

Influential Behavioral Factors on Retirement Planning Behavior: The Case of Malaysia

Fateme Kimiyagahlam,^a Meysam Safari,^b and Shaheen Mansori^c

The main objective of this research is to identify the behavioral factors which have an effect on retirement planning behavior. The study applies the theory of planned behavior and time perspective theory as a basis for the analysis of data by the structural equation modeling technique from a sample of 900 adults in Kelang Valley, Malaysia. The results of structural equation modeling show that financial literacy, propensity to plan, and future orientation are directly associated with retirement planning behavior. The saving attitude is also found to partially mediate these relationships. However, family education and materialism are not associated with retirement planning. Implications for researchers and practitioners are presented.

Keywords: family education, future orientation, financial literacy, materialism, partial least squares, propensity to plan, retirement planning, saving attitude

In the current study, retirement is the point in time when an employee stops working because they reach the standard retirement age, which is defined by a country's tax laws and/or state old-age pension rules and is 60 years old in Malaysia. Many working age people are concerned about whether they would fund their so-called golden years because of poor saving rates, rising healthcare costs, and high life expectancy. HSBC Global report (2015) showed many Malaysians were worried about running out of money (81%) and about having enough money to live on day-to-day (88%) during their retirement. Planning is one of the effective ways to facilitate a more successful transition into retirement (Petkoska & Earl, 2009). Research, along with practical interventions, has concentrated on the financial domain of retirement planning, due to wide range of expenses in different domains such as health, leisure, and work (Asebedo & Seay, 2014). Therefore, individuals cannot think of retirement as just resting in the "golden years." Instead, they must plan and save far in advance of retirement to be able to be financially comfortable during those years.

Employees Provident Fund (EPF) is the Malaysian government agency that manages savings plans and retirement planning for private industry workers. The majority of the workforces in Malaysia are employed by private sectors (EPF, 2016). The EPF annual report in 2015 disclosed that many Malaysians have insufficient retirement savings in their pension funds as they reach 55, compelling them to prolong their working years. It is also known that 50% of retirees exhaust their EPF savings within 5 years. In fact, many Malaysians rely on the little nest egg accumulated through mandatory contributions to the EPF, which may not necessarily be enough for their retirement (Hassan, Ahmad, Rahim, Zainuddin, & Merican, 2015). Indeed, saving over a lifetime for retirement is a relatively new concept for Malaysians. A key pillar in financing a retirement plan in Malaysia is family, especially children (Tan, 2015). Nevertheless, this reliance has undermined in a course of time because of industrialization, urbanization, attitudes, values, and expectations, which leads to a more individualistic lifestyle (Asher, 2002).

^aPh.D. Candidate, Institute of graduate study (IGS), SEGi University, 9 Jalan Teknologi, Taman Sains Selangor, PJU 5, Kota Damansara, PJ, Malaysia. E-mail: fateme.kimiya@gmail.com

^bAssociate Professor, Graduate study of Business Department (GSB), SEGi University, 9 Jalan Teknologi, Taman Sains Selangor, PJU 5, Kota Damansara, PJ, Malaysia. E-mail: meysam.safari@gmail.com

^cAssociate Professor, Graduate study of Business Department, INTI International University, Persiaran Perdana BBN, Putra Nilai, 71800 Nilai, Negeri Sembilan, Malaysia. E-mail: Shaheen.mansori@gmail.com

Shifting the pension scheme from a Defined Benefit (DB) plan toward a Defined Contribution (DC) scheme in Malaysia has pushed all retirement planning risks—poor investment choices, inadequate saving, and outliving savings—to untrained individuals, who often do not have time or knowledge to plan for their retirement (Andonov, Bauer, & Cremers, 2017). Together with increasing longevity, this substitution of DB plans with DC plans has made social security arrangements less certain, and compounded by increasing healthcare costs.

Many researchers found that inadequate personal retirement planning stems from behavioral factors like economic knowledge, risk attitude, time preferences, confidence, and saving behavior (Hanna, Waller, & Finke, 2011; Mitchell & Utkus, 2003; Tanaka, Camerer, & Nguyen, 2010; Van Rooij, Lusardi, & Alessie, 2011). However, influential behavioral factors on personal retirement planning are still only partially understood. In fact, the behavioral factors are postulated to be the underlying influence of performing the behavior (Ajzen, 1985). According to the theory of planned behavior, the probability that a behavior will occur is dependent on the effect of behavioral factors on an individual to engage in that behavior (Sharma, Chrisman, & Chua, 2003). Most studies in Malaysia focus on retirement systems rather than on personal planning for retirement (Tolos, Wang, Zhang, & Shand, 2014). The objective of this study is to examine the influence of behavioral factors on retirement planning behavior through an appropriate measurement scale and theory. This study examines five significant variables—financial literacy, family education, propensity to plan, materialism, and future orientation—based on a large body of literature. This study tries to find the behavioral factors that might affect self-control ability that in turn would lead to performing the retirement planning behavior. Moreover, the relationship between these behavioral variables (financial literacy, family education, propensity to plan, materialism, and future orientation) and retirement planning behavior through saving attitude would be supported by the theory of planned behavior and future time perspective theory. The current study was conducted among Malaysians who are residents in Kelang Valley.

Literature Review

Retirement Planning

Personal retirement planning is not a compulsory, it is a personal option for future preparation. Unfortunately, many are

not ready for this (Ng, Tay, Tan, & Lim, 2011). There are many reasons for keeping individual's away from planning (DeVaney, 1995). Most people think retirement planning is important only when they are nearing retirement, or if they are young and too far away to think about the retirement years. However, even if they start to save for retirement, it is still not enough (Martin, Guillemette, & Browning, 2016).

Everyone has self-control problems such as when individuals tend to behave in one manner but end up behaving in another manner (O'Donoghue & Rabin, 2001). This is because individuals are likely to pursue immediate gratification with ignorance in the long run consequence. Self-regulation has clear implications for long-term financial decision making. Consumers must restrain themselves and resist temptation to spend money in the short-term in order to maximize their financial well-being in the long-term (Howlett, Kees, & Kemp, 2008).

Planning for retirement is difficult, few do it and fewer still think they get it right (Fernandes, Lynch, & Netemeyer, 2014). For developing a retirement plan, a series of information is required. There is evidence on the relationship between financial literacy and retirement planning (Bucher-Koenen & Lusardi, 2011; Sekita, 2011). Studies of personality revealed that certain traits (such as future orientation and propensity to plan) have a relationship with planning and saving (Bearden & Haws, 2012; Friedman & Scholnick, 2014; Yang & Devaney, 2011). Over 40% of successful planners use formal means (i.e., retirement calculators, retirement seminars, or financial experts), while simple planners—some of whom tried and failed—have more tendency to rely on less formal approaches (talking with family or friends; Grable & Joo, 1999).

There is a noteworthy shortcoming in the measurement of retirement planning (Earl, Bednall, & Muratore, 2015). In spite of the increasing evidence for the viability of retirement planning, the literature is overwhelmed by broad and questionable measurement scales (Elder & Rudolph, 1999; Noone, Stephens, & Alpass, 2010; Quick & Moen, 1998).

Saving Attitude

Some factors have significant relationship with individual's preparedness and capability for retirement saving (Joo & Grable, 2005). These factors can be classified into three groups: environmental influences, individual differences,

and psychological process factors (Engel, Blackwell, & Miniard, 1990).

Parents have vital roles in instructing their children for having appropriate behavior in all aspects of life including financial management. The results by Ward, Wackman, and Wartella (1977) revealed that by prescriptive and proscriptive financial advice, children's attitudes toward saving could be developed. They pointed out that if saving was important for parents, their children could adopt this behavior and have it become meaningful for them.

Self-control is an indisputably important factor in regards to saving outcomes (Kennickell, Starr-McCluer, & Sunden, 1997). No matter how much importance individuals attach to saving, if they have difficulties withstanding short-term temptation and do not find ways to constrain their consumption behavior, they will not be able to save (Van Rooij et al., 2011).

Family Education

Parents with money management skills influenced children's financial behavior in adulthood and this parent-child relationship is aligned with previous research in finance. Generally, the financial outlook of children is linked to their parents' attitude. In turn, attitudes are predictors of sound financial behavior. The interesting result of the research by Webley and Nyhus (2006) was that parents' behavior had a major association with children's attitude than their behavior. They demonstrated that parental behavior (such as talking about monetary matters with children) and parental orientation (conscientiousness and future orientation) had a weak effect on children's financial behavior. The influence of parental financial socialization is persistent with age, however, the propensity to save declined at an elder age (Buccioli & Veronesi, 2014).

Individuals whose parents did not establish high self-control in childhood suffer a long lasting deficit that puts them in unfavorable outcomes. While parents ignore developing the ability to defer gratification in their children, in the future their children would encounter problems in financial decision making (Perrone, Sullivan, Pratt, & Margaryan, 2004).

Future Orientation

The future time perspective is about measuring the level which individual's emphasis on future rather than present

or past (Howlett et al., 2008). Rabinovich, Morton, and Postmes (2010) determined that the future time perspective might influence individuals' attitudes toward a particular behavior. Individuals who perceived the future as closer are more likely to be prepared for saving and planning behavior. In a similar vein, Jacobs-Lawson and Hershey (2005) found the individuals with a high score of future time perspective would be more likely to set objectives and consequently, better in developing a plan for their retirement. However, there are contradictory views regarding the effect of future time perspective and planning. Petkoska and Earl (2009) showed that future time perspective was not a predictor of planning across any of the planning domains.

Financial Literacy

Financial literacy is normally seen as a particular sort of consumer's skill regarding how individuals deals with their related financial issues effectively or personal finance-specific form of human capital (Alba & Hutchinson, 1987). Several studies confirmed a high correlation between financial literacy and a set of financial behaviors related to saving, wealth, and portfolio choice (Bernheim, 1995, 1998; Lusardi & Mitchell, 2011). Nevertheless, some recent research is in contradiction with previous studies about the effects of financial literacy (Adams & Rau, 2011; Xiao, & O'Neill, 2016; Xiao, & Porto, 2017). Fernandes et al. (2014) conducted a meta-analysis of the relationship between financial literacy, financial education, and financial behaviors in 168 papers covering 201 prior studies. They found that interventions to improve financial literacy explain only 0.1% of the variance in financial behaviors, with weaker effects in low-income samples. Also, the findings from the study by Mandell and Klein (2009) cast some doubt on the ability of a high school course in personal financial management, as currently administered, to significantly improve financial decision making later in life.

Materialism

Garoarsdottir and Dittmar (2012) found that materialistic individuals have worse money-management skills and a greater tendency toward compulsive buying and spending. Indeed, the materialistic attitude has an association that stresses the importance of being a consumer rather than a saver (Belk, 1985). Hershey and Mowen (2000) found that there is an indirect relationship between materialism and financial readiness. In the same line, Payne, Yorgason, and

Dew (2014) showed the indirect association between materialism and planning for retirement. It seems that the only relationship between materialism and saving for retirement is through financial strain.

Propensity to Plan

Human behavior influential models embody most behavior as planned and under the control of conscious intentions (Ajzen & Fishbein, 1980). Research showed that developing plans has a positive effect on self-control (Gollwitzer & Oettingen, 2007; Sniehotta, Scholz, & Schwarzer, 2005). It will help the person to be more organized and well prepared before encountering a task (Kreidler & Kreidler, 1987). Khwaja, Silverman, Sloan, and Wang (2007) studied the effect of planning skills in different decision-making areas. The results of their study revealed that having planning skills for a particular task cannot cover all dimensions of different decision making. In other words, propensity to plan is not an all-purpose skill.

Relevant Theories

Theory of Planned Behavior. This theory is an extension of the theory of reasoned behavior (Ajzen, 1991). The aim of this theory is to forecast and understand human behavior. The planned behavior theory states that the positive or negative attitude toward actual behavior, subjective norms, and perceived behavioral controls are three factors affecting an individual's intention. On the other hand, behavioral intention forms an individual's behavior.

Future Time Perspective Theory. The fundamental aspect of the psychological structure that arises from the cognitive procedure is the time perspective that divides the experience of human into past, present, and the future (Mischel, Shoda, & Rodriguez, 1989). Indeed, the essential concept of time perspective theory is the effects of time on individual's actions. An individual's cognitive capability to consider both immediate and long-term outcomes of assigning the job in the distant future would be explained by the future time perspective theory (Andriessen, Phalet, & Lens, 2006).

Conceptual Framework and Hypotheses

According to the theory of planned behavior, one of the key elements for performing the behavior is attitude. However, the relationship (or lack thereof) between attitudes and behavior has been the topic of considerable debate (Wicker, 1969). Fishbein (1967) conducted a meta-analysis

of 83 attitude-behavior studies, which revealed that attitudes significantly predict future behavior. Based on the broad literature review, this study proposes saving attitude as a significant element in implementing retirement planning behavior. Moreover, the current research intends to test the direct relationship between attitude and behavior. In other words, it attempts to expand the theory of planned behavior according to the outcomes of Fishbein (1967). The next step is finding the influential factors on attitude formation. Schiffman and Kanuk (2007) showed that family/friends, personal experiences, media/environment, knowledge, and personal/behavioral factors would be the key elements in forming the attitude toward a behavior. According to the objective of this study in personal retirement planning, among these factors current research examines the effect of family, learning and behavioral factors on retirement planning behavior. The time perspective theory suggests that individual's outlook has a strong effect on the way they perceive all components of human behavior (Coudin & Lima, 2011). Indeed, individual propensities to regularly emphasize on a particular period might have a dynamic influence on important decisions. This study looks for behavioral factors that affect the self-regulatory skill of individuals. Along with this, inconsistency in the results of different studies provokes current research to select the significant behavioral factors influencing saving attitude and in turn, retirement planning behavior. Family education, future orientation, materialism, financial literacy, and propensity to plan are proposed for the framework of this study. Furthermore, investigating the mediator role of saving attitude in the relationship of behavioral factors and retirement planning behavior is another objective of this study. Thus, by supporting an extensive review of the literature and above theories, this study includes 10 hypotheses that were developed from research questions. Hypotheses H1, H2, H3, H4, and H5 test the direct relationships between family education, future orientation, financial literacy, materialism, and propensity to plan with retirement planning. Hypotheses (H6–H10) propose the mediating role of saving attitude in the direct relationship between the proposed behavioral variables and retirement planning (Figure 1 and Table 1).

Methodology

Data

This study attempted to examine the hypotheses with positivist ontology, empirical epistemology, and quantitative

Figure 1. Research framework.

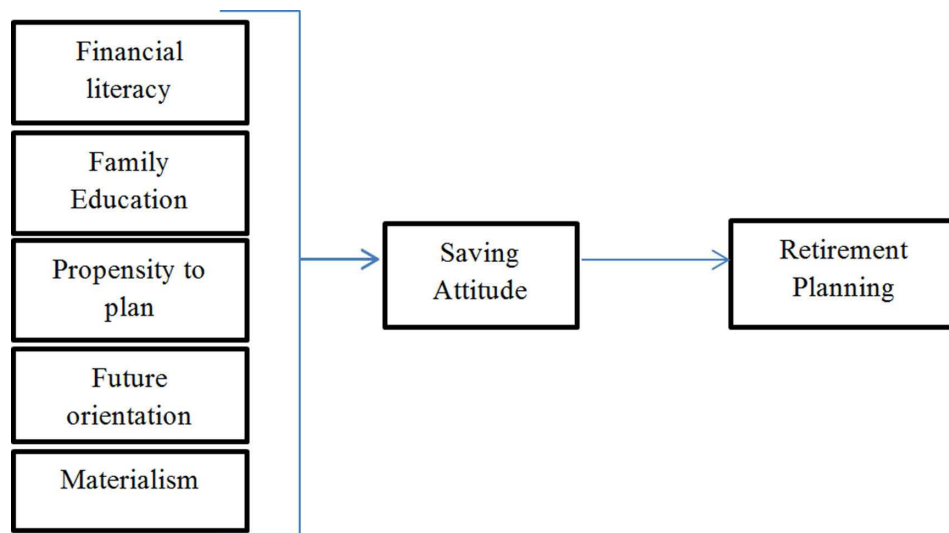


TABLE 1. Study’s Hypotheses

- H.1.1:* There is a significant relationship between family education and retirement planning.
H.1.2: There is a significant relationship between future orientation and retirement planning.
H.1.3: There is a significant relationship between financial literacy and retirement planning.
H.1.4: There is a significant relationship between materialism and retirement planning.
H.1.5: There is a significant relationship between propensity to plan and retirement planning.
H.2.1: Saving attitude significantly mediates the relationship between family education and retirement planning.
H.2.2: Saving attitude significantly mediates the relationship between future orientation and retirement planning.
H.2.3: Saving attitude significantly mediates the relationship between financial literacy and retirement planning.
H.2.4: Saving attitude mediates significantly the relationship between materialism and retirement planning.
H.2.5: Saving attitude significantly mediates the relationship between propensity to plan and retirement planning.

methodology, using a survey to obtain the relevant primary information. Under the positivist paradigm, it is theoretically “essential” to follow probability sampling. However, there could be certain situations that may constrain the study from collecting data via probability sampling (Visser, Krosnick, & Lavrakas, 2000). In the current study, the key barrier was accessing a list of individuals, which is not provided in any formal portal. Indeed, there is no available sample frame. As a result, the survey was designed using convenience—quota nonprobability sampling. In addition, the reasons for applying a nonprobability technique were time, cost, and feasibility. This study tried to control uncertainty and bias by taking some steps such as control, assessing the sample’s representativeness, adding diversity, and using more data (Skowronek & Duerr, 2009). The target population of this study is Malaysian people,

which was 31.7 million in 2016. Among Malaysian citizens, ethnic Malay comprised the highest percentage with 67%, followed by Chinese (25%), Indian (7%), and others (1%). Also, 54% of them were male and 46% were female. A questionnaire survey was conducted with a sample size of about 900 Malaysians residing in the Klang Valley area where the population was about 9 million in 2016. About 40% of the nation’s gross domestic product can be related to this area. The Klang Valley was selected because people in this area represent the demographics of the country. Accordingly, questionnaires were distributed to Malaysians at numerous locations such as shopping malls, local markets, public libraries, restaurants, and other “heavy” traffic areas. Nine hundred questionnaires were distributed by research assistants to the individuals with the following criteria

- Coverage of Malaysian individuals residing in the Klang Valley;
- Only one member of each family, preferably the head of the family would be responsible for answering the questionnaire; and
- All working Malaysian adults age 18 years and above would be involved in this survey (Those over 18 years old are targeted as this group is about to start academic education and the seeking for the job).

The response rate was 66.6% in this research. In the current study, the missing values of an indicator variable were replaced with the mean of valid values of that indicator (Hair, Hult, Ringle, & Sarstedt, 2013).

Variables

The questions were designed in 6 point Likert-scale format from strongly disagree to strongly agree, and all were closed-ended questions. Most of the questions for each variable were based on the existing literature. However, some items were modified for better understanding. Table 2 shows more details regarding the source of the questions.

Data Analyses

Partial Least Squares (PLS-SEM) was used to test the hypothesized relationships between the research constructs as postulated in the conceptual model. The main reasons for applying this method are capability of this technique to analyze the different scale of measurement (all constructs have interval measurement scale except one of them with categorical measurement scale), explanation of variance (prediction of the constructs), efficient algorithm, and high levels of statistical power (Hair et al., 2013).

Results

Sample Characteristics

Sample characteristics can be found in Table 3. The majority of the respondents was in the age bracket of 30 to 39 (38.7%) and married (64%). Statistics showed that over half (55.6%) were male, and 44.4% were female. Close to half of the participants were Malay (49.8%) then Chinese (34.6%), followed by Indian (12.5%), and others (2.5%). In terms of education, 54.2% of the respondents reported having a bachelor degree. The majority of participants (55 %) also indicated that they were employed in private sectors.

TABLE 2. Reference of Questions

Variable	Source of Questions
Retirement planning	<ul style="list-style-type: none"> • MacFarland, Marconi, and Utkus (2003) • Noone et al. (2010) • Petkoska and Earl (2009) • Van Rooij et al. (2011)
Saving attitude	<ul style="list-style-type: none"> • Brandstätter (2005)
Family education	<ul style="list-style-type: none"> • Webley and Nyhus (2006) • Sherraden, Peters, Wagner, Guo, and Clancy (2013) • Shim et al. (2010)
Materialism	<ul style="list-style-type: none"> • Benmoyal and Moschis (2010) • Richins and Dawson (1992)
Propensity to plan	<ul style="list-style-type: none"> • Lynch, Netemeyer, Spiller, and Zammit, (2010)
Future orientation	<ul style="list-style-type: none"> • Jacobs-Lawson and Hershey (2005)
Financial literacy	<ul style="list-style-type: none"> • Van Rooij et al. (2011)

Normality Test

Table 4 shows the results of descriptive analysis and normal distribution of all variables as the skewness and kurtosis of variables are within the acceptable range (± 3). This research does not include financial literacy in Table 3 since the measurement of this variable is in a nominal scale.

Validity and Reliability Test

The validity and reliability of the questionnaire in this research were tested through convergent validity and internal consistency reliability. For convenience, this study used abbreviations for each variable as follows: Fam (family education), Ret (Retirement planning), Sav (Saving attitude), Fut (Future orientation), Plan (Propensity to plan), Mat (Materialism), and Lit (Financial literacy).

TABLE 3. Demographic Profile

		Frequency	Percent			Frequency	Percent
Gender	Male	289	55.6	Marital status	Single	145	27.9
	Female	231	44.4		Married	333	64.0
					Divorced	25	4.8
					Widowed	17	3.3
Monthly Income	RM 3,000 and below	172	33.1	Age	18–29	104	20.0
	RM 3,001–RM 6,000	223	42.9		30–39	201	38.7
	RM 6,001–RM 9,000	76	14.6		40–49	134	25.8
	RM 9,001–RM 12,000	31	6.0		50–59	68	13.1
	RM 12,001 and above	18	3.5		60 and above	13	2.5
Education level	High school and below	44	8.5	Race	Malay	260	49.8
	Diploma	106	20.4		Chinese	183	34.6
	Bachelor Degree	282	54.2		Indian	65	12.5
	Postgraduate	88	16.9		Others	12	2.3
Occupation	Self-employed	61	11.7	Military/armed force	13	2.5	
	Government sector	57	11.0	Other	44	8.5	
	Student	20	3.8				
	Private sector employee	286	55.0				
	Professional	39	7.5				

TABLE 4. Descriptive Results

Variables	Mean	Standard Division	Skewness	Kurtosis
Retirement planning	4.1628	0.96479	-0.732	-0.404
Saving attitude	4.1602	0.8965	-0.995	0.611
Family education	4.0054	0.93444	-0.528	-0.04
Materialism	4.1269	1.08267	-0.922	-0.293
Propensity to plan	4.0981	0.98325	-0.626	-0.192
Future orientation	4.1298	0.91251	-0.653	0.123

In the current research, three items (Lit_5, Lit_8, and Sav_6) were removed as their outer loading was below 0.40, and they had poor AVE. Removing these items improved AVE, CR, and Cronbach's Alpha for these variables. Table 5 shows the validity and reliability of proposed variables in this study.

Path Coefficients

Looking at the relative importance of exogenous driver constructs for retirement planning (Ret), we found that saving attitude of household (Sav) was the most important, followed by financial literacy (Lit) and the propensity of the plan (Plan). In contrast, family education (Fam), future orientation (Fut), and materialism (Mat) had little bearing on the perceived competence. However, family education

(Fam) was of high importance for saving attitude. Moving on to the model, the study showed that propensity to plan (Plan) and financial literacy (Lit) were also critical for having a saving attitude. The relationship between materialism (Mat) and saving attitude had a negative, weak path coefficient (Table 6).

Mediating Effect

For testing the mediating effect, this study followed Preacher and Hayes (2004, 2008) for indirect effect as well as Hair, Hult, Ringle, and Sarstedt (2016). This research was testing the role of saving attitude as a mediator in the proposed framework. All the direct effects of exogenous variables (future orientation, propensity to plan, and financial literacy) on retirement planning was significant

TABLE 5. Convergent Validity After Removing the Items

Items	Questions	Loadings	AVE	CR	Cronbach's Alpha
Fam_1	When you were a teenager, your parents had economical behavior regarding financial issues.	0.756	0.604	0.901	0.869
Fam_2	When you were a teenager, your parents were discussing their personal financial decisions with you.	0.731			
Fam_3	You learned financial knowledge from your parents' behavior while you were a teenager.	0.794			
Fam_4	When it comes to managing money, I do the same as my parents did in the similar situation.	0.799			
Fam_5	Your parents encouraged you to save your money when you were a teenager.	0.807			
Fam_6	When you think back to your teenager time, your parents had a regular saving for future.	0.773			
Fut_1	I follow the advice to save for a rainy day.	0.760	0.500	0.851	0.786
Fut_2	I enjoy thinking about how I will live years from now in the future.	0.686			
Fut_3	Planning for distant future is difficult.	0.435			
Fut_4	The future seems very vague and uncertain to me.	0.806			

(Continued)

TABLE 5. Convergent Validity After Removing the Items (Continued)

Items	Questions	Loadings	AVE	CR	Cronbach's Alpha
Fut_5	I have established long-term goals and am working to fulfill them.	0.710			
Fut_6	I think there is no need to sacrifice things now for problems that lie in the future.	0.763			
Lit_1	If the chance of getting a disease is 10%, how many people out of 1,000 would be expected to get the disease?	0.792	0.553	0.908	0.885
Lit_2	Suppose you have RM 100 in a savings account and the interest rate is 2% per year. After 5 years, how much do you think you would have in the account if you do not withdraw it during these five years?	0.743			
Lit_3	Imagine that the interest rate on your savings account is 1% per year and inflation is 2% per year. After one year, how much would you be able to buy with the money in this account?	0.721			
Lit_4	Assume a friend inherits RM 10,000 today and his sibling inherits RM 10,000 3 years from now. Who is richer because of the inheritance?	0.706			
Lit_6	What happens if somebody buys the stock of firm B in the stock market?	0.725			

(Continued)

TABLE 5. Convergent Validity After Removing the Items (Continued)

Items	Questions	Loadings	AVE	CR	Cronbach's Alpha
Lit_7	What happens if somebody buys a bond of firm B?	0.735			
Lit_9	Generally, which asset displays the highest fluctuations over time	0.753			
Lit_10	When an investor spreads his money among different assets, how does the risk of losing money change?	0.771			
Mat_1	Some of the most significant achievement in life includes acquiring material possessions (e.g., Bungalow, Jewelry . . .).	0.558	0.572	0.913	0.898
Mat_2	The things I own say a lot about how well I am doing in life.	0.761			
Mat_3	I like to own things that impress people.	0.859			
Mat_4	Buying things give me a lot of pleasure.	0.789			
Mat_5	My life would be better if I owned certain things I do not have.	0.813			
Mat_6	I like to have a lot of luxury in my life.	0.779			
Mat_7	I pay much attention to the amount value of material objects that other people have.	0.788			
Mat_8	I have all the things I really need to enjoy life.	0.659			
Plan_1	I set financial goals for the next 1–2 years for what I want to achieve with my money.	0.803	0.691	0.918	0.888

(Continued)

TABLE 5. Convergent Validity After Removing the Items (Continued)

Items	Questions	Loadings	AVE	CR	Cronbach's Alpha
Plan_2	I plan earlier how my money will be used in the next 1–2 years.	0.868			
Plan_3	I actively consider the steps I need to take to stick to my financial plan in the next 1–2 years.	0.863			
Plan_4	Reviewing my financial plan during 1–2 years will give me a view of my spending in the future.	0.837			
Plan_5	Having a financial plan for next 1–2 years makes me feel better	0.782			
Re_1	I am generally optimistic about my financial future.	0.798	0.518	0.941	0.933
Re_2	It is early for me to start thinking about my retirement planning.	0.503			
Re_3	Making financial provisions for retirement is worthwhile.	0.795			
Re_4	I have a clear understanding of financial issues for retired people.	0.732			
Re_5	I spend time for planning and reviewing my finance.	0.795			
Re_6	I never think about retirement planning.	0.739			
Re_7	I do not like dealing with money and finances.	0.685			
Re_8	I feel stressed out when I think about planning for retirement.	0.702			

(Continued)

TABLE 5. Convergent Validity After Removing the Items (Continued)

Items	Questions	Loadings	AVE	CR	Cronbach's Alpha
Re_9	I am more focused on day-to-day responsibilities than on planning for retirement.	0.551			
Re_10	Planning for retirement needs too much time and effort.	0.592			
Re_11	I participate in workshops/seminars on retirement planning.	0.697			
Re_12	I usually discuss with my families/friends about retirement planning.	0.713			
Re_13	I am in a position to meet all of my financial goals for retirement.	0.808			
Re_14	I know the amount of money I will need for retirement time.	0.785			
Re_15	By the time I retire, I will have sufficient <i>income</i> to ensure the standard of living I need in retirement time.	0.812			
Sav_1	I save money to be more financial independent.	0.756	0.637	0.913	0.886
Sav_2	Being careful with money is an important character trait.	0.827			
Sav_3	It is important always to save as much as possible and only to spend money on things that are strictly necessary.	0.824			
Sav_4	Having a regular saving in each month is important.	0.838			

(Continued)

TABLE 5. Convergent Validity After Removing the Items (Continued)

Items	Questions	Loadings	AVE	CR	Cronbach's Alpha
Sav_5	People who are successful in saving are also successful in life.	0.772			
Sav_7	I believe that for the better retirement life I should save regularly a portion of my income.	0.768			

TABLE 6. Results of the Structural Model Path Coefficients

	Path Coefficient	t Values	Significance Level (p-value)
Fam → Ret	0.093	1.712	NS
Fam → Sav	0.401	8.888	Significant
Fut → Ret	0.090	2.060	Significant
Fut → Sav	0.097	2.580	Significant
Lit → Ret	0.125	3.319	Significant
Lit → Sav	0.111	3.386	Significant
Mat → Ret	0.062	1.305	NS
Mat → Sav	-0.089	2.323	Significant
Plan → Ret	0.100	1.970	Significant
Plan → Sav	0.206	4.309	Significant
Sav → Ret	0.369	6.551	Significant

$p < .05$ is significant; NS is not significant.

except family education and materialism. Testing the indirect relationships for family education and materialism with retirement planning determined that these two constructs significantly had an indirect effect through saving attitude on retirement planning. Variance accounted for (VIF) should be used to find out that how much the mediator variable absorbs the direct effect. The results showed that saving attitude partially mediate the relationships between financial literacy, propensity to plan, and future orientation with retirement planning (Table 7).

Conclusion, Limitation, and Implications

The two general objectives of this research were first investigating the relationships between behavioral factors and retirement planning, and second examine the mediating role of saving attitude between proposed behavioral factors and retirement planning. Given these objectives, a theoretical model was developed based on theory of planned behavior and time perspective theory. The data analysis

show that financial literacy, propensity to plan, and future orientation have significant relationship with retirement planning behavior which saving attitude mediates these relationships. However, family education and materialism don't have direct effect on retirement planning behavior of individuals.

This study has its limitations. First, this research was undertaken as a cross-sectional study. Thus, it cannot measure the change in the variables over time and findings capture only a snapshot of the retirement planning of Malaysians at a particular point in time. Nevertheless, this shortcoming is mitigated by studying five different age groups and three ethical groups as proxies representing the various individuals. Second, this study is based on a nonprobability sampling method because of the limitation in cost and accessibility to the list of the population, thus this limitation should be taken under consideration before generalizing the findings. Third, the study was restricted to Malaysians working and living in the Klang Valley area so it may not

TABLE 7. Results of Mediating Testing

Relationship	Indirect Effect	SD	t Value (Indirect)	t Value (Direct)	LL	UL	VAF	Result
Fam → Ret	0.148	0.030	4.933	1.672	0.089	0.207		Indirect
Fut → Ret	0.036	0.015	2.400	2.069	0.06	0.065	0.286	Partial mediation
Lit → Ret	0.041	0.014	2.929	3.279	0.013	0.068	0.247	Partial mediation
Mat → Ret	-0.034	0.015	2.267	1.311	-0.062	-0.003		Indirect
Plan → Ret	0.076	0.020	3.800	1.965	0.037	0.115	0.432	Partial mediation

be representative of the overall Malaysian population. This study tried to diminish the impact this limitation by collecting data from different parts of Klang Valley. Last but not least, since this research is a type of behavioral study, choosing significant factors for making an appropriate framework by considering time and content were crucial. The selected behavioral factors were based on literature reviews so that the proposed framework could be more accurate and comprehensive by adding more variables.

Since this study applied just a part of the theory of planned behavior, it is recommended for future studies to examine the effect of subjective norms and perceived behavioral control on retirement planning. Moreover, in future, a mixed-method approach may be applied to investigate the influential factors on retirement planning. Finally, this study could be the first empirical research to analyze the proposed relationships in Malaysia, and the replication of this research in future using samples from other places could be a fruitful attempt to confirm a robust conclusion of the findings.

This study has several major implications for academicians. The findings of the current research help to cover the existing literature gaps.

Develop the Knowledge in Personal Retirement Planning

The retirement planning literature is expanded through this research by examining the effect of behavioral factors. The framework of this study explains 30% of retirement planning variance, which is considered to be substantial and thus can be a good reference for future research. Findings show the direct relationship between attitude and behavior that bring the greater insight into the complexity of human behavior. Thus, the model of attitude-to-behavior in the theory of planned behavior may provide a fuller framework and also the possibility of offering numerous opportunities for research.

Increase the Knowledge of Saving Attitude

The attitude concept has played a central role in both scientific and lay attempts to understand human thought and behavior. Proposed behavioral factors of this study explain near to 35% of saving attitude variance, which can provide a new avenue of research surrounding this subject. Moreover, the result shows that saving attitude can explain 25% of retirement planning behavior. This study shows that individual's behavioral attitude can lead to implementing the action. The findings of the current study confirmed the outcome of Fishbein (1967) and might provide great insight for further research on expanding the theory of planned behavior.

Measurement of Retirement Planning Behavior

One of the outstanding findings of the current study is measuring retirement planning behavior. The lack of standard measurement for this behavior is a clear shortcoming in planning behavior literature. The results show that the validity and reliability of the retirement planning behavior scale is satisfactory. Future studies using the Retirement Planning Behavior scale will be able to determine not only whether retirement planning foresees well-being in retirement but also which domains show the greatest influence.

Regarding the perspective of practical implications, the results reveal that parents may have a significant effect on their children's behavior. Family life educators and financial management educators should take this point and educate parents via their lesson plans. Parents should learn that their strategy to tackle with financial issues and their saving patterns for the future might be the first financial lesson for their children. On the other hand, financial advisors and planners should identify their niche market to dispense their professional services on financial planning for retirement planning strategies. Realizing that an individual's behavioral factors will improve financial planners' predictions about how people will react to incentives.

The policy makers can derive benefits from the results of this study. The findings highlight the role of financial literacy in retirement planning. It is essential to encourage financial education and raise awareness at the national level since it motivates a broader culture of financial education and persuades the whole population. Any policy that has the goal of improving retirement planning must consider that “one size does not fit all” and therefore, different solutions should be designed for different target groups.

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