

Retirement saving behavior: evidence from UAE

Retirement
saving
behavior

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Abstract

Purpose – This study aims to examine the effect of future time perspective (FTP), financial risk tolerance (FRT) and knowledge of financial planning for retirement (KFPR) on retirement saving behavior (RSB).

Design/methodology/approach – Primary data were collected using a non-probability judgmental sampling technique. A questionnaire was distributed either manually (by hand) or through email where 370 United Arab Emirates (UAE) residents used in the higher education sector participated. The data analysis was obtained by using SPSS and Smart-PLS software. Structural equation modeling was used to evaluate the linear relationship between FTP, FRT, KFPR and RSB.

Findings – The findings from this study are consistent with previous research. FTP and KFPR had a significant positive effect, while FRT had an insignificant negative effect on RSB.

Research limitations/implications – This study examined the effect of a few psychological variables on RSB and was conducted on a sample of university employees in the UAE. Additional research should examine environmental influences, individual differences and other psychological process factors. Furthermore, future research could extend the current study into other industries and other the Middle East and North Africa countries.

Practical implications – A better understanding of the factors that influence RSB can help working individuals, financial advisors/financial planning professionals, financial institutions and government/policymakers strengthen their understanding and initiatives toward retirement planning.

Originality/value – To the best of the authors knowledge, none of the previous research papers studied RSB in the UAE. Additionally, it is important to note that the results of this study can be generalized to all Gulf Cooperation Council countries because of the similar economic, political, ethical, social and cultural factors.

Keywords UAE, Smart-PLS, Financial risk tolerance, Future time perspective, Financial planning knowledge, Retirement saving behavior

Paper type Research paper

1. Introduction

Retirement has become an essential issue in the United Arab Emirates (UAE) in the past few years. The UAE Government expanded the retirees' visa for an additional five years, in which able-bodied foreign individuals over 60 can stay in the country under some conditions (Haime, 2018). They are allowed to work up to the age of 65 if the Minister of Human Resources and Emiratization or the Undersecretary approves it; otherwise, they should have an investment property worth at least 2m dirhams or financial savings of 1m dirhams. Foreign individuals can get end-of-service benefits up to an amount equivalent to two years, without getting any pension. Frank Carr, the chief marketing officer of Financial Risk



Solutions, suggested providing a mandatory pension for all workers, as a result of which the UAE could become the leading country in retirement provision ([Al Rifai, 2019](#)). That would help foreigners who spend half of their lives in the UAE, as they are not able to contribute to the social security systems in their homeland ([El Sawy, 2020](#)).

On the other hand, and per Federal Law No. 7 of 1999 on the Issuance of the Law on Pensions and Social Security, UAE citizens are entitled to pensions and other retirement benefits after they reach the retirement age of 49 or have served a minimum of 20 years in total. Besides, the Gulf Cooperation Council (GCC) countries' citizens are eligible for pensions following the schemes established in their home countries.

Individuals get shocked when they find themselves unable to retire because they did not save seriously earlier in life. [Keating and Marshall \(1980\)](#) found that individuals are not interested in retirement finances until they are 48 years old. This delay in financial planning will lead to having insufficient savings, which will lead to distress ([Ferraro and Su, 1999](#)). Before deciding to retire, individuals need to set retirement goals and a clear plan for what they will do upon reaching the retirement stage. According to [Murphy \(2009\)](#), the main concern for the majority preparing for retirement is to outlast their incomes and assets in a way that they are not short of income throughout their life and particularly during retirement.

Because retirees live for 25 to 30 years or more after retirement, and due to the instability of the economy, retirement matters have become more challenging. Thus, those who are about to retire need to set clear goals for the way they will manage their savings, investments and contribution plans. Saving, in general, has been defined as the act of setting aside some current income for future needs. Thus, both individual future preferences over current consumption and future income expectations affect the extent to which individuals save. Previous studies have tried to uncover the motivations behind individual saving behavior through examining the influence of demographic factors, environmental influences and different psychological factors on retirement saving behavior (RSB), which will be discussed further in the next section.

In recent decades, the UAE has witnessed tremendous economic growth and unprecedented wealth, turning it into one of the wealthiest oil-producing nations ([Ali and Wisniesk, 2010](#)). Indeed, this rapid economic and urban growth shifted life from simplicity and austerity to one of thriving urban centers and easy access to the most developed techniques in the globe, resulting in increased demand for luxury and willingness to spend and travel ([Ali and Wisniesk, 2010](#)). In other words, the shift in lifestyle resulted in heightened consumerism, which is defined by [Ali and Wisniesk \(2010\)](#) as a tendency to spend more and embrace materialism. For sure, saving for retirement or any other purpose would be challenging in the UAE, which is a country famed for uncontrolled hedonic consumption as [Madichie and Blythe \(2011\)](#) describe it. Charlie Nunn, HSBC Group Head of Wealth Management, claims that saving for a stable and prosperous retirement was never more challenging or significant than in this era due to the unprecedented political, cultural, economic and technological changes ([Nunn, 2017](#)). The existence of retirement saving plans helps institutions in several ways. First, it reduces the pressure on government spending as governments do not have to provide for those who do not save. Second, it reduces information asymmetry in the private sector whereby those who are saving will invest early in their life, and therefore reduce the adverse selection issue of running out of their retirement funds. Third, during periods of a severe downturn, insurance companies will face only undiversifiable risks like inflation. Fourth, governments can use retirement savings plans to redistribute income to cater to low-income groups. Fifth, increased savings lead to

more funds available for both the private and government sectors to invest, which can help stimulate productivity rather than hedonic consumption.

Nigel Sillitoe, the CEO of Insight Discovery, stated that saving rates are much higher in other parts of the world, particularly in developed countries (Al Rifai, 2019). A new survey from the global bank HSBC found that more than 75% of UAE residents are not saving anything for their retirement. The reason behind that is more than half believe in spending money to enjoy the present or saving it for short-term goals rather than saving it for retirement (Haine, 2018). Tarek Zouiten, the head of the retirement at Mercer Middle East, revealed that almost half of UAE expatriate employees expect the end-of-service gratuity to cover their long-term savings needs (El Sawy, 2020). Thus, the inadequate knowledge of the amount needed to fund a retirement plan plays an essential role in the low-saving rate, as well as lifestyle demands and day-to-day commitments that make saving for the future harder (Haine, 2018). Another recent survey found that 50% of foreign saving is 5% or less, and only 16% of foreigners consider retirement-planning a priority, while 28% plan to start saving without having a specific goal (Al Rifai, 2019). Mercer's latest survey found that 45% plan to work for as long as they can, while 37% predict working beyond the retirement age (El Sawy, 2020). In addition, the demographic structure of the UAE is tilted toward expatriates, who form around 90% of the population, while the remaining 10% are locals.

Moreover, more than 60% of the UAE population are between 25 and 54 years old, which indicates that the workforce population is vast compared to other age groups, with 50% of the population considered skilled workers. Facing this growing age group population coupled with no income tax in the UAE makes the issue of retirement planning of great concern. Moreover, the UAE is currently not facing a high level of old-age dependency ratio because its young population is growing massively. However, this might be due to the continuous influx of expatriates. This poses a significant question as to whether this trend can be maintained in the long run.

On the other hand, we believe the UAE is a unique country to study, given its diverse demographics and the economic diversification it initiated to move away from oil revenue into services and manufacturing. This might indicate that the UAE is different from other countries in the region and in other regions as well.

Therefore, given how wealthy the UAE is, combined with an extreme level of saving and myopia in future plans, the objective of this study is to examine the effect of future time perspective (FTP), financial risk tolerance (FRT) and knowledge of financial planning for retirement (KFPR) on RSB. The primary focus of the study is financial preparation for retirement, as the purpose is to extend the knowledge on RSB to help individuals retire with financial security. The study contributes to research on RSB in four-folds. First, the study contributes to the public policies (such as automatic enrollment in retirement schemes) that should be designed to promote and improve the older population's well-being through sufficient retirement funds. Second, although this is not the first study to be done on a developing economy, we believe the UAE can be used as a blueprint for other GCC economies. Therefore, it is important to note that the results of this study can be generalized to all GCC countries because of the similar economic, political, ethical, social and cultural factors. Third, the study adds to the existing micro-level studies of RSB in developing economies. Fourth, the UAE is considered a knowledge-based economy (Aswad *et al.*, 2011), and according to Lai *et al.* (2009), in such an economy, university staff and professionals should be among the highest-paid groups. It is, therefore, unique and interesting to use a sample of university staff to see their RSB.

The remaining sections in this study are organized as follows: Section 2 provides a review of the literature on the effect of FTP, FRT and KFPR on RSB. The research

2. Literature review and hypotheses

2.1 Retirement saving behavior

Saving is an act of setting aside some current income for future needs. No one could disagree on the definition of saving, but they may differ in the method of saving. [Kotlikoff \(1993\)](#) stated that saving methods include cash, investment fund, putting money aside in a deposit account, buying stocks or contributing to a pension plan. When it comes to economists, saving means consuming less than a given quantity of resources to consume it in the future, whereby the real motivation is to accumulate savings for future spending ([Mori, 2019](#)). Individuals usually save to fund old-age consumption. As retirees must have some personal savings to replace their salaries after retirement, it is essential to find which factors influence RSB the most.

[Joo and Grable \(2005\)](#) believe that environmental influences (culture, social class, family and employment situation), individual differences (motivation, involvement, knowledge, attitudes, personality, lifestyle and demographics) and psychological process factors (information processing, learning and attitude and/or behavior change) are related to individuals' willingness and ability to save for retirement. [Wilson \(1998\)](#), [Joo and Grable \(2005\)](#), [Croy et al. \(2010\)](#), [Moorthy et al. \(2012\)](#), [Lim et al. \(2018\)](#) and others argued that individuals' attitudinal characteristics would influence their behavior on making decisions in retirement savings.

Prior literature also focused on the financial literacy/knowledge effects on RSB. [Yoong et al. \(2012\)](#) stated that by enhancing the literacy of an individual, the mental ability to predict the effects of actions would be enhanced as well. In the same context, [Sabri and Juen \(2014\)](#) believe that financial literacy is a skill that can assist individuals in making financial choices efficiently. They also argued that financially literate individuals understand the importance of retirement planning and tend to have greater confidence in their preparation for retirement, as they usually accumulate wealth for retirement preparation.

Retirement planning activity levels have caught the attention of many researchers (see, for example, [Hershey et al., 2007a](#); [Hershey et al., 2007b](#); [Hershey et al., 2010b](#); [Topa et al., 2018](#)). Retirement planning activity was defined by [Topa et al. \(2018\)](#) as a set of actions concerned with wealth accumulation to cover post-retirement requirements. [Hershey et al. \(2007a\)](#) linked it to individuals' saving practices and found that individuals who engaged in planning activities collected more wealth.

[Jacobs-Lawson and Hershey \(2005\)](#) examined the extent to which FTP, FRT and KFPR affect retirement saving practices. Their study participants consisted of 270 working American adults between 25 and 45 years of age. The FTP was assessed using a six-item scale that was developed by [Hershey and Mowen \(2000\)](#). The FRT was assessed using a six-item scale that was developed by [Jacobs-Lawson \(2003\)](#), and KFPR was assessed using a five-item scale that was developed by [Hershey and Mowen \(2000\)](#). The analysis was conducted using a hierarchical regression model. The findings showed that higher levels of FTP, FRT and KFPR lead to more aggressive saving profiles, which is compatible with prior studies.

[Gutierrez and Hershey \(2014\)](#) examined life-quality (future) retirement expectations among younger and middle-aged adults. Individuals' perceptions of FTP, FRT and KFPR were tested. The participants included 90 working middle-aged adults and 1,560 undergraduate young adults in Oklahoma, the USA and were selected through snowball sampling. Future orientation was measured using a two-item scale, while both FRT and

KFPR were measured using a three-item scale (Jacobs-Lawson and Hershey, 2005). For the young group, both FRT and KFPR had a significant positive relationship with retirement saving practices, while FTP had an insignificant positive relationship with retirement saving practices. On the other hand, for the middle-aged group, both FTP and KFPR had a significant positive relationship with retirement saving practices. In contrast, FRT had an insignificant negative relationship with retirement saving practices. The results matched the expectations and provided replicative support for prior studies.

2.2 Future time perspective The literature on both psychology and economics focused highly on FTP using different terms and constructs, as it is often referred to as FTP or future orientation in the psychological literature, whereas it is usually referred to as one's patience level, time preference or planning horizon in the economic literature (Jacobs-Lawson and Hershey, 2005). FTP was defined as individuals' desire for a long-term view and a long-term perspective of planning (Hershey, 2004; Hershey *et al.*, 2007a; Adams and Rau, 2011). The role of the expected future has been highlighted as a key determinant of action through the theories of social-cognitive and goal-based motivation (Bandura, 1986). The future time experience of the individual is supposed to influence highly the shaping of the goals and plans that control actions and outcomes (Kooij *et al.*, 2018).

Hershey and Mowen (2000) studied the factors influencing the financial preparedness of individuals for retirement. They provided recommendations for both the educational and marketing sectors to encourage individuals to save for retirement. The study participants totaled 230 members of the Arkansas Household Research Panel. Their average age was 62.6 years, and the majority were wholly or partly used. Hershey and Mowen (2000) developed their measure for future orientation, which was a four-item scale that they designed by modifying Mahon and Yarcheski's (1994) measure. Future orientation was found to be a significant predictor of pre-retirement planning and saving. Thus, participants who have a strong future orientation were assumed to have higher retirement preparedness.

Hershey *et al.* (2007a) investigated the psychological mechanisms underlying retirement planning and saving trends. In total, 988 Dutch and 429 Americans between 25 and 64 years of age participated in the study. Future orientation was measured using a four-item scale (Hershey and Mowen, 2000; Neukam and Hershey, 2002); however, two items were excluded as they resulted in low coefficient alpha. A path analysis was conducted, and hierarchical regression techniques were used. The results for the Dutch participants were different from those of their American counterparts; the Americans had significantly longer FTPs than the Dutch. Furthermore, FTP was positively related to retirement saving practices, matching the result found by Lusardi (1999), Hershey and Mowen (2000) and Jacobs-Lawson and Hershey (2005).

Hershey *et al.* (2007b) examined the relationship between FTP and RSB, as well as the mediating role of FTP on the relationship between demographics and RSB. Path analytic methods were used to test the model based on responses from 265 middle-aged working adults. The FTP was measured using a six-item scale developed by Hershey and Mowen (2000). The results support the role of psychological variables in the retirement planning process, whereby a significant positive relationship was found between FTP and RSB, which is in line with previous research results.

Nations in Europe have rapidly evolved in cultural, demographic and economic terms, leading governments to think about how well they can assist their citizens in old age. Hershey *et al.* (2010a) attempted to find out if individuals are concerned about their retirement financial future and the degree to which they are taking effective planning and saving steps to ensure satisfactory living standards. Data used in the study was derived from the European Social Survey third wave and consisted of 21,416 working adults with an

age range of 18–60 years from 19 EU countries and four non-EU countries. A two-item scale was used to measure FTP through multilevel modeling. FTP was the strongest predictor of retirement saving practices in the study. The results of the study reveal a significant positive relationship between FTP and retirement saving practices whereby a longer FTP leads to a more positive attitude toward planning and more active retirement savers.

In the same context, [Hershey et al. \(2010b\)](#) investigated almost the same aspect. They examined different social, economic and psychological factors that influence financial planning for retirement. Their participants were 975 working individuals 25 to 64 years of age. Of these, 419 were Americans sampled from public places in the north-central Oklahoma region, and 556 were Dutch sampled from the CentERdata databank at the University of Tilburg in The Netherlands. FTP was measured using a four-item scale ([Hershey and Mowen, 2000](#)) and path analysis models. FTP was proposed to affect planning and saving practices positively, either directly or indirectly. The results match those from studies by [Lusardi \(1999\)](#), [Webley and Nyhus \(2006\)](#), [Hershey et al. \(2007a\)](#), [Hershey et al. \(2007b\)](#) and [Hershey et al. \(2010a\)](#).

[Kooij et al. \(2018\)](#) sought to explain the FTP structure, develop its theoretical advancement and demonstrate its significance. They conducted a literature search of different electronic databases for 65 years from January 1950 to December 2015. A meta-analysis was conducted, with a total of 212 studies. Seven different measures of FTP were included in the study, with the most used measure in the literature review being the [Zimbardo Time Perspective Inventory \(Zimbardo, 1990\)](#). The findings confirmed the existence of a significant positive relationship between future orientation and retirement planning and saving practices, which is in line with previous studies' results.

[Yang and Devaney \(2011\)](#) combined the intrinsic rewards of work, FTP and future economic perspective to create a model for the retirement planning psychological process. Their study participants were in total 2,266 working adults between 51 and 61 years of age, drawn from the first wave of the Health and Retirement Study, which was conducted in 1992. A six-item scale was used to measure FTP, and both confirmatory factors analyze and structural equation modeling was used to examine the data. A significant negative relationship was found to exist between FTP and retirement planning and saving practices. Their result contradicted the findings of previous studies. This could be attributed to their definition of FTP, which was defined as the belief that one holds about how much time is left. In this case, individuals who believe that the future is limited are found to be more prepared for retirement as they think they would not work for a much longer time.

Thus:

H1. There is a significant positive relationship between FTP and RSB.

2.3 Financial risk tolerance The risk tolerance concept is studied in different cases such as gambling or daily life experiences risk. Regarding the FRT literature, most studies examined the financial investment decisions of individuals; only a few studies examined retirement saving decisions ([Jacobs-Lawson and Hershey, 2005](#)). FRT was defined as the highest possible uncertainty that somebody may take when making a financial choice ([Grable, 2000](#); [Larson et al., 2016](#)). [Croy et al. \(2010\)](#) linked risk tolerance to the propensity to plan; the more risk tolerance an individual has, the higher the propensity to plan. In addition, [Joo and Grable \(2005\)](#) linked risk tolerance to savings and investment willingness; according to them, individuals with low-risk tolerance are less willing to save for retirement.

[Joo and Grable's \(2005\)](#) study aimed to establish a framework explaining the decision-making process made by individuals in setting up a retirement saving plan and the factors influencing it. The participants of the study were 751 American working

individuals 25 and older years of age. The data were analyzed using logistic regression analysis, whereby FRT was measured through a three-item scale. An insignificant relationship was found between retirement saving practices and FRT, whereas [Yuh and DeVaney \(1996\)](#) and [Yuh and Olson \(1997\)](#) found the relationship to be positive and significant.

[Croy et al. \(2010\)](#) investigated major psychological intentions and motivators of RSB to improve their understanding of individual behavior to enhance saving rates. A total of 2,339 Australian working individuals participated in the study. The questionnaires were sent to individuals selected from four databases of Australian superannuation fund members. FRT was measured using the Survey of Consumer Finances, which is conducted every three years by the US Federal Reserve Board ([Sung and Hanna, 1996](#)). The study analyzed two RSBs, namely, making additional voluntary contributions and changing investment strategy for savings. Despite assumptions, the study found that the FRT of the participants contributes little to the behavioral intention prediction. FRT was a significant indicator only of the intention to change investment strategy, indicating the importance of changing the investment strategy relative to other contribution decisions.

The most important decisions an individual can make are retirement investment decisions, which underlines the importance of understanding individual investment decision guidance factors. [Larson et al. \(2016\)](#) studied key factors such as financial knowledge and risk tolerance that might influence retirement investment decisions. Their study focused on millennials, who are known for their risk-averse behavior and the unique environment they live in, which can have an impact on the decisions they make. The study examined the effect of risk tolerance on millennials' retirement decisions. The participants were 128 college students between the ages of 19 and 31. The majority of participants were Caucasian. Four investment options ranging from highly conservative to highly risky were presented in the survey scenario in which individuals needed to select an investment option and then complete the FRT measure (items taken from the 2005 Jacobs-Lawson and Hershey scale). A significant positive relationship was found between FRT and retirement choice, which confirms that, in terms of saving efforts, financially risk-tolerant individuals make more ambitious financial plans. Additionally, behavioral decision theory supports these findings. As [Mellers et al. \(1998\)](#) noted, the critical role of risk and emotion is involved in most modern frameworks of judgment and decision-making.

To summarize, [Joo and Grable \(2005\)](#) and [Croy et al. \(2010\)](#) found an insignificant positive relationship between FRT and RSB, while [Koposko \(2013\)](#) and [Gutierrez and Hershey \(2014\)](#) found an insignificant negative relationship. On the other hand, [Masters \(1989\)](#), [Yuh and DeVaney \(1996\)](#), [Yuh and Olson \(1997\)](#), [Hariharan et al. \(2000\)](#), [Hershey and Mowen \(2000\)](#), [Hershey and Walsh \(2000\)](#), [Hershey et al. \(2001\)](#), [Ekerdt et al. \(2001\)](#), [Jacobs-Lawson and Hershey \(2005\)](#), [Hershey et al. \(2007a\)](#), [Hershey et al. \(2007b\)](#), [Parker et al. \(2012\)](#) and [Larson et al. \(2016\)](#) all found a significant positive relationship between FRT and RSB.

Thus:

H2. There is a significant relationship between FRT and RSB.

2.4 Knowledge of financial planning for retirement Financial knowledge is one of the psychological variables that received considerable attention in the saving literature, as individuals need more knowledge about retirement saving and investment plans to secure a better retirement life ([Jacobs-Lawson and Hershey, 2005](#)). Knowledge-based planning is about improving the efficiency of planning and reducing the variability of the quality of the plan ([Faught et al., 2018](#)). Financial knowledge has been defined as a representative

collection of financial information that has been discovered and collected systematically (Lim *et al.*, 2018). On the other hand, financial planning for retirement has been defined as a set of activities concerned with wealth accumulation to satisfy post-retirement needs (Topa *et al.*, 2018).

Financial planning for retirement is all about “how much is needed for retirement” (Fernandes *et al.*, 2014). According to Lusardi and Mitchell (2007), planners are those who have thought a lot, some or a little about retirement. It is possible to decide how to use the knowledge appropriately in the decision-making process based on the current level of financial knowledge (Litterer, 1965). Hershey and Mowen (2000) believe in the effect of individuals’ knowledge of the process of financial planning on the quality of individuals’ retirement saving decisions. Mitchell and Moore (1998) stated that the lack of sufficient knowledge causes failure to plan for retirement. The social-cognitive theory highlights the role of personal knowledge as a critical determinant of action. Individuals who have high knowledge of financial planning would know how to plan appropriately for their retirement, which would result in adequate saving rates.

In recent decades, an enormous number of American baby boomers will retire with insufficient resources, as economists predict. Hershey and Mowen (2000) examined the factors influencing the financial preparedness for retirement. They provided recommendations for both the educational and marketing sectors to encourage individuals to save for retirement. Their participants totaled 230 members of the Arkansas Household Research Panel. Their average age was 62.6 years, and the majority were wholly or partly used. A multifaceted questionnaire was used, and structural equation modeling techniques were used. Hershey and Mowen (2000) developed their measure for perceived financial-planning knowledge, which was a four-item scale, after eliminating a three-item scale to increase reliability. Perceived financial planning knowledge was found to be a significant predictor of pre-retirement planning and saving. Therefore, respondents who knew more about financial planning often assumed they were better prepared for retirement financially.

Hershey *et al.* (2007a) investigated the psychological mechanisms underlying retirement planning and saving trends. In total, 988 Dutch and 429 Americans between 25 and 64 years of age participated in the study. Perceived financial knowledge was measured using a three-item scale (Hershey and Mowen, 2000; Jacobs-Lawson and Hershey, 2005), where three items were excluded as they resulted in a low coefficient alpha. A path analysis was conducted, and hierarchical regression techniques were used. There were differences in findings between the Dutch and American groups for different variables, but for perceived financial knowledge, the scores were almost the same. Furthermore, perceived financial knowledge was positively related to retirement saving practices, matching the results found by Yuh and DeVaney (1996), Lusardi (1999), Hershey and Mowen (2000), Ekerdt and Hackney (2002) and Chan and Stevens (2008).

Hershey *et al.* (2007b) examined the relationship between self-rated KFPR and RSB, as well as the mediating role of self-rated KFPR on the relationship between demographics and RSB. Path analytic methods were used to test the model based on responses from 265 middle-aged working adults. Self-rated KFPR was measured using a six-item scale developed to evaluate the individuals’ impression of their general knowledge of the subject (Hershey and Mowen, 2000; Mowen *et al.*, 2000). The results support the role of psychological variables in the retirement planning process, whereby a significant positive relationship was found between self-rated KFPR and RSB, which is in line with previous research results.

Petkoska and Earl (2009) analyzed the extent to which workers participated in financial, medical, interpersonal/leisure and work planning for retirement and examined whether

demographic and psychological factors inhibit or promote planning in each field. A total of 377 employees 50 years of age and older who were working at financial institutions participated in the study. For this research, a detailed and wide-ranging questionnaire on retirement planning that examined 36 items was created to assess different fields of retirement planning. The findings suggested that different variable sets influence each field of planning.

Thus:

H3. There is a significant positive relationship between KFPR and RSB.

3. Methodology

3.1 Research design

This study focuses on extending the knowledge of RSB to help individuals to retire with financial security. Quantitative research is about investigating the case in the real world as opposed to what the case should be. It is a sort of work that illustrates phenomena through gathering numerical data examined using mathematical methods, especially statistics (Sukamolson, 2007). Furthermore, quantitative research depends on casual relationships and tests hypotheses. Thus, the study used the quantitative method as it is the most suitable method. A questionnaire was distributed either manually (by hand) or through email. The cross-sectional data collected were used to examine the effect of FTP, FRT and KFPR on RSB.

3.2 Sampling procedures

This study aims to cover the UAE, a multiracial country, which to the best of our knowledge, has not been covered. The data to be used is primary data collected using a non-probability judgmental sampling technique. Judgmental sampling is a process where researchers use their judgment to select a group of people who know about the problem (Rahi, 2017). The results obtained using this sampling technique are likely to be highly accurate, with a minimal margin of error. The targeted population is university employees in the UAE. Focusing on UAE residents, the sample of this study is limited to individuals working in one of the following universities: the American University of Sharjah, American University in Dubai, Khalifa University, UAE University, University of Sharjah and Zayed University, which are the top six universities in the UAE.

This study focuses on university employees because of accessibility, as there is no complication or need for any official letter, which is the case in other sectors such as banks or private companies. Another reason is the knowledge level of university employees, who seem to be more knowledgeable and professional because of consistently conducting training programs and workshops. There is also the possibility of knowledge sharing. In universities and academic institutions, the possibility of sharing knowledge, especially among academic staff, is higher than in other organizations, which leads to the development and retention of new knowledge within universities (Chahal and Savita, 2014). After a total of 370 questionnaires were distributed, this study successfully sampled 312 satisfactory responses, i.e. the response rate was 84.32%.

In addition, another reason for using university employees in this study is their knowledge of financial matters. In the UAE, the concept of personal finance was not integrated into the school system until 2017, and in higher education, it is not compulsory for students of different levels. Statistics about the UAE suggest that the level of financial literacy is very low. Recent studies in 2018 and 2020 showed that those with financial

literacy skills are 38% of the adult population, 29% are not well-informed about the credit cards and personal loans they have and 60% have a debt of some kind (McLaren, 2018; Ahmed, 2020). In addition, the level of saving behavior in the UAE is very low, although professional income is high compared to other countries. Moreover, the UAE does not have an income tax, which might also be a factor that contributes to low saving behavior. In UAE Vision 2021, the country is considered a knowledge-based economy and according to Lai *et al.* (2009), in such an economy, university employees should be among the highest-paid groups.

3.3 Measurement of variables

3.3.1 Dependent variable

3.3.1.1 Retirement saving behavior. Saving, in general, has been defined as the act of setting aside some current income for future needs. Retirement saving indicators were measured using a modified version of the five-item scale that was developed by Neukam and Hershey (2002) to determine the retirement saving practices of individuals. A sample item from the scale is, "I made meaningful contributions to my voluntary retirement savings plan." Each item uses a seven-point response scale (1 = "strongly disagree"; 7 = "strongly agree").

3.3.2 Independent variables

3.3.2.1 Future time perspective. FTP has been defined as individuals' desire for a long-term view and a long-term perspective of planning (Hershey, 2004; Hershey *et al.*, 2007b; Adams and Rau, 2011). The FTP indicator is measured using a four-item scale, which is a modified version of Hershey and Mowen's (2000) scale and is designed to reflect the degree to which individuals appreciate thinking and planning for the future. The scale is a general measure of personality dimension and not exact to the retirement topic. Each item uses a seven-point response scale (1 = "strongly disagree"; to 7 = "strongly agree"). A sample item from this scale is "the distant future is too uncertain to plan for."

3.3.2.2 Financial risk tolerance. FRT has been defined as the highest possible uncertainty that somebody may take when making a financial choice (Grable, 2000; Larson *et al.*, 2016). The FRT indicator was measured using a four-item scale, which is a modified version of the Jacobs-Lawson's (2003) scale and illustrates the attitudes of individuals toward risk. A sample item from this scale is "I prefer investments that have higher returns even though they are riskier." Each item uses a seven-point response scale (1 = "strongly disagree"; to 7 = "strongly agree").

3.3.2.3 Knowledge of financial planning for retirement. Financial planning for retirement has been defined as a set of activities concerned with wealth accumulation to satisfy post-retirement needs (Topa *et al.*, 2018). The KFPR indicator, which uses a modified version of the six-item scale developed by Hershey and Mowen (2000), was conceived to assess the general knowledge of individuals about retirement financial planning. Each item uses a seven-point response scale (1 = "strongly disagree"; to 7 = "strongly agree"). A sample item from this scale is "I am very knowledgeable about financial planning for retirement."

3.4 Pilot testing

A pilot study was carried out to confirm that the questionnaire addressed the relevant issues adequately and that the questionnaire statements were fully understood. It was conducted on 30 responses that were randomly collected. The values of Cronbach's alpha of the dependent variable and independent variables were more than 0.6, which is considered reliable and acceptable. The measure of RSB scored 0.923, FTP scored 0.765, FRT scored 0.862 and KFPR scored 0.95.

3.5 Data analysis technique

The hypotheses in this study were examined using SPSS and Smart-PLS software to explore the factors that contribute to retirement planning behavior. Smart-PLS was used due to its nature of being fitted frequently for confirmatory analysis in exploratory examinations (Hair *et al.*, 2011). Furthermore, PLS is a suitable choice to examine theories and shape models of casual-predictive relationships between relative concepts. Data were screened for typos or any values out of range. The questionnaire data analysis was carried out using statistical techniques. These techniques involve descriptive statistics and frequency analysis, which was used to measure the demographic profile of the respondents. All variables were checked for reliability and factor analysis. Discriminant validity was conducted to determine whether or not the predictors in the model are highly correlated among them. Finally, the bootstrapping test was used to evaluate the dependent variable value based on its linear relationship to all independent variables.

3.6 Theoretical framework (Figure 1)

4. Findings and discussion

4.1 Data screening and cleaning

The first step in conducting the analysis is to screen and clean the data to ensure its reliability and validity for testing a causal theory. A total of the 370 responses were screened for errors made inputting the data, missing data, inconsistent responses and outliers. It was found that five cases of completed questionnaires were unusable due to missing answers. All incomplete responses were, therefore, dropped immediately. The next step was to screen for outliers, whereby an outlier is an extraordinary value that is quite different from the rest of the data. In total, 53 cases were noted and dropped, resulting in 312 usable responses.

4.2 Demographic profile of respondents

Table 1 provides the demographic characteristics of the respondents. Frequency analysis was used to allocate respondents in terms of gender, nationality, age, educational level, monthly income, experience and position (academic or administrative).

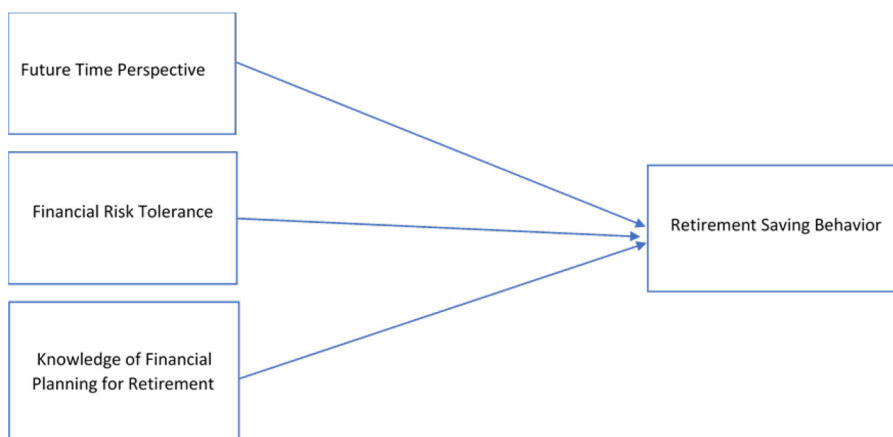


Figure 1.
Theoretical
framework

Profile	Frequency	(%)
<i>By gender</i>		
Male	135	43.3
Female	177	56.7
<i>By nationality</i>		
Local	65	20.8
Foreign	247	79.2
<i>By age</i>		
21–30	75	24
31–40	147	47.1
41–50	71	22.7
More than 50	19	6.1
<i>By education level</i>		
High school	1	0.32
Bachelor and equivalent degree	179	57.4
Master	82	26.3
PhD	50	16
<i>By monthly income</i>		
Less than 5,000	7	2.3
5,001 to 10,000	4	1.3
10,001 to 25,000	188	60.3
25,001 to 50,000	111	35.6
More than 50,000	2	0.6
<i>By experience</i>		
0–5 years	66	21.2
6–10 years	89	28.5
11–15 years	90	28.9
16–20 years	43	13.8
21 years or more	24	7.7
<i>By position</i>		
Academic	55	17.6
Administrative	257	82.4
Total	312	100

Table 1.
Respondents profile

The categorization of the sample by gender shows that 43.3% are male and 56.7% are female. In terms of nationality, 20.8% of the respondents are local and 79.2% are foreign. By age, 24% are between 21 and 30 years, 47.1% are between 31 and 40 years, 22.8% are between 41 and 50 years and 6.1% are above 50 years old. By education level, 0.3% of the sample hold a high school certificate, 57.4% hold a Bachelor and Equivalent degree, while 26.3% hold a master’s degree and 16% hold a PhD. In terms of monthly income, 2.3% of the respondents earn less than 5,000 AED, 1.3% earn between 5,001 and 10,000 AED, 60.3% earn between 10,001 and 25,000 AED, 35.6% earn between 25,001 and 50,000 AED and 0.6% earn more than 50,000 AED. In terms of work experience, 21.2% have been used 5 years and below, 28.5% have been used for 6 to 10 years, 28.9% have been used for 11 to 15 years, 13.8% have been used for 16 to 20 years and 7.7% have been used for 21 years or more. The majority of the sample (82.4%) are administrative staff, while 17.6% are academic staff.

The high percentage of the local participants might be debated, as the UAE citizens are only 10% of the whole UAE population. The UAE Government encourages employers to hire citizens efficiently in both the public and private sectors. Three out of the six universities targeted in the study are public universities where most of the administrative staff are locals. Furthermore, 82.4% of the study participants are administrative staff, with 98.5% of the locals who participated in the study being administrative staff.

4.3 Descriptive statistics

Table 2 demonstrates the descriptive statistics of the full sample for all the study variables. RSB, FTP, FRT and KFPR were each measured on a seven-scale basis (1 = “strongly disagree,” and 7 = “strongly agree”). The mean score of RSB was 3.15, which indicates a low level of retirement savings. The mean score of FTP was 4.25, which represents a moderately high level of future orientation. The mean score of FRT was 2.99, which indicates a low level of risk tolerance. The mean score of KFPR was 3.18, which indicates a low level of retirement financial planning knowledge. The standard deviations of all variables were smaller than the mean value, which indicates that the data points are clustered tightly around the mean.

4.4 Factor analysis and reliability analysis

Table 3 provides the initial and revised factor loadings. Factor loading expresses the relationship of each variable to the underlying factor where loadings close to -1 or 1 show that the factor strongly influences the variable. By contrast, loadings close to 0 indicate a weak influence of the factor (Kline, 2014). As a rule of thumb, a factor loading of 0.6 or higher shows that the factor extracts sufficient variance from that variable (Kline, 2014). The indicators of the four variables were higher than 0.6 , except for the first indicator of FRT (FRT1), which was equal to 0.554 . FRT1 was eliminated to increase the factor loadings, which enhances the influence of the indicators on the construct.

Additionally, Table 3 represents the initial and revised Cronbach's alpha of each variable. Cronbach's alpha measures internal consistency by estimating how tight a set of items is as a group (Gliem and Gliem, 2003). As a rule of thumb, for the instrument to be reliable, the lowest acceptable value of Cronbach's alpha is 0.6 (Gliem and Gliem, 2003). Cronbach's alpha of RSB was 0.947 , FTP was 0.885 and KFPR was 0.949 . Furthermore, Cronbach's alpha of FRT rose from 0.901 to 0.933 after eliminating the first statement. Thus, the coefficient alpha values in this study are very high compared with previous studies.

Furthermore, Table 3 demonstrates both the composite reliability (construct reliability) and the average variance extracted (AVE). Composite reliability measures the internal consistency of indicators, which is much like Cronbach's alpha (Raykov, 1998). As a rule of thumb, 0.7 or higher composite reliability indicates good reliability (Raykov, 1998).

Variable	Mean	SD
RSB	3.15	1.37
FTP	4.25	1.32
FRT	2.99	1.54
KFPR	3.18	1.38

Notes: RSB = retirement saving behavior; FTP = future time perspective; FRT = financial risk tolerance; KFPR = knowledge of financial planning for retirement

Table 2.
Descriptive statistics

Table 3.
Factor loadings,
construct reliability
and validity

Variable	Items	Initial		Revised		Composite reliability	AVE
		Factor loadings	Cronbach's alpha	Factor loadings	Cronbach's alpha		
RSB	RSB1	0.906	0.947	0.906	0.947	0.96	0.826
	RSB2	0.908		0.908			
	RSB3	0.933		0.933			
	RSB4	0.89		0.89			
	RSB5	0.907		0.907			
FTP	FTP1	0.842	0.885	0.842	0.885	0.918	0.736
	FTP2	0.836		0.836			
	FTP3	0.904		0.904			
	FTP4	0.85		0.85			
	FTP						
FRT	FRT1	0.554	0.901	Dropped	0.933	0.951	0.83
	FRT2	0.897		0.891			
	FRT3	0.923		0.925			
	FRT4	0.917		0.923			
	FRT5	0.898		0.904			
KFPR	KFP1	0.891	0.949	0.891	0.949	0.959	0.797
	KFP2	0.919		0.919			
	KFP3	0.918		0.918			
	KFP4	0.884		0.884			
	KFP5	0.866		0.866			
	KFP6	0.878		0.878			
	KFP						

Composite reliability of RSB (0.960), FTP (0.918), FRT (0.951) and KFPR (0.959) was much higher than 0.7, which indicates a high reliability of the measures.

The AVE assesses the convergent validity, which demonstrates the extent to which the items are related to each other for each construct (Ping, 2009). As a rule of thumb, AVE must be at least 0.5 (Ping, 2009). AVE of the measures exceeded the recommended level of 0.5 for RSB (0.826), FTP (0.736), FRT (0.830) and KFPR (0.797), providing evidence for convergent validity.

4.5 Discriminant validity

Churchill (1979) defined discriminant validity as “the extent to which the measure is indeed novel and not simply a reflection of some other variable.” Discriminant validity is formed when the square root of the AVE for each construct exceeds the correlation values between the given construct and each of the other constructs (Farrell and Rudd, 2009). Table 4 shows that the square root of the AVE was always higher than the correlation values. Such

Table 4.
Discriminant validity

	RSB	FTP	FRT	KFPR
RSB	0.909			
FTP	0.309	0.858		
FRT	0.157	−0.428	0.911	
KFPR	0.741	0.209	0.357	0.893

findings suggest acceptable discriminating validity for the measurements. In addition, the heterotrait-monotrait ratio of correlations (HTMT) was added to confirm the results of AVE in Table 4. The results of HTMT values are below the conservative threshold of 0.85 suggested by Kline (2011). Therefore, this suggests that the measurements have acceptable discriminant validity (Table 5).

4.6 Analysis of the structural model and testing of hypotheses

Table 6 shows the parameter estimation as a result of the bootstrap simulation. The result supports *H1*, which states that the relationship between FTP and RSB positive and significant ($\beta = 0.138$, $t = 2.982$, $p < 0.05$). Individuals having a long-term view would inevitably think about saving for the future and precisely for retirement. These findings are in line with previous studies such as Jacobs-Lawson and Hershey (2005), Webley and Nyhus (2006), Howlett *et al.* (2008), Hershey *et al.* (2010a), Hershey *et al.* (2010b) and Kooij *et al.* (2018). Both the social-cognitive and goal-based motivation theories highlight the role of expected future events as a critical determinant of action; the future time experience of individuals profoundly influences and shapes the goals and plans that control actions and outcomes (Bandura, 1986). This is also confirmed by the high mean score of FTP (4.25), which shows that the FTP is one of the most important variables that the respondents consider. This indicates that the relatively young generation is concerned about the future and what it may bring. So long-term thinking is critical when there is a lot at stake and especially when it concerns their savings for the future.

H2 was not supported as an insignificant negative relationship was found between FRT and RSB ($\beta = -0.044$, $t = 0.72$, $p > 0.47$), which is in line with Koposko's (2013) and Gutierrez and Hershey's (2014) findings. Dahlbäck (1991) found that risk-tolerant individuals tend to have less money in their bank account and a higher burden of debt. They would prefer to invest their money in higher-risk investments, which might result in higher returns rather than keeping the money aside for future needs without getting an additional return from it.

H3 was supported as a significant positive relationship was found between KFPR and RSB ($\beta = 0.728$, $t = 14.737$, $p < 0.00$). The results are in line with previous literature such as Yuh and DeVaney (1996), Grable (2000), Ekerdt and Hackney (2002), Jacobs-Lawson and Hershey (2005), Chan and Stevens (2008) and Petkoska and Earl (2009). The social-cognitive theory highlights the role of personal knowledge as a critical determinant of action.

Table 5.

HTMT correlation

	FRT	FTP	KFPR
FRT			
FTP	0.471		
KFPR	0.381	0.218	
RSB	0.156	0.314	0.775

Table 6.

Parameter estimation
– full model

	Coefficient	<i>t</i> -statistics	<i>p</i> -values
FTP → RSB	0.138	2.982	0.003
FRT → RSB	−0.044	0.722	0.472
KFPR → RSB	0.728	14.737	0.000

Individuals who have high knowledge of financial planning would know how to plan appropriately for their retirement, which would result in adequate saving rates. Thus, higher levels of KFPR enhance RSB. This shows the important role of financial knowledge in general and financial knowledge of retirement planning in particular (Yuh and DeVaney, 1996; Hershey and Mowen, 2000; Ekerdt *et al.*, 2001). As mentioned earlier in the introduction, the level of financial knowledge in the UAE is considered to be low compared to other developing countries. Therefore, the results support previous studies, which showed that financial knowledge is one of the determining variables of RSB (Figure 2).

R^2 was found to be equal to 0.575, which means that 57.5% of RSB is measured by FTP, FRT and KFPR (Figure 3). This value is generally considered to have a moderate effect size.

5. Conclusion and implications

This study aimed to examine the effect of FTP, FRT and KFPR on RSB. This study is unique, as none of the previous research papers studied RSB in the UAE. The findings of this study are consistent with previous research. Both FTP and KFPR had a significant positive effect, while FRT had an insignificant negative impact on RSB.

The results of the study have important implications for working individuals, financial advisors/financial planning professionals, financial institutions and government/policymakers. The study results can be a warning to all working individuals to consider their preparations for retirement to protect themselves after retirement. Working individuals must set achievable and attainable goals for retirement planning, as well as obtain professional advice when facing any problems in preparing retirement plans. Moreover, working individuals who are more knowledgeable about retirement planning must share their knowledge and experience with the people around them. Additionally, in the absence of pension benefits, employers need to be more supportive and proactive in employees' early retirement preparation. All these recommendations can contribute to more efficient and effective retirement planning.

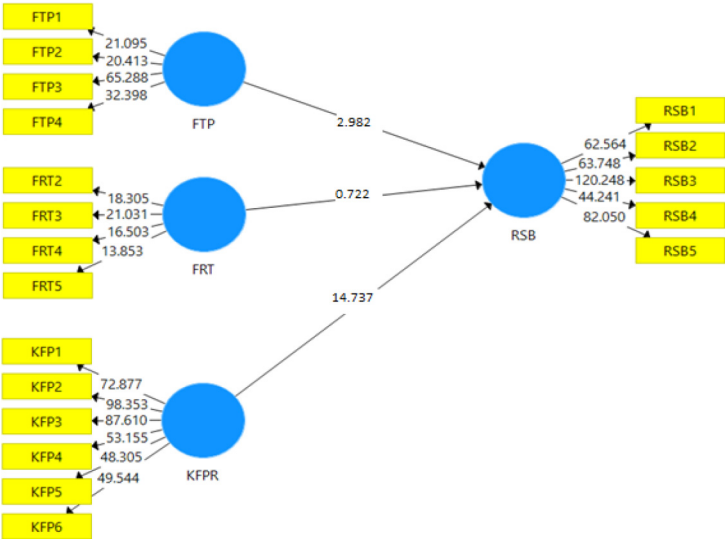
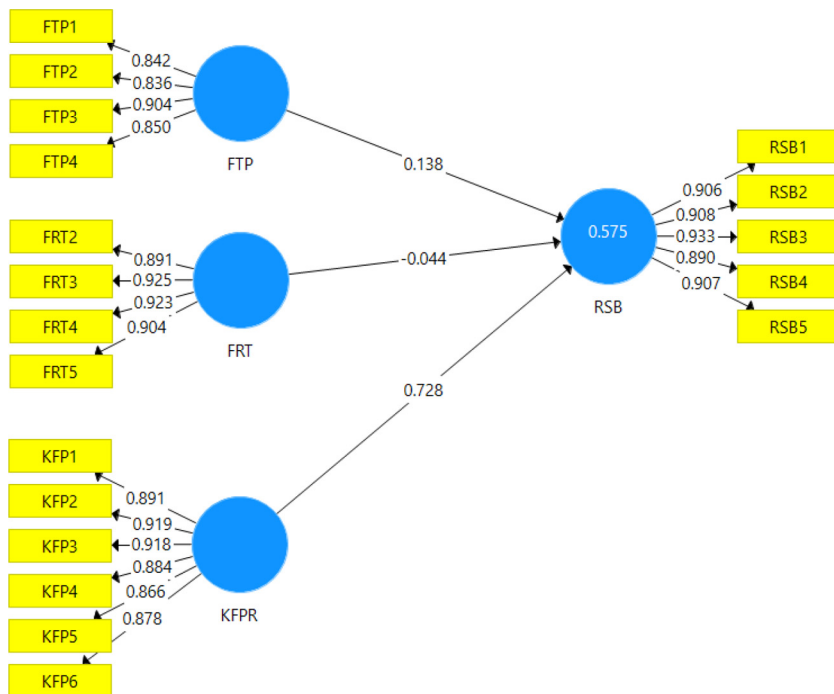


Figure 2.
Structural model



Retirement
saving
behavior

Figure 3.
Measurement model

The scales of FTP and KFPR could be used as assessment techniques to determine the predispositions of customers. A better understanding of the factors that influence RSB can help financial advisors strengthen their clients' attitudes toward retirement. Financial advisors and planning professionals must assist clients through counseling and educational sessions. For instance, a client with low financial knowledge and a short time horizon would benefit from receiving information packages and goal-setting exercises that would enhance his or her understanding of financial planning and extend his or her time horizon.

As a guideline, financial institutions must develop more appealing marketing strategies from time to time to attract young working individuals to save and invest in their future retirement plans. Enticing, in-depth descriptions regarding the importance of investment and insurance could attract more individuals. Working individuals need support from both the government and private sectors to prepare for their retirement. The government can also collaborate with the Central Bank to adopt an ideal retirement saving scheme for the working population. Furthermore, policymakers should create policies with realistic components for educational systems to raise a financially educated generation with greater awareness and willingness to take responsibility. In addition, the low level of financial literacy in the UAE and in most GCC countries needs to be tackled. Looking at how beneficial RSB is, it is imperative that GCC governments design, implement and monitor policies to improve the level of financial knowledge among the younger and older generations alike. This, in return, can reduce a mounting pressure on these governments to interfere in some cases to either cover the debt or provide financial assistance or both to the financially worst-off individuals.

This study is unique as no previous studies were conducted in the UAE or the whole Middle East and North Africa (MENA) region. Still, this study is limited by the fact that it was conducted on a sample of university employees in the UAE. Further research could extend the current work into other industries and other MENA countries. Furthermore, the study examined the effect of a few psychological variables on RSB, while future studies might examine environmental influences, individual differences and other psychological process factors as well. Besides, future research could focus more on the qualitative indicators of planning and saving. The quality of planning and saving efforts need to be evaluated to determine if they are appropriate or not, as more planning and saving are not necessarily better.

References

- Adams, G.A. and Rau, B.L. (2011), "Putting off tomorrow to do what you want today: planning for retirement", *American Psychologist*, Vol. 66 No. 3, pp. 1-13.
- Ahmed, I. (2020), "Providing monetary support to their families is the top financial goal among UAE working residents", available at: <https://mena.yougov.com/en/news/2020/03/17/providing-monetary-support-their-families-top-fina/>
- Al Rifai, N. (2019), "Half of UAE expats saving 5% or less of income – survey", available at: www.zawya.com
- Ali, A.J. and Wisniesk, J.M. (2010), "Consumerism and ethical attitudes: an empirical study", *International Journal of Islamic and Middle Eastern Finance and Management*, Vol. 3 No. 1, pp. 36-46.
- Aswad, N.G., Vidican, G. and Samulewicz, D. (2011), "Creating a knowledge-based economy in the United Arab Emirates: realising the unfulfilled potential of women in the science, technology and engineering fields", *European Journal of Engineering Education*, Vol. 36 No. 6, pp. 559-570.
- Bandura, A. (1986), *Social Foundations of Thought and Action*, SAGE Publishing, Englewood Cliffs.
- Chahal, S.S. and Savita, S. (2014), "Knowledge sharing among university teaching staff: a case study", *Maharshi Dayanand University*, pp. 1-8.
- Chan, S. and Stevens, A.H. (2008), "What you don't know can't help you: pension knowledge and retirement decision making", *Review of Economics and Statistics*, Vol. 90 No. 2, pp. 253-266.
- Churchill, G.A. (1979), "A paradigm for developing better measures of marketing constructs", *Journal of Marketing Research*, Vol. 16 No. 1, pp. 64-73.
- Croy, G., Gerrans, P. and Speelman, C. (2010), "The role and relevance of domain knowledge, perceptions of planning importance, and risk tolerance in predicting savings intentions", *Journal of Economic Psychology*, Vol. 31 No. 6, pp. 860-871.
- Dahlbäck, O. (1991), "Saving and risk taking", *Journal of Economic Psychology*, Vol. 12 No. 3, pp. 479-500.
- Ekerdt, D.J. and Hackney, J.K. (2002), "Workers' ignorance of retirement benefits", *The Gerontologist*, Vol. 42 No. 4, pp. 543-551.
- Ekerdt, D.J., Hackney, J., Kosloski, K. and DeVine, S. (2001), "Eddies in the stream: the prevalence of uncertain plans for retirement", *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, Vol. 56 No. 3, pp. 162-170.
- El Sawy, N. (2020), "Almost half of UAE expatriates have no financial plan to fund their retirement", available at: www.thenational.ae
- Farrell, A.M. and Rudd, J.M. (2009), "Factor analysis and discriminant validity: a brief review of some practical issues", *Anzmac*, pp. 1-9.

-
- Faught, A.M., Olsen, L., Schubert, L., Rusthoven, C., Castillo, E., Castillo, R., . . . Vinogradskiy, Y. (2018), "Functional-guided radiotherapy using knowledge-based planning", *Radiotherapy and Oncology*, Vol. 129 No. 3, pp. 494-498.
- Fernandes, D., Lynch, J.G., Jr and Netemeyer, R.G. (2014), "Financial literacy, financial education, and downstream financial behaviors", *Management Science*, Vol. 60 No. 8, pp. 1861-1883.
- Ferraro, K.F. and Su, Y.P. (1999), "Financial strain, social relations, and psychological distress among older people: a cross-cultural analysis", *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, Vol. 54B No. 1, pp. 3-15.
- Gliem, J.A. and Gliem, R.R. (2003), "Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales", *Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education*, pp. 82-88.
- Grable, J.E. (2000), "Financial risk tolerance and additional factors that affect risk taking in everyday money matters", *Journal of Business and Psychology*, Vol. 14 No. 4, pp. 625-630.
- Gutierrez, H.C. and Hershey, D.A. (2014), "Age differences in expected satisfaction with life in retirement", *The International Journal of Aging and Human Development*, Vol. 78 No. 2, pp. 93-114.
- Haine, A. (2018), "Three quarters of UAE residents are not saving anything for retirement", available at: www.thenational.ae
- Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011), "PLS-SEM: Indeed a silver bullet", *Journal of Marketing Theory and Practice*, Vol. 19 No. 2.
- Hariharan, G., Chapman, K.S. and Domian, D.L. (2000), "Risk tolerance and asset allocation for investors nearing retirement", *Financial Services Review*, Vol. 9 No. 2, pp. 159-170.
- Hershey, D.A. (2004), "Psychological influences on the retirement investor", *CSA: Certified Senior Advisor*, Vol. 22, pp. 31-39.
- Hershey, D.A. and Mowen, J.C. (2000), "Psychological determinants of financial preparedness for retirement", *The Gerontologist*, Vol. 40 No. 6, pp. 687-697.
- Hershey, D.A. and Walsh, D.A. (2000), "Knowledge versus experience in financial problem solving performance", *Current Psychology*, Vol. 19 No. 4, pp. 261-291.
- Hershey, D.A., Brown, C.E. and Jacobs-Lawson, J.M. (2001), "Retirees' perceptions of important retirement decisions", *The Southwestern Journal on Aging*, Vol. 16, pp. 91-100.
- Hershey, D.A., Henkens, K. and Van Dalen, H.P. (2007a), "Mapping the minds of retirement planners: a cross-cultural perspective", *Journal of Cross-Cultural Psychology*, Vol. 38 No. 3, pp. 361-382.
- Hershey, D.A., Henkens, K. and van Dalen, H.P. (2010a), "What drives retirement income worries in Europe? A multilevel analysis", *European Journal of Ageing*, Vol. 7 No. 4, pp. 301-311.
- Hershey, D.A., Henkens, K. and van Dalen, H.P. (2010b), "Aging and financial planning for retirement: interdisciplinary influences viewed through a cross-cultural lens", *The International Journal of Aging and Human Development*, Vol. 70 No. 1, pp. 1-38.
- Hershey, D.A., Jacobs-Lawson, J.M., McArdle, J.J. and Hamagami, F. (2007b), "Psychological foundations of financial planning for retirement", *Journal of Adult Development*, Vol. 14 Nos 1/2, pp. 26-36.
- Howlett, E., Kees, J. and Kemp, E. (2008), "The role of self-regulation, future orientation, and financial knowledge in long-term financial decisions", *Journal of Consumer Affairs*, Vol. 42 No. 2, pp. 223-242.
- Jacobs-Lawson, J.M. (2003), *Age Differences in Planning for Retirement among Working Women*, OK State University, Stillwater.

-
- Jacobs-Lawson, J.M. and Hershey, D.A. (2005), "Influence of future time perspective, financial knowledge, and financial risk tolerance on retirement saving behaviors", *Financial Services Review*, Vol. 14 No. 4, pp. 331-344.
- Joo, S.-H. and Grable, J.E. (2005), "Employee education and the likelihood of having a retirement savings program", *Journal of Employment Counseling*, Vol. 37 No. 1, pp. 37-49.
- Keating, N. and Marshall, J. (1980), "The process of retirement: the rural self employed", *The Gerontologist*, Vol. 20 No. 4, pp. 437-443.
- Kline, P. (2014), *An Easy Guide to Factor Analysis*, Routledge.
- Kline, R.B. (2011), *Principles and Practice of Structural Equation Modeling*, Guilford Press, New York, NY City.
- Kooij, D.T., Kanfer, R., Betts, M. and Rudolph, C. (2018), "Future time perspective: a systematic review and meta-analysis", *Journal of Applied Psychology*, Vol. 103 No. 8, pp. 1-27.
- Koposko, J.L. (2013), *Parental and Social Influences on Understanding of Financial Planning for Retirement*, OK State University.
- Kotlikoff, L. (1993), "'Saving.' The concise encyclopedia of economics", *Library of Economics and Liberty*.
- Lai, M.M., Lai, M.L. and Lau, S.H. (2009), "Managing money and retirement planning: academics' perspectives", *Pensions: An International Journal*, Vol. 14 No. 4, pp. 282-292.
- Larson, L.R., Eastman, J.K. and Bock, D.E. (2016), "A multi-method exploration of the relationship between knowledge and risk: the impact on millennials' retirement investment decisions", *Journal of Marketing Theory and Practice*, Vol. 24 No. 1, pp. 72-90.
- Lim, T.S., Mail, R., Abd Karim, M.R., Baharul-Ulum, Z.A., Jaidi, J. and Noordin, R. (2018), "A serial mediation model of financial knowledge on the intention to invest: the Central role of risk perception and attitude", *Journal of Behavioral and Experimental Finance*, Vol. 20, pp. 74-79.
- Litterer, J.A. (1973), "Analysis of".
- Lusardi, A. (1999), "Information, expectations, and savings for retirement", in *Behavioral Dimensions of Retirement Economics*, Brookings Institution Press, Washington, DC, pp. 81-115.
- Lusardi, A. and Mitchell, O.S. (2007), "Baby boomer retirement security: the roles of planning, financial literacy, and housing wealth", *Journal of Monetary Economics*, Vol. 54 No. 1, pp. 205-224.
- McLaren, K. (2018), "How financially knowledgeable are consumers in the UAE?", available at: [YouGov:https://mena.yougov.com/en/news/2018/12/17/how-financially-knowledgeable-are-consumers-uae/](https://mena.yougov.com/en/news/2018/12/17/how-financially-knowledgeable-are-consumers-uae/)
- Madichie, N.O. and Blythe, J. (2011), "The 'bold and the beautiful' of the UAE retail environment", *Marketing Intelligence and Planning*, Vol. 29 No. 6, pp. 593-601.
- Mahon, N.E. and Yarcheski, T.J. (1994), "Future time perspective and positive health practices in adolescents", *Perceptual and Motor Skills*, Vol. 79 No. 1, pp. 395-398.
- Masters, R. (1989), "Study examines investors' risk-taking propensities", *Journal of Financial Planning*, Vol. 2 No. 3, pp. 151-155.
- Mellers, B.A., Schwartz, A. and Cooke, A.D. (1998), "Judgment and decision making", *Annual Review of Psychology*, Vol. 49 No. 1, pp. 447-477.
- Mitchell, O.S. and Moore, J.F. (1998), "Can Americans afford to retire? New evidence on retirement saving adequacy", *The Journal of Risk and Insurance*, Vol. 65 No. 3, pp. 371-400.
- Moorthy, M.K., Chelliah, T.D., Sien, C.S., Leong, L.C., Kai, N.Z., Rhu, W.C. and Teng, W.Y. (2012), "A study on the retirement planning behaviour of working individuals in Malaysia", *International Journal of Academic Research in Economics and Management Sciences*, Vol. 1 No. 2, pp. 54-72.

-
- Mori, N. (2019), "Determinants of individual savings among Tanzanians", *Review of Behavioral Finance*, Vol. 11 No. 3, pp. 352-370.
- Mowen, J.C., Hershey, D.A. and Jacobs-Lawson, J. (2000), "Psychological determinants of retirement planning activities", in *Poster presented at the Annual Meeting of the Gerontological Society of America, Washington, DC*.
- Murphy, C.H. (2009), "Retiring in a time of economic uncertainty", *Academe*, Vol. 95 No. 5, pp. 36-38.
- Neukam, K.A. and Hershey, D.A. (2002), "Fear and goal-based planning motives: a psychological model of financial planning for retirement", Paper presented at the Annual Meeting of the Gerontological Society of America, Boston, MA.
- Nunn, C. (2017), "The future of retirement shifting sands", available at: www.hsbc.ae/futureofretirement
- Parker, A.M., De Bruin, W.B., Yoong, J. and Willi, R. (2012), "Inappropriate confidence and retirement planning: four studies with a national sample", *Journal of Behavioral Decision Making*, Vol. 25 No. 4, pp. 382-389.
- Petkoska, J. and Earl, J.K. (2009), "Understanding the influence of demographic and psychological variables on retirement planning", *Psychology and Aging*, Vol. 24 No. 1, pp. 245-251.
- Ping, R.A. (2009), "Is there any way to improve average variance extracted (AVE) in a latent variable (LV) X (revised)?"
- Rahi, S. (2017), "Research design and methods: a systematic review of research paradigms, sampling issues and instruments development", *International Journal of Economics and Management Sciences*, Vol. 6 No. 2, pp. 1-5.
- Raykov, T. (1998), "Coefficient alpha and composite reliability with interrelated nonhomogeneous items", *Applied Psychological Measurement*, Vol. 22 No. 4, pp. 375-385.
- Sabri, M.F. and Juen, T.T. (2014), "The influence of financial literacy, saving behaviour, and financial management on retirement confidence among women working in the Malaysian public sector", *Asian Social Science*, Vol. 10 No. 14, pp. 40-51.
- Sukamolson, S. (2007), "Fundamentals of quantitative research", *Language Institute Chulalongkorn University*, pp. 1-20.
- Sung, J. and Hanna, S.D. (1996), "Factors related to risk tolerance", *Financial Counseling and Planning*, Vol. 7, pp. 11-19.
- Topa, G., Lunceford, G. and Boyatzis, R.E. (2018), "Financial planning for retirement: a psychosocial perspective", *Frontiers in Psychology*, Vol. 8, pp. 1-8.
- Webley, P. and Nyhus, E.K. (2006), "Parents' influence on children's future orientation and saving", *Journal of Economic Psychology*, Vol. 27 No. 1, pp. 140-164.
- Wilson, V.M. (1998), *A Cohort Study of Individual Retirement Savings Behavior*, University of CO, Denver.
- Yang, T.Y. and Devaney, S.A. (2011), "Intrinsic rewards of work, future time perspective, the economy in the future and retirement planning", *Journal of Consumer Affairs*, Vol. 45 No. 3, pp. 419-444.
- Yoong, F.J., See, B.L. and Baronovich, D.-L. (2012), "Financial literacy key to retirement planning in Malaysia", *Journal of Management and Sustainability*, Vol. 2 No. 1, pp. 75-86.
- Yuh, Y. and DeVaney, S.A. (1996), "Determinants of couples' defined contribution retirement funds", *Journal of Financial Counseling and Planning*, Vol. 7, pp. 31-38.
- Yuh, Y. and Olson, P. (1997), "Factors affecting the retirement fund levels of self-employed households and wage and salary households", *Family Economics and Resource Management Biennial*, Vol. 2, pp. 25-31.
- Zimbardo, P.G. (1990), *Shyness: What It is, What to Do about It*, Da Capo Press, Cambridge, MA.

Appendix. Questionnaire

Items that comprise the five scales in the investigation

- (1) Retirement saving behavior
 - I made meaningful financial contributions to my voluntary retirement savings plan.
 - Relative to my peers, I have saved a great deal for retirement.
 - I kept accumulated substantial savings for retirement.
 - I made a conscious effort to save for retirement.
 - Based on how I plan to live my life in retirement, I have saved accordingly.
- (2) Future time perspective
 - The distant future is too uncertain to plan for. (R)
 - The future seems very vague and uncertain to me. (R)
 - I pretty much live on a day-to-day basis. (R)
 - I enjoy living for the moment and not knowing what tomorrow will bring. (R)
- (3) Financial risk tolerance
 - I prefer investments that have higher returns even though they are riskier.
 - For retirement investment, overall growth potential is more important than the level of risk.
 - I am willing to make risky investments to ensure retirement financial stability.
 - As a rule, I would never choose the safest investment when planning for retirement.
- (4) Knowledge of financial planning for retirement
 - I am very knowledgeable about financial planning for retirement.
 - I know more than most people about retirement planning.
 - I am very confident in my ability to do retirement financial planning.
 - When I have a need for financial services, I know exactly where to obtain information on what to do.
 - I am knowledgeable about how Social Security works.
 - I am knowledgeable about how private investment plans work.

Note: Items marked with (R) were reverse coded.

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