Financial Literacy and Financial Behaviour in Four Different Age Groups in Malaysia

Afransell Vlarie Anak Douglas[1], Afrina Binti Mohd Khairul Anwar[1], Dafferin Sherylyn Garing[1], Puteri Arliansha Binti Arman Perpakaran[1], Josephine Tan-Hwang Yau[1,2], and Audrey Liwan[1]

[1]Faculty of Economics and Business, Universiti Malaysia Sarawak, 94300 Kota Samarahan, Sarawak, Malaysia
[2]corresponding author, email: ythjosephine@unimas.my

Abstract

The goal of this research was to look at the association between financial literacy and financial behaviour in different age groups. Financial literacy was judged by the number of accurate answers from questions that required the respondent to calculate and also was based on the respondents' responses on a scale of 1 to 5. The age groupings were as follows: 13–19, 20–39, 40–59, and 60 and over. Long-term financial behaviour included retirement saving and investment, whereas short-term financial behaviour included expenditure and emergency savings. The data was gathered from a sample of 300 respondents through a survey method. It was analysed using Ordered Logistic Regression. The findings are broadly similar with those of other investigations. However, some of the results may differ due to its geographical boundaries, sample size, and research design. This research demonstrates policymakers and financial practitioners with a detailed financial assessment of various age groups, along with valuable insights.

Keywords

Financial literacy, financial behaviour, age groups, Malaysia

INTRODUCTION

Generally, in the last century, the development of the economy or the financial markets have become progressively complex. This means the dramatic financial system has occurred and it is constantly impacting the financial decisions of every individual. For instance, the shifting of financial decisions in corporations, whereby the involvement of employers in the decision of pension contributions have gradually decreased over time, in which every individual today carries the responsibility for the decisions of their financial well-being. Many statements agree that good financial practices during younger years do influence a good financial wellbeing and less financial problems during older years. The decisions made in managing finances are becoming more and more challenging, not only to financial institutions and businesses, but also to households and individuals. In addition, each different age group has their own motives or intention for living in terms of

financial pressures, perspectives and influences (Zick et al, 2002). Hence, a question arises as the consumers' needs are changing over time, how do these differences in intentions affect the financial behaviour of younger and older adults?

This research aims to examine the relationship between financial literacy and financial behaviour among adults at different age groups, with insights from Malaysia. The financial behaviour shall include the examination on short and long term financial decisions of young and older adults. In the survey, those in the age range of 13 to 39 are considered young adults, whereas those who fall within 40 years of age and above are considered older adults. To derive conclusions on the mixed findings of previous researchers, this paper studies closely the significance of financial literacy and financial behaviour by examining younger and older adults' financing decisions on their day-to-day as well as assessing their short term and long term financial planning through the distribution of survey questionnaires.

The awareness of financial literacy among young and older adults matters as it enables them for easier administration of their finances in short or long-term financial decision making. Past research stated a fact that those young adults with high financial literacy are the significant factor for the future development in a country's economy. Research literacy tends to increase with the level of education and age, but some previous research did conclude that young adults with high education still have low financial literacy, which affects their financial behaviour in making short- and long-term financial planning. Therefore, problem statements arise when a high level of education is not a guarantee in financial literacy as young adults are increasingly burdened by debt and high level of commitment at a young age (Scheresberg, 2013). As stated by Bennet et al. (2012), decisions in managing finances have lasting effects on every stage of life. They further suggested that increasing financial literacy is a baseline that every younger years should prepare as it facilitates better options in both short and long term financial decisions in later years. In contrast, older adults are most likely to have lower debt, and their financial knowledge may increase over time through financial experience, adaptation, and exposure to financial technology.

Many past studies have derived findings on the relationship between financial literacy and financial decision making in most developed as well as developing countries such as the United States, Japan, and Korea. In addition, the research is becoming widespread from time to time. However, there is only a little research evidence on financial literacy among adults in Malaysia. Through this research, it is significant to external users, especially to future researchers that are interested in investigating the relationship between financial literacy and financial behaviour among adults, specifically Malaysian adults. Furthermore, users can also evaluate whether the level of literacy of adults has improved as years pass by through these research findings. This is a unique research contribution whereby this study provides the appropriate different age groups that clearly specify their spending or financial behaviours and subsequently examines whether financial knowledge has any associations with short- and long-term financial behaviours.

This research is organised into a few sections. The next section discusses the background, followed by a literature review that provides past research reviews pertinent to this study, as well as hypothesis development. A section to discuss the appropriate theory and, subsequently, to provide details on sample data as well as the methodology used. It is then followed by the descriptive and empirical findings, which conclude the findings of this research.

Background of Study

The level of financial literacy is believed to be changing from decades ago, consistent with the increased level of education, especially in modern times. However, the financial literacy of adults is still in question. Why is there also a need to conduct research on financial literacy and one's financial behaviour? Simply because of fraud victims, not specifically occurring to young adults, but these older adults are often targeted for certain types of fraud. New schemes have consistently emerged and tricked people into keeping their money. Thus, gaining knowledge of and acknowledging the financial products and services before deciding what to purchase is important. Enhanced financial knowledge has profound well-being, avoiding pitfalls in debt and investment scams (Anwar et. al, 2020).

Young adults are naturally more burdened by debts compared to older adults as a consequence of having to make early necessary commitments at younger ages. Many research or statements on high debt are linked to the effect of high living costs that have been gradually increased compared to the past ten years. As for higher learning institutions, some students take out study loans such as National Higher Education Fund Corporation (PTPTN) and are burned by loan repayment, usually a few months after graduation. As disclosed in the news as of 2021, the number of borrowers that pay consistently is lower than the total number of borrowers who do not yet make any repayments (Ministry, as cited in Star, 2021). Another finding extracted from The Star newspaper back in 2015 revealed that approximately 25,000 young adults at the age of under 35 have declared bankruptcy since 2010, which is usually due to the inability to support debt from mortgages, hire purchase transactions, credit cards, and personal loans (Adzis et al., 2017). Similar statements by the Assistant Governor, Bank Negara Malaysia, whereby high credit card debt has been recorded by the youth in Malaysia. He further stated it as alarming news as it reflected that financial literacy as a concept among young adults in Malaysia is still lacking (Mohamad, 2020).

The disclosure on the compilation of debt factors among households from various past researchers and concludes their findings whereby: good financial management leads to lower debt, lower income has higher debt, and having high materialistic behaviour leads to higher debt levels (Adzis et al., 2017). There is no doubt that the financial independence of the elderly is influenced by the financial practices they had during their younger years. As observed in general, older adults tend to be exposed to or focus on basic financial management such as planning and cash management, but a lower percentage is found among elderly adults exposed to investment activities and credit plans (Jariah et al.,2012). However, lower debts and fewer financial problems are examined among older adults, which are most likely improved by experience. Demographic factors and behavioural aspects in managing the finances also play a crucial role in financial planning before retirement, not only financial literacy education (Kenayathulla et. al.,2018). The researchers also emphasise that policymakers need to implement programmes to enhance financial literacy in order to aid retirement planning amongst adults. An improved well-being initially resulted from good financial management and a good practice in spendings and savings.

LITERATURE REVIEW

Financial behaviour

Financial behaviour is linked with the financial literacy of an individual of all age groups. Financial behaviour is the habits or the way an individual uses their money for a specific purpose especially in funding their needs based on their level of financial literacy and capability. Financial behaviour can also be categorised into two, namely long- and short-term financial behaviour. Long-term financial behaviour includes retirement saving behaviour and investing behaviour, whereas short-term financial behaviour includes spending and emergency saving behaviour (Henager and Cude, 2016). Different age groups are said to have different tolerance of financial behaviour as their needs and wants change in line with their financial situation. For instance, younger generations might have lower financial capabilities as they just started working, groups of students or might not have any savings yet as they need to pay necessities more and vice versa. This is confirmed by Mokhtar et al (2020) where they found that young individuals, particularly those between the ages of 18 and 24, seemed to have the least assessed financial aptitude and that as people matured, they gained a wealth of information and experience that allowed them to make wise financial decisions.

Past research also agreed that financial literacy is important among young adults (18 to 39 years old) in order to have good financialbehaviour in both short and long term. Despite individuals possessing knowledge and a positive outlook on financial concerns, their future financial well-being is contingent on their behaviour around the use of money in their everyday life (Choudhary and Kamboj, 2017). Most young individuals are not just incapable of dealing with unforeseen events, but also have no long-term plans (Scheresberg, 2013). This is supported by the findings of Silva et al. (2014), who conducted research on the financial behaviour of young adults and summed up their research results with survey results indicating that, despite the fact that one hundred percent of the surveyed population believes budgeting is important, only sixty percent save on regular basis. Therefore, the long-term financial behaviours of young people indicate that they are less capable of saving owing to a number of circumstances.

Age and education were significantly associated with financial literacy and financial health, according to Rahman et al. (2021). In which older generations have more experience and knowledge of financial management. However, there are also views from past research assuming that the older groups who have not retired still have a lot of debts and liabilities that they have not paid, especially those of low-income individuals or families. How effectively older families handle their wealth possessions is a significant driver of their retirement financial stability, and very little is understood about their financial decision-making and how this connects to their financial knowledge (Fong et. al., 2021). Although this age group should be at the pinnacle of their retirement funds, they are saddled with debt due to education loans and outstanding medical costs; starting a family also impacts their financial situation (Lusardi et al., 2020). This study will examine the relationship between these financial behaviours and financial literacy in different age groups.

Financial Literacy

In general, financial literacy means having the concept and knowledge of financing. A broad definition of financial literacy was discussed in various past researches. A measure of competency in human resources to improve well-being (Hustan, as cited in Hasibuan et. al, 2017) and the capability to control personal finance (Chen and Volpe, 2002). In this aspect, financial literacy can be associated with the knowledge or education of an individual, which includes, in this aspect, both young and older adults on any financial activity. This includes knowledge and skills in managing finances and financial activities such as investments, loans, budgeting and any other related undertakings, both short and long term.

From the early 20's until recent years, researchers conducted several types of assessments with the core purpose of measuring the financial knowledge of individuals. In the findings of American schools back in the late 90's, the outcomes of questionnaires were not assured, as only approximately ten percent of the total number of senior high school students were able to answer the *Personal Financial Survey* correctly. Nevertheless, the knowledge in saving and money management continued to decline as it was recorded to the lowest levels but the knowledge in credit and spending were gradually increased (Mandell, 2008). The researcher added that clearer positive or assuring results were seen when the survey was supplemented with college students instead of high school graduates and concluded that a higher level of education has a positive relationship with financial literacy. Meyers (2020) stated that young adults are at a disadvantage in developing financial literacy because they have fewer opportunities to practise financial behaviours. Unlike American students, mostly Malaysian students or teenagers who have just started working, they still lack the responsibility and awareness to take into account the importance of financial literacy.

In addition, a paper of financial literacy studies by investigating what younger adults know and do not know as determined by a set of simple questions that assessed their financial literacy, it was discovered that financial literacy was severely lacking among young adults; according to their surveys, only 27 percent of young adults have knowledge of it (Lusardi et al., 2009). Older adults also have low financial literacy where most of them do not understand the concepts in finance such as inflation and risk diversification, which are the prospects of good financial decisions. Most researchers, however, believed and supported both knowledge and experience to enhance financial literacy. In an analysis, a larger role of short-term planning is seen in younger cohorts compared to older cohorts (Xiao et al., 2015).

Another research also supported knowledge and experience, which stated that young adults usually have behaviours such as spending and budgeting, but as in contrast, older adults are more experienced in investing and borrowing, which also includes retirement planning. In fact, older adults are better at handling borrowings (Shim et al., 2013). In other words, younger adults focus more on short-term planning, whereas older adults look forward to long-term financial planning. Research findings on Klang Valley Malaysia, the financial exposure, financial awareness and monetary goals help in enhancing knowledge in elderly cohorts which takes place in the planning of financial retirement (Kenayathulla et. al.,2018). From the discussions, researchers derive the hypotheses as below:

H1: Financial literacy has a positive relationship with long-term financial behaviour, and the relationship is stronger for subjective financial knowledge in the older age group.

H2:Financial literacy has a positive relationship with short-term financial behaviour, and the relationship is stronger for objective financial knowledge in the younger age group.

Age Groups

This research is conducted where age is taken into consideration as an independent variable, specifically young adults, 13 to 39 years old, and the older generations range from the age of 40 years old and above. The research assumes that different age groups have their own financial tolerance depending on their spending behaviour and financial literacy. Thus, the purpose of this research is to determine the relationship between financial literacy and financial behaviour in both younger and older age groups. Xiao and Chen (2015), in their research of age differences in consumer financial capability: financial literacy and desirable financial behaviour, expect older consumers to demonstrate higher levels of both objective and subjective financial literacy, more desirable financial behaviours, a higher level of perceived financial capability, and a higher score on the financial capability index.

Furthermore, researchers believe that young adults have low financial literacy as in Malaysia they are most likely to be students or teenagers who are just starting a career, either with a low level of education or fresh graduates. According to Mokhtar et al. (2020), people actually believed that as they aged, they gained a wealth of knowledge and experience that enabled them to make wise financial decisions. This means the older group has more stable financial literacy and behaviour. They are those who have worked for a long time, have savings, higher salaries due to the mandatory increment each year, and those who are retired. Hence, they know how to manage their finances well with high financial literacy and right-minded financial etiquette. It is supported by Milson (2021), his findings revealed that older age was positively associated with increased financial literacy. As a result, young adults may be lacking in financial literacy, which will be investigated in this paper.

The Theory of Planned Behaviour

In 1980, the Theory of Planned Behaviour (TPB) was established to predict a person's intention to participate in a given behaviour at a specific time and location (Ajzen, 1991). The purpose of the hypothesis was to define all human behaviours over which they may exert self-control, as well as those over which others would act in opposition. The TPB was used to anticipate the future range of behaviours, and it suggests that the effectiveness of a behaviour is governed by both motivation (intention) and skill (behavioural control).

In his study, Cunningham (2003) argues that TPB has been utilised in several human domains to explore links involving beliefs, attitudes, behavioural intentions, and behaviours. These fields include advertising, public relations, advertising campaigns, healthcare; sports management; and sustainability. In addition, TPB has boosted the predictability of intentions in a range of health-related areas, such as condom usage, leisure, exercise, and nutrition, among others. TPB (and TRA) have also aided the understanding of a person's social behaviour by incorporating social norms as a key explanatory element (Pratkanis & Greenwald, 1989). In the context of this study, using a sample of younger and older working adults in Malaysia, the TPB will be used to explore how financial literacy is formed through the interaction of behavioural components such as financial education, knowledge, attitude, and behaviour.

DATA AND METHODOLOGY

Data Collection Methods

The research incorporates quantitative methodologies. To establish the association between financial literacy and financial conduct, casual research approaches were utilised. Causal research is undertaken to determine the respondents' financial literacy. This study makes use of both primary and secondary data. The technique of acquiring primary data was through a questionnaire survey, which was distributed to the target population. Secondary data, such as journals and articles, is also employed to assist this research.

The research takes data from respondents with an age range ranging from 13 years old to over 60 years old in Malaysia. The population sample should have a diversity of educational backgrounds. They must have a basic grasp of finances. There are no constraints on respondents' choice of profession as long as they satisfy the above-mentioned requirements. Non-probability sampling procedures such as quota sampling as well as convenience sampling are applied to evaluate the target population in this study. For this research, a required sample size of 341 questionnaires has already been determined to be representative. Initially, the objective of this study was to reach 500 participants within the time and resource limits. Considering the time limits and the potential that numerous respondents picked "don't know" as the response, it would not be recorded as the proper choice.

This research adopted a self-administered questionnaire approach to collect data. A multiple choice question, a yes or no question, and a Likert scale are included in the questionnaire. The study employed a closed-ended format while developing the questions. Once respondents identified their level of financial literacy, this strategy allowed them to stay anonymous. This is regarded to be advantageous in creating more impartial replies. The obtained data was handled prior to analysis. Incomplete data and outliers were verified in the dataset. The data was then examined using SPSS Version 28.0.1 statistical software. It is an easy-touse programme, and it is an extraordinarily effective tool for manipulating and analysing survey data.

Dependent Variable

The dependent variable in this research is short-and long-term financial behaviour. The short-term financial behaviour index was made up of three questions about whether or not someone had an emergency fund, how much money they spent compared to how much money they made, and whether or not they had ever gone overdrawn on a checking account. The long-term financial behaviour index was made up of three questions about planning for retirement, owning investments outside of retirement accounts, and setting long-term financial goals. The variables were coded using numbers. For example, for a yes-or-no question, we use 0 for yes and 1 for no. Same goes to questions that ranges 0 to 4.

Independent Variable

The variables of financial literacy were established in accordance with the conceptual framework. Using examples from past research, objective knowledge about interest rates, inflation, and bond prices was based on the number of correct answers, while subjective knowledge was composed of a single question with answers ranging from 1 (very low) to 5 (very high) to test the respondent's confidence in their knowledge of bond prices, inflation, and interest rates (high). Since the connection between the two categories suggested

that the tests were not testing the same structure and that each provided a distinct aspect to the total measure of financial literacy, the tests were presumably not assessing the same concept.

Descriptive Analysis

The descriptive analysis approach is employed in this study to demonstrate simple differences in demographic data. The self-perceived financial awareness, the precision of properly responded financial questions, and the real financial knowledge gap are all reported in table form, along with their respective percentages. The percentage of actual financial knowledge gaps is determined by comparing respondents' corrected answers to basic and advanced financial questions to their self-perceived financial knowledge in order to determine if respondents possess knowledge, are unsure, or lack knowledge about financial literacy.

Ordered Logistic Regression

The short-term financial behaviour index consisted of questions pertaining to the existence of emergency savings, expenditure in proportion to income, overdrawing a bank account, and budgeting. The long-term financial behaviour index consists of questions about saving for retirement, retirement plan ownership, and the establishment of long-term financial objectives. The short-term and long-term financial behaviour indexes were subjected to further analysis in order to offer a more thorough picture. A few previous studies use the same method, such as Henager and Cude (2019) and Kim et al. (2018).

The results of the study are examined by observing the odds ratio. An odds ratio is often used in casecontrol studies as it determines the association of the variables or exposure with the outcomes (Szumilas, 2010). For instance, the exposures of the study are the objective and subjective financial knowledge, whereas the outcomes are the short- and long-term financial behaviours of four different age groups. A positive odds ratio indicates that there is greater strength or association between the exposure and the outcomes. A negative odds ratio indicates that the exposures do not explain the effect on the outcomes. The interpretations of the odds ratio are as follows:

OR = 1 (the exposure has no effect on the outcome).
OR > 1 (the exposure has a higher association with the outcome)
OR < 1 or -1 (the exposure has a lower association or has risk with the outcome)

RESULTS AND DISCUSSIONS

Descriptive Findings

The target sample includes both younger and older adults. The online questionnaires were distributed all across the states in Malaysia via social media such as Whatsapp, Instagram, and Facebook, from which researchers achieved 341 respondents, which consists of 53.1% female and 46.9% male. Most of the respondents are Indian, Malay, and Chinese at 43.4%, 23.8%, and 19.1% simultaneously, while the rest are Bumiputera from Sarawak and Sabah.

Based on the age groups, most of the respondents are aged 40 to 59 years old, which refers to older age groups (43.4%) and 20 to 39-year old age groups (40.5%). The fewest respondents are from the youngest

age group between 13 and 19 years old, at 3.5%. The respondents are mostly employed at 41.9% and selfemployed at 33.1%. 8.5% of the respondents are unemployed, 7.7%are retirees, and 8.8% comprises students. As for the states of respondents, 79.9% are from the West and 20.1% are from East Malaysia. The data obtained is rational as the online questionnaires are mostly distributed among working adults at the older age groups.

Most of the respondents have qualifications of Sijil Pelajaran Malaysia (SPM) or Skill Certificate at 35.8% and 33.7%hold a Bachelor's Degree,Master's Degree, or Doctorate Degree. As observed, the respondents are mostly employed in full-time jobs and working in a family business. It can be seen that not many Malaysians have got their investment returns as their source of income. This reflects the long-term financial behaviour of the respondents. The use of pension money as income is the expected response from older adults.

The monthly income indeed affects one's financial behaviour. By observing the monthly income, 48% of the respondents received income in the range of RM1,500 and below. 37.5% received RM1,501 to RM4,500 and the rest received more than RM4,4501. Considering having a lower monthly income with a high commitment, it affects the saving behaviours for both long-term and short-term financial planning. Table 1 Descriptive Analysis

Variables	Frequency (%)
Gender:	
Male	46.9
Female	53.1
Race:	
Indian	43.4
Malay	23.8
Chinese	19.1
Bumiputera Sarawak	10.0
Bumiputera Sabah	3.7
Age:	
13-19 years old	3.50
20-39 years old	40.5
40-59 years old	43.4
60 years and above	12.6
Occupation:	
Unemployed	8.5
Employed	41.9
Self-employed	33.1
Retired	7.7
Student	8.8
States:	
West Malaysia	79.9
East Malaysia	20.1

Variables	Frequency (%)
Education Level:	
Primary school or lower	0
Secondary school	6.5
Sijil Pelajaran Malaysia/Skill Certificate	35.8
Diploma/O Level/6th form	24.0
Bachelor's Degree/Master's Degree/Doctorate Degree	33.7
Source of Income:	
Allowance or spending money from parents	7.3
Student loan/Scholarship	4.6
Working in a family business	21.1
Full time job	55.7
Investment dividend/return	9.3
Pension money	2.0
Monthly Income	
RM1,500 and below	48.1
RM1,501-RM4,500	37.5
RM4,501-RM7,500	11.1
RM7,501-RM10,000	2.3
RM10,501-RM40,000	0.8

Financial Literacy and Long-Term Financial Behaviour

Ordered Logistic Regression With Long-Term Financial Behaviour Index as Dependent Variable (N=341)

	Long Term Financial Behaviour Index

Variables	Coefficient	Standard Error	Odds Ratio
Objective Financial Knowledge	0.384***	0.1052	1.47
Subjective Financial Knowledge	0.461***	0.2296	1.26
Age Group (reference: 13-19 years old)			
20-39 years old	0.481***	0.053	1.59
40-59 years old	0.562***	0.057	2.38
60 years and above	1.201***	0.07	3.78

Notes: *, **, ***, Significant level at 10%, 5% and 1% respectively.

The first hypothesis examined the link between long-term financial behaviours and financial literacy, which has been divided into objective and subjective knowledge. The age group effect was investigated first, preceded by the differences by age group. The table displays the results of the ordered logistic regression for the entire sample. The index of long-term financial behaviour was positively and significantly related to the age group.

The odds ratio of 1.47 for the correlation between the long-term financial behaviour index and objective financial knowledge suggests that a respondent with stronger objective financial knowledge had a 47% higher chance of participating in many long-term financial behaviours, unlike a respondent with limited objective financial knowledge. Similarly, subjective financial knowledge was found to be positively and significantly related to long-term financial behaviour. The odds ratio of 1.26 indicates that a respondent with greater confidence was 26% more likely to engage in one or more of the long-term financial behaviours. In relation to the theory used in this research, the theory of planned behaviour implies that there are reasons for every individual's behaviour. Different age groups in this research are exposed to different factors that influence their financial behaviour. External factors such as education, advertising, and culture influence their spending behaviour.

Age groups were significantly and positively related to long-term financial behaviours, with the 13 to 19 age group serving as the reference group. The odds increased with age; the odds of the 20 to 39 age group engaging in long-term behaviours were 59 percent higher than the 13 to 19 age group. The odds were 3.78 times higher for the oldest age group than the youngest. A research found that because of their increased experience and better emotion regulation, the older age group appears to have better financial behaviour (Eberhardt et al., 2017).

Ordered Logistic Regression With Long-Term Financial Behaviour Index as Dependent Variable (N=341)

Variables	N = 341	Coefficient	Standard Error	Odds Ratio
13-19 years old	12			

Objective Financial Knowledge		0.190***	0.024	1.25
Subjective Financial Knowledge		0.136***	0.023	1.23
20-39 years old	138			
Objective Financial Knowledge		0.122***	0.037	1.43
Subjective Financial Knowledge		0.203***	0.034	1.39
40-59 years old	148			
Objective Financial Knowledge		0.241***	0.039	1.45
Subjective Financial Knowledge		0.382***	0.035	1.41
60 years and above	43			
Objective Financial Knowledge		0.376***	0.045	1.59
Subjective Financial Knowledge		0.431***	0.043	1.56

Notes: *, **, ***, Significant level at 10%, 5% and 1% respectively.

The above table displays the findings of the ordered logistic regressions that investigated the relationship between financial literacy and long-term financial planning and financial behaviour in four different age groups. In each age group, there were significant relationships between the index of long-term financial behaviour and both objective financial knowledge and confidence. As shown in the table, the odds ratios for subjective financial knowledge increased with age, with the odds of an individual with a greater level of financial knowledge and engaging in long-term financial behaviour increased from 23% in the youngest age group, 39% and 41% in the middle, and 56% in the oldest.

Financial Literacy and Short-Term Financial Behaviour

Ordered Logistic Regression With Short-Term Financial Behaviour Index as Dependent Variable (N=341)

Variables	Short Term Financial Behaviour Index		
	Coefficient	Standard Error	Odds Ratio
Objective Financial Knowledge	0.127***	0.052	1.18
Subjective Financial Knowledge	0.288***	0.0296	1.27
Age Group (reference: 13-19 years old)			
20-39 years old	(0.348)***	0.058	0.83
40-59 years old	0.093***	0.061	0.71
60 years and above	0.437***	0.063	1.96

Notes: *, **, ***, Significant level at 10%, 5% and 1% respectively.

The hypothesis that follows investigates the relationship between financial literacy and short-term financial behaviour. The age group effect was studied first, followed by age group differences. The results of the

ordered logistic regression for the entire sample are shown in the table. The age group was significant and positively correlated to the index of short-term financial behaviour. All age groups were also significantly related to the index of short-term financial behaviour. However, as we can see, it was negative for people aged 20 to 39. The remainder of the age group achieves significant and positive results.

The odds ratio of 1.18 for the relationship between the short-term financial behaviour index and objective financial knowledge indicates that a respondent with more objective financial knowledge was 18% more likely than a respondent with less objective financial knowledge to engage in one or more of the shortterm financial behaviours. All age groups are significantly and positively related toshort-term financial behaviour, according to both long and short-term results. The odds increased with age, with the 20-39 age group having an 83% higher chance of engaging in long-term behaviours than the 13-19 age group. The odds for the oldest age group were 1.96 times higher than for the youngest. The odds ratio of 1.27 indicates that a more confident respondent was 27 percent of the time. Hence, financial knowledge was found to be positively and significantly related to short-term financial behaviour.

Ordered Logistic Regressions by Age Group With Short-Term Financial Behaviour Index as Dependent Variable (N=341)

Variables	N = 341	Coefficient	Standard Error	Odds Ratio
13-19 years old	12			
Objective Financial Knowledge		0.190***	0.023	1.19
Subjective Financial Knowledge		0.136***	0.024	1.22
20-39 years old	138			
Objective Financial Knowledge		0.122***	0.025	1.25
Subjective Financial Knowledge		0.203***	0.028	1.34
40-59 years old	148			
Objective Financial Knowledge		0.241***	0.031	1.27
Subjective Financial Knowledge		0.382***	0.033	1.31
60 years and above	43			
Objective Financial Knowledge		0.376***	0.034	1.39
Subjective Financial Knowledge		0.431***	0.041	1.54

Notes: *, **, ***, Significant level at 10%, 5% and 1% respectively.

The table displays the findings of the ordered logistic regressions that investigated the relationship between financial literacy and long-term financial planning and financial behaviours in four different age groups. In each age group, there were significant relationships between the index of long-term financial behaviour and

both objective financial knowledge and confidence. As shown in the table, the odds ratios for subjective financial knowledge increased with age, with the odds of an individual with a greater level of financial knowledge engaging in long-term financial behaviours increasing from 23% in the youngest age group, 39% and 41% in the middle, and 56% in the oldest.

Discussion

This research is primarily aimed at examining the association between financial literacy and financial behaviour in Malaysia across four age groups. In this research, the four age groups were separated into sections: 13 to 39 to represent the younger age group, and 40 and over to represent the older age group. Using data from a survey, this research's final sample size is 341. The data was collected from April to May 2022. The primary findings of this study were that significant positive relationships with long-term financial behaviour, with the relationship being stronger for subjective financial knowledge in the older age group, and significant positive relationships with short-term financial behaviour, with the relationship being stronger for objective financial knowledge in the younger age group, were the primary findings of this study. Both hypotheses are supported by the results of this study, which indicate that both tests are significant.

Previous study findings by Henager and Cude (2019) indicate the opposite outcomes. Their sample size in the research was 23,727, a significant difference compared to this study's sample size. In addition, they used samples from outside of Malaysia; hence, the disparity in geographical contexts may be one of the causes of the divergent findings. A notable conclusion is the low level of objective financial literacy among older respondents compared to those younger than them who can answer questions about interest rates, inflation, and bond prices. Although older respondents are likely to have already handled many financial choices, they did so with little understanding of some objective financial concepts.

In addition, the findings indicate that the subjective financial knowledge of younger age groups is inferior to that of older age groups. The explanation for this may be that younger generations do not see a need for in-depth financial information, such as notions of bond prices or inflations, since they believe they will not need it. Furthermore, older age groups may have experience with investing, which contributes to their knowledge on such concepts compared to younger age groups, who has not yet fully understood the importance of it. The public's worries about the inadequate financial capabilities of young people is partly attributable to the contraction of support services and the concurrent rise in personal responsibility (OECD, 2012). The findings of this study imply that establishing a comprehensive financial literacy and financial education among young people might be especially crucial.

To sum up, there is a difference between the two age groups in terms of financial literacy and financial behaviour. It is evident that older age groups have higher subjective financial knowledge owing to their greater life experiences. The younger generation has a greater grasp of objective financial information than the older generation. Therefore, both hypotheses were approved since they were consistent with the suggested hypothesis.

CONCLUSIONS

The study revealed that long-term financial behaviours were positive and they were significantly related to the age groups. The results of the relationship of financial literacy were examined, using subjective financial knowledge questions to measure the long-term financial planning of individuals. According to the regression results, when the age increases, the odds ratio on the subjective financial knowledge also increases. It indicates that older age groups were better at engaging in long-term financial planning compared to younger adults. Similarly, the short-term financial behaviours were related to age group in a way that was both positive and significant. Using objective financial knowledge questions to investigate the short-term financial behaviours, the results revealed that the odd ratios increased with age group as can be seen in the regression results. Hence, this study interprets that both younger and older adults in Malaysia tend to improve their financial planning behaviour by experience.

The study aims to examine the financial literacy of adults in Malaysia and it has ramifications to every individual, as it influences everything from day-to-day to long-term financial decisions. It is important to assess the efficiency or inefficiency in spending, as well as debt management, since they are all linked to financial literacy and the financial spending behaviours of adults. This study is beneficial to financial institutions such as investment and commercial banks in assessing a better understanding of financial behaviour among Malaysian adults. Specifically, banks can promote financial services or products based on their needs and preferences. The policy makers, specifically to the education ministry, can make use of this study for future crucial implementations. For instance, to emphasise financial literacy education as one of core subjects in primary and secondary schools as it is only an optional part of the syllabus as earlier exposure on financial education is important for better financial decisions. Other than that, this study aims to provide valuable insights to employees and students, especially for undergraduates to examine their financial literacy, thus, encouraging the desire to learn more. Young adults are urged to improve their financial literacy at a young age in order to promote better financial planning, achieve financial stability, and prevent massive debt later in life.

A study is not complete without limitations. As the duration to assess respondents' data is approximately for a month, the outputs of the financial literacy and financial behaviors would vary depending on the timeframe. The results reliability would be better if the study conducts face-to-face surveying instead. This can be done by conducting a 3-months time lag to assess the improvements of respondents' financial literacy and financial behaviors. As for the reliability of data, the responses may provide biassed answers, especially on revealing their personal details as for the demographic question. The race of the respondents was leaning more towards Indian respondents might be because our survey reached more Indian people. It might also be because Indians are more willing to respond to our survey and found it interesting.

The questions for conducting the online survey to address financial literacy are mostly highly used questions involving financial literacy and financial behaviour. This study covered the objective and subjective financial knowledge to measure financial literacy. The objective questions include questions on interests, inflations and bond price while the subjective questions examined the respondents' understanding on the concept of bond price, financial knowledge, as well as concepts of inflation and interests. Hence, to enhance the understanding of financial literacy, future research can emphasise the objective of financial knowledge questions such as to include questions on the understanding of credit management and insurance, as well as the awareness on time value of money. The questions can also include topics on stocks and mortgages in order to derive better results in the measurement of financial literacy. This is supported by Knoll and Housts, as

cited in Heneger and Cude (2019) where providing a set of robust questions are preferable to achieve a better indication on financial knowledge.

The questions on financial behaviour in this study are direct which examined the respondents' shortterm and long-term financial behaviour. The short-term behaviors include questions on emergency funds, spending habits and bank overdraft while the long-term behaviour is accessed on their retirement planning, investments and financial goals. Retirement planning is one of the most frequent questions that most researchers use to measure long-term financial behavior. To reach the maximum validity of the study measure, future studies are recommended to include daily behaviors of respondents. This can be done by including questions that examine their behaviors of checking bank accounts and making a monthly budget.

References

Adzis, A. A., Bakar, J. A., & Shahar, H. K. (2017). Factors influencing young adults' debt in Malaysia. *Journal of Business & Retail Management Research*, *12*(01). https://doi.org/10.24052/jbrmr/v12is01/fiyadim

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-t

Athirah, M. (2020, October 13). Financial literacy among youth alarmingly low. *New Straits Times*. https://www.nst.com.my/opinion/letters/2020/10/631937/financial-literacy-among-youthalarmingly-low

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

Choudhary, K., & Kamboj, S. (2017). A Study of Financial Literacy and Its Determinants: Evidence from India. *Asian Journal of Accounting Perspectives*, *10*(1), 52–72. https://doi.org/10.22452/ajap.vol10no1.4

Cunningham, G. B., & Kwon, H. (2003). The theory of planned behaviour and intentions to attend a sport event. *Sport Management Review*, *6*(2), 127–145. https://doi.org/10.1016/s1441-3523(03)70056-4 de Bassa Scheresberg, C. (2013). Financial Literacy and Financial Behavior among Young Adults: Evidence and Implications. *Numeracy*, *6*(2). https://doi.org/10.5038/1936-4660.6.2.5

Dewi, V. I., Febrian, E., Effendi, N., Anwar, M., & Nidar, S. R. (2020). Financial literacy and its variables: The evidence from Indonesia. *Economics & Sociology*, *13*(3), 133–154. https://doi.org/10.14254/2071-789x.2020/13-3/9

Emily, M. (2020). Young Adult Financial Literacy and Its Underlying Factors. *Honors Theses*, *64*.

Fernandes, D., Lynch, J. G., & Netemeyer, R. G. (2014). Financial Literacy, Financial Education, and

Downstream Financial Behaviors. *Management Science*, *60*(8), 1861–1883. https://doi.org/10.1287/mnsc.2013.1849

Fong, J. H., Koh, B. S., Mitchell, O. S., & Rohwedder, S. (2021). Financial literacy and financial decisionmaking at older ages. *Pacific-Basin Finance Journal*, *65*, 101481. https://doi.org/10.1016/j.pacfin.2020.101481

Hasibuan, B. K., Lubis, Y. M., & HR, W. A. (2018). Financial Literacy and Financial Behavior as a Measure of Financial Satisfaction. *Proceedings of the 1st Economics and Business International Conference 2017 (EBIC 2017)*. https://doi.org/10.2991/ebic-17.2018.79

Henager, R., & Cude, B. J. (2016). Financial Literacy and Long- and Short-Term Financial Behavior in Different Age Groups. *Journal of Financial Counseling and Planning*, *27*(1), 3–19. https://doi.org/10.1891/1052-3073.27.1.3

Henager, R., & Cude, B. J. (2019). Financial Literacy of High School Graduates: Long- and Short-Term Financial Behavior by Age Group. *Journal of Family and Economic Issues*, *40*(3), 564–575. https://doi.org/10.1007/s10834-019-09626-2

Herawati, N. T., Candiasa, I. M., Yadnyana, I. K., & Suharsono, N. (2018). Factors That Influence Financial Behavior Among Accounting Students in Bali. *International Journal of Business Administration*, *9*(3), 30. https://doi.org/10.5430/ijba.v9n3p30

Jariah, M., Husna, S., Tengku Aizan, T. A. H., & Rahimah, I. (2012). Financial Practices and Problems amongst Elderly in Malaysia. *SOCIAL SCIENCES & HUMANITIES*, *20*(4), 1065–1084.

Kim, H. H., Maurer, R., & Mitchell, O. S. (2018). Cognitive Ability, Financial Literacy, and the Demand for Financial Advice at Older Ages: Findings from the Health and Retirement Study. *TIAA Institute Research Dialogue*.

Kumar, S., Watung, C., Eunike, J., & Liunata, L. (2017). The Influence of Financial Literacy Towards Financial Behavior and its Implication on Financial Decisions: A survey of President University Students in Cikarang - Bekasi. *Semantic Scholar*.

Lewis, M. (2008). THE FINANCIAL LITERACY OF YOUNG AMERICAN ADULTS. *2008 JumpStart Financial Literacy Survey*.

Lusardi, A., Mitchell, O. S., & Oggero, N. (2020). Understanding Debt in the Older Population. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3537858

Mokhtar, N., Sabri, M. F., & Ho, C. S. F. (2020). Financial Capability and Differences in Age and Ethnicity. *The Journal of Asian Finance, Economics and Business*, *7*(10), 1081–1091. https://doi.org/10.13106/jafeb.2020.vol7.no10.1081

OECD. (2012). Pisa 2012 Financial Literacy Assessment Framework. *Australian Council for Educational Research*. https://www.oecd.org/pisa/pisaproducts/46962580.pdf

Pratkanis, A. R., Breckler, S. J., & Greenwald, A. G. (1989). *Attitude Structure and Function* (1st ed.) [Ebook]. Psychology Press.

Rahman, M., Isa, C. R., Masud, M. M., Sarker, M., & Chowdhury, N. T. (2021). The role of financial behaviour, financial literacy, and financial stress in explaining the financial well-being of B40 group in Malaysia. *Future Business Journal*, *7*(1). https://doi.org/10.1186/s43093-021-00099-0

Satsios, N., & Hadjidakis, S. (2018). Applying the Theory of Planned Behaviour (TPB) in Saving Behaviour of Pomak Households. *International Journal of Financial Research*, *9*(2), 122. https://doi.org/10.5430/ijfr.v9n2p122

Sekaran, R. (2021, November 24). *Over half a million PTPTN borrowers yet to repay loans*. The Star.

https://www.thestar.com.my/news/nation/2021/11/24/over-half-a-million-ptptn-borrowers-yet-torepay-loans

Selvadurai, V., Kenayathulla, H. B., & Siraj, S. (2018). Financial Literacy Education And Retirement Planning In Malaysia. *Malaysian Online Journal of Educational Management*, *6*(2), 41–66. https://doi.org/10.22452/mojem.vol6no2.3

Shim, S., Serido, J., Bosch, L., & Tang, C. (2013). Financial Identity-Processing Styles Among Young Adults: A Longitudinal Study of Socialization Factors and Consequences for Financial Capabilities. *Journal of Consumer Affairs*, *47*(1), 128–152. https://doi.org/10.1111/joca.12002

Szumilas, M. (2010). *Explaining Odds Ratio*. National Library of Medicine. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2938757/

Wilson, J. M. (2021). Financial Literacy, Experience, and Age Differences in Monetary Sequence Preferences. *Graduate Theses, Dissertations, and Problem Reports*. https://doi.org/10.33915/etd.3864

Xiao, J. J., Chen, C., & Sun, L. (2015). Age differences in consumer financial capability. *International Journal of Consumer Studies*, *39*(4), 387–395. https://doi.org/10.1111/ijcs.12205

Zulaihati, S., Susanti, S., & Widyastuti, U. (2020). Teachers' financial literacy: Does it impact on financial behaviour? *Management Science Letters*, 653–658. https://doi.org/10.5267/j.msl.2019.9.014