisely and plan to secure future financial needs to attain improved financial well-being. In this context, the present study attempted to evaluate the impact of financial literacy on financial well-being. Although several studies have been conducted across different sections of the society including adults, students and other salaried class people. However, studies on business school faculties are non-existent in the extant literature and, as such, make the contribution of the present study more vital and relevant. The study has used structure equation modelling (SEM) to test the proposed hypotheses. The SEM results reveal that

business school faculties that are financially literate in terms of financial awareness, financial experience and financial skill are more likely to have financial self-efficacy which helps in improving their financial well-being. Further, the results of mediation analysis depict that financial self-efficacy partially mediates the impact of financial literacy on financial well-being. It is deciphered from the findings of the present study that people not only from finance backgrounds have shown positive results regarding financial well-being but people from other disciplines also have given a positive response. Also, the present is more relevant in the context of the Jammu and Kashmir region as people belonging to this region always have a looming threat to their well-being. Such threat particularly emanates from political and security instability on account of hostilities between the nuclear-armed countries surrounding the region.

Appendix I

Financial literacy

Financial awareness

- FA1- I am aware of the interest rates being charged by banks and other financial institutions.
- FA2- I am familiar with the fundamentals of personal finance management.
- FA3- I often make a list before shopping.
- FA4- I always compare financial products before making a decision.
- FA5- I often gather information related to financial issues.
- FA6- I am always willing to discuss financial issues.

Financial experience

- FE7- I always hold emergency savings.
- FE8- I always maintain financial records.
- FE9- I have an experience in managing personal assets.
- FE10- I have an investing experience in stock market.
- FE11- I plan how I will spend and invest my money.

Financial Skills

- FS12- I evaluate personal financial statement on regular basis.
- FS13- I manage risks through purchasing insurance.
- FS14- I regularly evaluate my debt position.
- FS15- I always try to diversify my investments.



Financial self-efficacy

- SE16- I am confident in my ability to manage my funds.
- SE17- I can plan for the future from the money saved in my bank.
- SE18- I possess the potential to take/raise loan from the bank.
- SE19- I use financial skills efficiently to manage my financial goals.

Financial well-being

Financial preparedness for emergency

- FPE20- If I lose my job today, I will be able to cover my expenses until I find a new one.
- FPE21- I regularly manage to save some money from my income.
- FPE22- I have been able to save enough money to secure my future life.
- FPE23- I believe I would never have desirable things in my life due to my bad financial condition.
- FPE24- I consider credit limits as extra cash (as cash buffer) whenever I plan my budget.

Current money management stress

- CMMS25- My finances have complete power over my life.
- CMMS26- Whenever I think I am in charge of my finances, something happens to throw me off track.
- CMMS27- I am not able to enjoy life on account of being too much preoccupied with my money.
- CMMS28- I am frequently concerned about my personal finances in general.
- CMMS29- I am worried about meeting my normal monthly living expenses.
- CMMS30- I have moderate level of financial stress today.
- CMMS31- I am satisfied with my current financial situation.

Perceived financial security

- PFS32- I frequently borrow money to pay off my debts.
- PFS33- I plan to secure my future financially.
- PFS34- The financial goals that have set will be accomplished.
- PFS35- I am not worried about my current financial situation.

Declarations

Conflict of interest The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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