

## **Personal Financial Literacy: An Analysis among Tertiary Education Students**

**By**

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### **Abstract**

#### ***Background***

A country will categorize as aging nation when 15 percentage of the population aged 65 years old and above. This aging phenomenon subsequent led to two issues, namely health and financial issue. Thus, financial knowledge is important for individual.

#### ***Purpose***

The objective of this study is to examine the level of financial knowledge and to determine the financial characteristic toward financial knowledge level among tertiary education students.

#### ***Design/methodology/approach***

This research adopts the causal experimental research design. Data is collected through self-administered survey questionnaires. A total of 436 respondents were collected and analyzed. Mean and multiple regression were applied in carrying out the analysis.

### ***Finding***

Results indicated the most students have low to medium level of financial knowledge. From the result, the highest score respondents able provide correct answer is saving and investment (62.0%), this followed by general knowledge (61.3%), debt and loan (58.3%), credit card (56.1%), and Islamic banking and financial products (36.6%). The top three statements that respondents able to provide correct answer were related to cost of cash purchase on debt loan (98.9%), credit card limit (95.4%), and Will (92.2%). Finding also showed financial characteristics (financial behavior, financial attitude and financial influence) effect financial knowledge level among tertiary education students.

### ***Practical implications***

The results also provided that financial characteristic elements shall not be underestimated by authorities, as it assists in recognize individual's financial knowledge. These components are considerably important in supplementary policymakers to control financial issue, in terms of initiative towards becoming financial independence of the citizen.

### ***Originality/Value***

The research was conducted during the Covid-19 pandemic focus in developing nation with imbedded Islamic concept, in which provides a unique setting to determine resilience learning. Paper type Research paper.

## **Introduction**

A nation will categorize as aging nation when 15 percentage of the population aged 65 years old and above. Latest statistics released by Malaysian Department of Statistics Malaysian (DOSM) have shown that percentage of population aged 65 years old and above increased from 2.2 million (6.8%) in year 2020 to 2.3 million (7.0%) in year 2021 (DOSM, 2022). Furthermore, DOSM make a short prediction that Malaysian will have 3.6 million (11.1%) aged 60 years and above by end of 2022. It means in five years' time in year 2027, Malaysia will have at least 11.1 percentage of aging population. In fact, the starting point to indicate the aging population when the nation has 7 percentage of the population have 65 years old and above. With this, according on the United Nations definition, Malaysia has become an aging society (DOSM, 2022). This aging phenomenon subsequent led to two issues, namely health and financial issue. In order to overcome the health issue, Malaysia government has created various of initiatives through Department of Social Welfare (DSW), under Ministry of Women, Family and Community Development (MWFCDD). Some of the most important policy under DSW is the National Policy for Older Persons and Plan of Actions Persons, in which approved on 5<sup>th</sup> January 2011 to produce older persons who are independent, honourable and respected by optimising self-potential through healthy aging, positive, active, productive and supportive according to the national development (DSW, 2022). On another hand, even lots have initiative being create to overcome financial issue still become crucial discussion due to lack to approaches and uncertainty of the economics condition (Mohd & Kassim, 2020; Teh & Sapuan, 2018; Khoong, 2015).

The ability to manage the personal finance is a crucial thing in one life to achieve a comfortable lifestyle during the retired years (Mohd & Kassim, 2020; Teh & Sapuan, 2018; Khoong, 2014; Khoong, 2015). Thus, the importance of personal financing decisions today cannot be overlooked, as it can distress one later quality life. Traditionally, people adopted the concept 'save now and buy later', as compare modern trend people adopted 'buy now and pay later' concept (Thapa, 2015; Davidson, 2006). Undeniable, this 'modern' concept leads the

funeral to bankruptcy due to neglect of adopt financial planning knowledge. According to statistics (MdI, 2021), a total of 294,371 cases under management of Malaysian Department of Insolvency (MdI) as at December 2020. Out of total cases, Malaysians have 74,699 proclaimed bankruptcy cases from 2016 until December 2020. During this period, Malaysian aged between 25-34 ages and the 45-64 age of group accounted respectively 24.70 percent & 35.51 percent of the total number of bankrupt cases.

Generally, it is found that Malaysians do not control their own financial affairs concerns (Teh & Sapuan, 2018; Khoong, 2015). While they have awareness on the importance of personal financing concept, however majority of the people have deficiency of personal financial planning knowledge, and advantages that they may derive from such planning. The root cause for contributing to this phenomenon is lack of understanding personal financial planning knowledge and how that affects the individual's preparation for personal financing planning (Mohd & Kassim, 2020; Khoong, 2014; Tan et al., 2011). Still, having the individual's financial literacy level is important and should take consideration of personal financial planning seriously.

Previous research has showed that increasing financial knowledge able to promote better and complete financial decision making, so people will be able to plan well and manage their life events such as education, housing purchase and retirement (Khoong, 2014; Khoong, 2015; Mahdzan & Tabiani, 2013). This financial knowledge is essential through the individual's life-cycle, in which tertiary education level students also being included. This become more important when these group students have their first experience with personal financing in their life. Being the first time, they would face variety of financial challenges with limited relevant instruction given. They unable to obtain any advise by guardian, thus cannot assist them to manage their financial situation. Subsequently, it is not weird if students facing financial challenges such as saving, investment, working and budgeting monthly expenses. Therefore, personal financing knowledge is particularly essential to college and university students.

In the early generation, high schools and college students are the focus of research. It is recognized that when the students do not understand the personal finance knowledge during high school, this may lead to bankruptcy issue, in which due to poor debt management and poor retirement planning (Sabri & Teo, 2014; Khoong, 2014; Khoong, 2015). As the younger generations are probably facing multiple and complex financial products and services, it is quite important to let the young generation understand the financial issues. The reason why youth must have financial knowledge is due to the deregulation of financial markets, issue of credit cards and sharp growth in marketing financial products. They will bear the financial risks than their parents in saving and planning the retirement (Mohd & Kassim, 2020; Atkinson & Messy, 2012). Thus, students have necessary to learn and understand about the financial management.

This research has two-fold objectives. First, to demonstrates the level of personal financing knowledge among tertiary education students. Second, to examines personality characteristic effect on the level of financial knowledge.

## **Literature Review**

### ***Financial Knowledge***

There is no specific definition of financial knowledge in previous studies. The most common term that use interchange with financial knowledge is financial literacy. However, the

financial knowledge relates to the discussion on the ability to comprehend and efficiently perform financial skills, including personal financial management, budgeting and investment (Mohd & Kassim, 2020; Teh & Sapuan, 2018; Khoong, 2015). Financial knowledge can help individuals achieve self-independence, thus accomplishing one's financial stability. Mohd & Kassim (2020) highlighted that financial knowledge is a measurement for how well an individual comprehends and applies the personal finance knowledge. It also includes how individuals able to apply their financial knowledge to make decisions related to their financial activities (Khoong, 2014; Sabri & Teo, 2014, Khoong, 2015; Huston, 2010). Subsequently, financial knowledge also can extend its scope of understanding the basic financial concept and the ability to apply the concept by managing one's financial resources.

Following the importance of financial knowledge, Sabri & Teo (2014) analysed how financial knowledge has been measured by researchers and summarized that financial knowledge has focused on five key areas, namely general knowledge, credit card, debt and loan, Islamic banking and financial products, and saving and investment. This consisted of debt element is supported by Robb (2011) study, and further ascertain that financial knowledge has a relationship between the debt management, specially the credit card behaviours. He surveyed 1,354 students and he found that there is a correlation between financial knowledge and credit card behaviours of college students. In his research, the students who display well in financial knowledge are more engaged in using credit card responsibility. In addition, previous researcher also relates the financial planning by including Islamic aspect in the discussion (Mohd & Kassim, 2020; Teh & Sapuan, 2018; Sabri & Teo, 2014; Khoong, 2014). This initiative due to the success of Islamic finance in the recent years.

Most of the previous studies focused on the financial knowledge among the working adults (Ashaari & Mohd, 2019; Abdul & Sabri, 2014; Sabri & Teo, 2014). This seems lack studies examine financial knowledge from the college and university students' group. Besides, some of the past research used the pure demographic variable in their evaluation. Sarigul (2014) conducted a survey on 1,127 students from three universities to examine the degree of financial knowledge among the tertiary education group students. The objective of the study is to determine the relationship between financial knowledge and student's characteristics and subsequent to provide information that may contribute in improving financial knowledge development among tertiary education students. The result of the study presented that the female participants displayed the survey lower as compared with male participants. The study also showed that those from business major education have higher financial knowledge level, and senior level students have higher degree of financial knowledge as compared with other class ranks of students. Nidar and Bestari (2012) surveyed 400 students in Padjadjaran University of Indonesia, and obtained the average score of 42.1 percentage from the students surveyed. They found that respondents obtained low score in the area of credit and debt, saving, investment, insurance and basic personal finance. The study also denoted that parents influence are the most important factor personal finance management. Furthermore, Annabi and colleagues (2018) evaluated level of financial knowledge group from the early stage of adulthood. From their analysis, they recommended that school should offer personal financial classes to those from non-business group. They also suggested that personal financial classes should target on freshman, woman and students who taking student loan.

Susan and Djajadikerta (2017) illustrated the description of financial knowledge, financial attitude and financial behaviour of college students in Indonesia. They found that college student score above average of financial knowledge. In addition, the study result presented that financial knowledge has positively affected on the financial behaviour of college students. Likewise, Chan and colleagues (2012) examined the financial knowledge and

financial well-being among 802 university students in Hong Kong. Their finding demonstrated that students' financial management are associated to their financial attitude toward financial knowledge, behaviour control, debt and employment. Students who have a healthy financial management are more likely incur less debt and show a better financial situation. Further to research using different methodology, Bongini and colleagues (2012) used Rasch analysis to examine the financial knowledge among Italian college students, and the result support result.

In addition, study by Boyland and Warren (2013) on both undergraduate domestic and international college students to examine their financial knowledge level. The study found there is not significant difference based on gender, however there is significant difference of domestic and international students. Cull and Whitton (2011) investigate the factor of financial knowledge among university students at different stage of study and different study majoring such as business, education, arts, humanities and sciences. They found that the business students have higher financial knowledge as compare with other students, especially in tax aspect. Nevertheless, one interesting finding from the study is students who study the sciences perform well in compound interest knowledge than business students and students in other study areas. In addition, the result showed that there is no association between financial knowledge and years of students. The study also found that gender is also insignificant affect the university students' personal financial knowledge, except who students aged 56 and over.

### ***Demographic Characteristics***

Most previous studies measure degrees of financial knowledge by using demographic characteristics (Ying et al., 2020; Khan et al., 2018; Loke, 2017). Study by Lusardi and colleagues (2010) by using the 1997 National Longitudinal Survey of Youth data, to indicate financial knowledge among young. They found that there is a strong correlation between sociodemographic characteristics and financial knowledge. They found respondents have low level of financial knowledge, and less than one-third of the youth have the knowledge of interest rate, inflation and risk diversification. On another hand, Heenkenda (2014) demonstrated that socio-economic-demographic characteristics have a strong association with individual's financial knowledge in Sri Lanka. Furthermore, it showed that the most participants indicated a certain degree of financial knowledge was quite diverse across participants depending on the levels of education, income, gender, age and others socio-economic-demographic variables.

Thapa (2015) surveyed 436 college students to examine the effect of demographic characteristic on financial knowledge in Nepal. The result showed that most of the students have basic concepts of financial knowledge, however they have less understanding in the areas of tax, credit, share market, financial statement and insurance. In term of socio-economic-demographic, the study indicated that age, income of students as determinants of level of financial knowledge, but then gender was not affected by the level of financial knowledge.

In local context, Mahdzan and Tabiani (2013) surveyed 200 individuals in Klang Valley, Malaysia. The objective of the study is to explore the impact of financial knowledge on individual saving. The determinants factors of financial knowledge were saving regularity, risk-taking behaviour and demographic characteristics. They demonstrated the positive probability of saving was influenced by saving regularity, gender, income and educational level. Then, Ansong and Gyensare (2012) found that the determinants of financial knowledge of university working-students. They discovered male working-students have higher financial knowledge as compare with female working-students. This study ascertains that male are most likely to understand the financial concept to make financial decisions. Agarwalla and colleagues (2013) attributed financial knowledge that was influenced by socio-demographic

attributes among working young in India. They explored that both male and females have inferior financial knowledge. They further highlighted that males need to improve their financial attitude, while and females need to enhance financial behaviour.

In addition, the study by Loke (2017) using the pilot survey data from OCED, she found that Malaysians demonstrate average level of financial knowledge and plan their budget, many are financially unprepared for income shock and unexpected circumstances. The study also highlighted demographic elements such as ethnicity, income, gender, regularity of income, education, age and financial knowledge have significant effect on individuals' financial knowledge. Furthermore, the research by Khan and colleagues (2018) using logistic regression in generation Y (Gen Y), imply a clear scope to improve Gen Y financial knowledge by concentrating on a certain socio-demographic groups.

### ***Educational Characteristics***

Fundamentally, education is a ticket to assist students to get a better job in future. However, education is also a essential element that affects financial knowledge of college and university students. Some studies proved that education characteristics are one of the pointers for defining financial knowledge of students. Almenberg and Save-Soderbergh (2011) investigated that there is a large difference between different majors from 491 respondents with college and degree. They have 27% majored in engineering, 17% majored in economics, 18% majored in social sciences, 19% majored in arts and humanities and 15% majored in medicine. The result showed that half or the respondents with economics and engineering perform well in the financial knowledge level. Thapa (2015) study also supported that education is one of the determinants of financial knowledge. This study also proved that the students who are majoring in management programme have higher knowledge of financial knowledge.

Fatoki (2014) examined the level of financial knowledge of non-business universities in South Africa, in which the participants majoring in agriculture and chemistry students in final year. The result demonstrated that non-business major students have less understanding of financial knowledge. In addition, some previous studies assessed the level of financial knowledge of medical students. They found that the poor financial knowledge was linked to their education. Jayakumar and colleagues (2017) indicated that most first year and fourth year medical students in US, and found they have poor financial knowledge. In their study, they recommended that medical students must learn about debt management and retirement savings aspects. Ansong and Gyensare (2012) also determined that there is the difference between business major students and non-business major students. Business major students perform higher financial knowledge level, as compare with non-business major students. Bharucha (2019) study determined the level of financial knowledge among the Indian youth. The result depicted that education is positively related to the level of personal financial knowledge.

### ***Financial Characteristics***

Financial characteristics divide into three elements, namely financial attitude, financial behaviour and financial influence have an impact of individual's level of financial knowledge. Financial attitude refers as the outcome of exclusive benefits, functions and resources, in which can eventually influence individual's purchasing behaviour. This further explained that individual's attitude towards money is influenced for every purchase and saving done, whereby ultimately affecting the fulfilment of certain life objectives (Sabri et al., 2020). Previous studies indicated a positive relationship between financial attitude with financial knowledge. This relationship assists in individual's financial aspects such as expenditures cautions through budgeting, and managing money wisely (Sabri et al., 2020; Abdullah, 2019). Thapa (2015) conducted a survey in Nepal, and the result pointed out that financial attitude can affect the

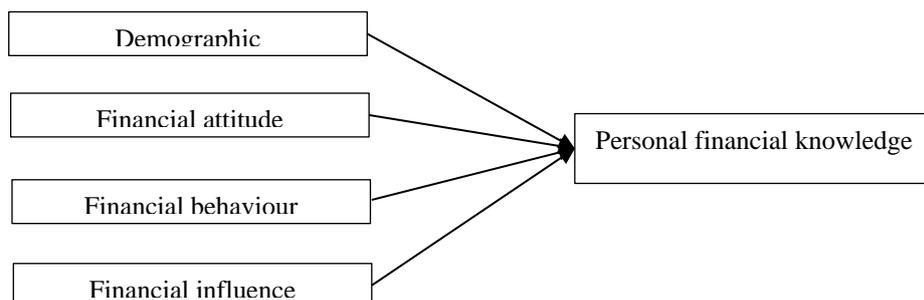
student's financial knowledge. This supported by Ibrahim and colleagues (2010) that the higher level of financial knowledge of degree students is related to financial attitude.

Regards financial behaviour, it refers to the arrangement of regular techniques or standardised working approaches that lead to structured accounting completion, cash-related detailing, budgeting, and various finance exercise (Sabri et al., 2020). BenDavid-Hadar (2015) surveyed 283 educators studying in universities and teachers' college in Israel. He examines the relationship of the level of personal financial knowledge between their background characteristic, financial behaviour and financial awareness. The result showed that the educators have low level of financial knowledge as the overall mean. The study found that the low levels of financial knowledge of educators were related to the behaviour and awareness of financial planning. According to study of Jing and colleagues (2014) in the study of association of earlier financial knowledge and later financial behaviour of college students. Financial knowledge was divided by subjective and objective knowledge, while financial behaviours were categorized into risky paying and borrowing behaviours. The finding showed that there is association between earlier financial knowledge and later financial behaviour. Subjective knowledge is stronger effect the later financial behaviour than objective knowledge.

Fernandes and colleagues (2014) study found that financial knowledge has a stronger association with financial behaviour. They conducted an analysis of the relationship of financial knowledge and financial education with financial behaviour. As a result, they found that when individuals omit the psychological traits that will affect financial knowledge diminish. Align with this, some studies provided the result showed that the parents can influence their children to manage their financial management. As stressed by Otto (2013) indicated that the ability and willingness of saving are related to parent's behaviour.

In term of financial influence, each individual grows up within their surroundings environment. The most common fundamental individual is the family. Thus, parental have a huge impact and cause for an individual to do certain things, in which based on what they learn from their parents. One of the most common is the financial aspect (Salim & Pamungkas, 2021). Besides, the peer group such as relative, friend and group associate also will influence individual decision (Salim & Pamungkas, 2021).

In summary, most of the previous research focused on demographic characteristics and education characteristics of students to understand the degree level of financial knowledge. However, few studies indicated the personality characteristics that influence the level of financial knowledge among college and university students. Besides, few studies pay attention to university students, especially degree students. Therefore, this study will find the gap using college and university students to examine their degree level of financial knowledge by using demographic characteristic, education characteristic and personality characteristic.



**Figure 1** *Conceptual framework*

### *Hypothesis*

Based on the prior literature, alternative hypothesis is formed as below:-

**H<sub>1</sub>:** There is significant relationship between difference financial behaviour and personal financial knowledge among college and university students.

**H<sub>2</sub>:** There is significant relationship between difference financial attitude and personal financial knowledge among college and university students.

**H<sub>3</sub>:** There is significant relationship between difference financial influence and personal financial knowledge among college and university students.

### **Methodology**

This research adopts the causal-experiment research design to analyse the relationship between the independent variables and dependent variables. The quantitative research approach is utilized in this research. Data collection through self-administered survey questionnaires with standardized objective measurements give to respondents. The collected data are analysed using statistical computation methods to determine insights on the study subject.

Descriptive research emphasizes describing characteristics of the target population or phenomenon during the time of study being conducted. Correlation research approach examines the relationship between the variables to identify patterns in the collected data. Causal experimental research, to examine the cause-and-effect sensitivity between variables by deploying the variables. Experimental research is where controlling the independent variables to determine its effect on the dependent variable. Each stage varies in terms of the extent of control on variables adjusted by the researcher and the level of data visualization, and this would provide multiple perspectives and insights on the research subject,

The questionnaire items were adopted from past studies. Respondents are required to answer all the questions consisted in the questionnaire through self-administrated. Before respondents start to fill up the survey form, respondents were briefed on the definition of financial knowledge, in which difference terminology to create clear understanding and prevent confusion. There are no right or wrong answers to the questions, and respondents are free to choose answers which are most closely related to respondent's opinion. The items included in the variables are adapted from several past researches where past researchers had examined the validity, accuracy, and reliability of the items. Nevertheless, few modifications are made for the items to better reflect the Malaysian context.

The questions were rearranged from work of and Sabri and Teo (2014), and Thapa (2015). The questionnaire designed to cover the individual's main aspects of financial literacy that includes basic financial knowledge, saving and borrowing, insurance and investment. For section A, the questionnaire also contains demographic questions, in which respondents were requested to provide demographic information which includes age, ethnicity, gender, family income and academic discipline major. Section B survey consists a total of 63 questions, in which include 34 true and false statements of financial knowledge, 29 Likert scale questions of their opinion and decisions of financial attitude, financial behaviour and financial influence. In order to ensure each item in the survey is consistently measured, all items are measured using a 5-point Likert scale. Respondents were asked to reflect the extent to which they agreed with or matched the best by ranking each statement from a scale of 1 to 5 to all the statements in the questionnaire. The participants are required to assess themselves against components using a 5-point Likert scale where "1" expresses "not at all true for me" and "5" expresses "very true for me".

Data collected was done in two stages. First, to determine the frequency, mean, standard deviation and percentage will be used to describe the level of financial knowledge data. A total of 34 statement items were given to respondents to measure their level of financial knowledge, in which respondents were to decide if the statements were true or false. If the answer is correctly answer, one point will be awarded. On another hand, if the statements were wrongly answer, no point is given. Those who score higher percentage scores indicated a higher level of financial knowledge. The categories of financial knowledge level based on Sabri and Teo (2014), in which consists of three categories where based on mean score obtained. Second, the multiple regression analysis is done to consider the financial characteristics on the financial knowledge level.

Responses collected from private higher education institution in the area of Klang Valley. The reason Klang Valley is chosen due high density of tertiary students, thus able to provides wide exposure to respondents. This research applies quantitative research method. This research will be using convenient sampling as the data collection methods. Convenient sampling is done by selecting respondents that are readily available and easily accessible. It is also an inexpensive and rather easy option as compared to other sampling methods (Taherdoost, 2016). This is to ensure the reliability of the test in terms of representing the population, and it is also to compare and find out differences among various groupings. A total of 436 responses were collected. The data collection took place during the month of January until March 2022. All responses are gathered via Google Forms, in which all responses collected are useable without any missing values with the assist of Google Forms operational settings.

The self-administrated survey questionnaires are distributed to Malaysians from different socio-cultural aspects of the population, in which those study different major tertiary education programme. This to consider each group of respondents would have different level and perspective on financial knowledge.

Initially, descriptive analysis is used to understand the demographic profile of respondents to describe the essential background or features of the data. The mean and standard deviation of each item for all variables are calculated to seek insights on the current existing phenomenon for each variable. Normality test and reliability test are essential as it ensures the accuracy, validity, level of representative, and usefulness of the collected data. Besides, inferential test which includes correlation analysis and multiple regression analysis is carried out to inspect, transform, and illustrate data into meaningful information for insights discovery.

## **Data Analysis**

### ***Reliability and descriptive test***

Before beginning to analyse the data, there are several procedures needed to carry out to ensure the data analysis is accurate. Error test, normality test and reliability test will be applied in this section. The data collected were analysed by Statistic software.

Cronbach's alpha reliability is one of the most widely used measurement by researchers to present that the established or adopted scale of the projects are suitable for or parallel with the purpose of the study). All variables had scored more than 0.8. This result had proven that the internal consistency of the items included in each variable is highly consistent, and this denoted that the questionnaire structure for this research is reliable. Reliability test is used to test how a test measures a characteristic dependably and consistently. Table 2 shows that the

Cronbach's Alpha for the 29 items that measured financial characteristics is between 0.953 and 0.974. Overall, the result is more than 0.8 thus the data seem to be reliable.

**Table 1** Cronbach's Alpha reliability for independent variables (N=436)

Variables	Items	Cronbach's Alpha
Financial behaviour	10	0.953
Financial Attitude	8	0.959
Financial influence	11	0.974

Table 1 presents the characteristics of the sample. 57.6 percent of the respondents are male, and female respondents possess 42.4 percent. Chinese (58.3%) respondents' domain the sample, followed by Malay (23.4%), Indian (12.4%), and others (6.0%). More than half of the respondents have family annual income more than RM60,001 (71.4%). As far as academic discipline of the respondents is concerned, respondent's majority are from business domain.

**Table 1** Descriptive analysis

Gender		
Gender	Frequency	Percentage
Male	251	57.6%
Female	185	42.4%
Ethnicity		
Ethnicity	Frequency	Percentage
Malay	102	23.4%
Chinese	254	58.3%
Indian	54	12.4%
Others	26	6.0%
Family annual income		
Family annual income	Frequency	Percentage
Below RM40,000	52	11.1%
RM40,001 – RM60,000	82	17.5%
RM60,001 – RM80,000	153	32.7%
RM80,001 – RM100,000	181	38.7%
Majoring Stream		
Majoring stream	Frequency	Percentage
Business	384	79.0%
Non-business	102	21.0%

### **Financial knowledge level**

Respondents were asked 34 questions from the financial knowledge covering general knowledge, credit card, debt and loan, Islamic banking and financial products, and saving and investment. The respondents score finding shown in Table 4. From the result, the highest score respondents able provide correct answer is saving and investment (62.0%), this followed by general knowledge (61.3%), debt and loan (58.3%), credit card (56.1%), and Islamic banking and financial products (36.6%). The top three statements that respondents able to provide correct answer were related to cost of cash purchase on debt loan (98.9%), credit card limit (95.4%), and Will (92.2%). On another hand, the bottom three statements that respondent

unable to provide correct answer were related to credit card purchasing power (23.9%), Islamic banking deposits interest rates (21.3%), and surplus income (19.5%).

**Table 2** Respondent financial knowledge level

Item statements	Correctly answer (%)
<b>1. General knowledge</b>	
Counselling and debt management agency (CCDMA) offers financial loans	186 (42.7%)
An increase in food prices will reduce purchasing power	304 (69.7%)
A balance sheet shows the financial status of a person	346 (79.4%)
A statement of cash flows (earning) shows the income and expenses of the family on a certain date	357 (81.9%)
The Central Credit Reference Information System (CCRIS) is a credit bureau that collects, processes, creates credit information	170 (39.0%)
A guarantor for a loan can also be declared a bankrupt	365 (83.7%)
Individuals who are declared bankrupt are not allowed to apply for a loan more than RM1,000	148 (33.9%)
A person may be declared bankrupt for failing to pay debts of RM100,000	127 (29.1%)
A family does not need a Will	402 (92.2%)
Average	61.3%
<b>2. Credit card</b>	
A credit card holder can spend without limit	416 (95.4%)
Owning a credit card will increase one's purchasing power	104 (23.9%)
Cash withdrawals using a credit card is a form of low-cost financial resources	267 (61.2%)
There is no charge for cash withdrawals using a credit card	286 (65.5%)
Credit card applicants should have at least a yearly income of RM24,000	149 (34.2%)
Average	56.1%
<b>3. Debt and loan</b>	
Buying goods on credit will reduce purchasing power in the future	129 (29.6%)
A high deposit payment will reduce the cost of loan	373 (85.6%)
The cost of a cash purchase is lower than that of purchase on credit	431 (98.8%)
The longer the repayment period, the lower the overall cost of a loan	327 (75.0%)
A person can spend more than 40% if his net income to pay monthly instalments	132 (30.3%)
The interest rate for unsecured loans such as personal loans is usually lower than the interest rate for secured loans such as home loans	134 (30.7%)
Average	58.3%
<b>4. Islamic banking and financial products</b>	
Islamic banking is interest-free	213 (48.9%)
Deposits with Islamic banking have higher interest rates and different returns	93 (21.3%)
Islamic banking borrowing costs are not fixed and depend on the business outcome	107 (24.5%)
The concept of Islamic banking investment is based on profit sharing (mudharabah) only	176 (40.4%)

Takaful uses a combination of Tabarru (donation) obligation of mutual help, mudharabah (profit-sharing) and wakalah between the operator and the insured	135 (31.0%)
Takaful funds can only be invested in instrument that meet Shariah requirements	208 (47.7%)
There are two takaful plans: general takaful and family takaful	221 (50.7%)
A takaful contract is based on the principle of utmost good faith (trust) which means you need to disclose all relevant information	124 (28.4%)
Average	36.6%

### 5. Saving and investment

We have overspent when we withdraw money from our savings to buy daily necessities	391 (89.7%)
Storage is surplus income after deducting expenses	85 (19.5%)
The interest rate for a saving account is higher than the interest rate for a fixed deposit account	201 (46.1%)
All forms of investment are always profitable	237 (54.4%)
A family is recommended emergency savings of at least 3 months income	351 (80.5%)
EPF contributions are just enough to meet our requirement during old age	357 (81.9%)
Average	62.0%

Multiple regression is an inferential statistical procedure for predicting the value of dependent variable on the basis of two or more independent variables by formulating a linear equation. The model summary table describes the degree of relationship between the multiple regression model and the dependent variable. The adjusted R square value is at 0.628 which implies a high correlation between the dependent variable and independent variables.

**Table 3** Model summary and ANOVA table (N=436)

	Value
Adjusted R Square	0.628
Std. Error of the Estimate	15.998
F value in ANOVA test	246.130*

Remark: \* significant at <.001

All findings will be based on the coefficients of multiple regressions. The hypothesis will use this result to define whether accepted or rejected. Multiple regressions are applied to test whether there is a significant relationship financial characteristic (financial behaviour, financial attitude and financial influence) and financial knowledge level. The result from the table above provides the full equation of multiple regressions for this study. The regression model equation is as follows:

$$\text{Level of financial knowledge} = 4.564 + 4.131 (\text{Financial Behaviour}) - 9.227 (\text{Financial Attitude}) + 5.633 (\text{Financial Influence})$$

Based on the equation, it can be expressed as the financial knowledge will be increase of 4.564 when all the independent variables are 0. This might due to the age factors with the experience gain. It also can interpret that when the independent variables increase by 1 unit, the financial knowledge will also increase. Moreover, when financial attitude increases by 1 point, their financial knowledge will increase by 5.663. Among the three financial characteristics, the finding showed financial attitude is the main factors contribute to student's financial knowledge level, followed by financial influence and financial behaviour.

**Table 4** *Coefficient table (N=436)*

	Unstandardized Coefficients			t	Sig.
	B	Std. Error			
Constant	4.564	2.570	1.776	.076	
Financial Behaviour	4.131	1.506	2.743	.006	
Financial Attitude	9.227	1.331	0.415	<.001	
Financial Influence	5.633	1.174	3.286	.001	

### *Summary of Findings*

**Table 5:** *Summary of findings for hypothesis testing*

Hypothesis	Results
H <sub>1</sub> : There is significant relationship between difference financial behaviour and personal financial knowledge among college and university students.	Supported
H <sub>2</sub> : There is significant relationship between difference financial attitude and personal financial knowledge among college and university students.	Supported
H <sub>3</sub> : There is significant relationship between difference financial influence and personal financial knowledge among college and university students.	Supported

From the research, the hypothesis testing result provided that there is significant relationship between difference financial behaviour and personal financial knowledge among college and university students. Hence, H<sub>1</sub> is supported. This finding is consistent with Fernandes and colleagues (2014), and Otto (2013).

From the research, the hypothesis testing result provided that there is significant relationship between difference financial attitude and personal financial knowledge among college and university students. Hence, H<sub>2</sub> is supported. This finding is consistent with Thapa (2015).

From the research, the hypothesis testing result provided that there is significant relationship between difference financial influence and personal financial knowledge among college and university students. Hence, H<sub>3</sub> is supported. This finding is consistent with Antoni and colleagues (2019), and Ning and colleagues (2015).

## **Limitations and Recommendations**

There are a few limitations to this study. First, they are numbers of factors that can pose an impact in financial characteristics on financial knowledge level, but only three variables are chosen for this research. The variables utilized in this study might not be the final resort that accurately explains financial knowledge level. Second, since this is a quantitative research, the insights or real thoughts of taxpayers cannot be fully expressed and covered via answering a questionnaire. Thus, findings of this study might not represent the actual factors that contribute to the financial knowledge level.

Some recommendations for future studies are provided. First, to consider adopting other factors that might consider for financial knowledge level. Second, to explore using qualitative research by focusing on respondents' experiences and thoughts toward financial characteristics.

## Conclusion

With the high level of bankrupt cases in the country, necessary measures shall be taken for rectification and prevention. Conducting research in this field is essential to gain insights which act as a base of idea in developing multi-layered educate the youth on the important of financial knowledge. In light of this study, more emphasis can be placed on psychological factors in future studies to understand tertiary students.

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## Reference

- Abdullah, N., Fazli, S. M., & Arif, A. M. M. (2019). The Relationship between Attitude Towards Money, Financial Literacy and Debt Management with Young Worker's Financial Well-being. *Pertanika Journal of Social Sciences and Humanities*, 27(1), 361-387
- Abdul, R. H. & Sabri, M. F. (2014). Malaysian Public Sector Employees' Financial Preparedness and Personal Financial Plan Implementation. *Journal of Wealth Management & Financial Planning*, 1, 33-42.
- Agarwalla, S. K., Barua, S. K., Jacob, J., & Varma, J. R. (2013). Financial literacy among working young in urban India. *Indian Institute of Management Ahmedabad, WP*, (2013-10), 02.
- Almenberg, J., & Säve-Söderbergh, J. (2011). Financial literacy and retirement planning in Sweden. *Journal of Pension Economics & Finance*, 10(4), 585-598.
- Annabi, A., González-Ramírez, J., & Müller, F. (2018). What Determines Financial Knowledge among College Students?. *Journal of Financial Education*, 44(2), 344-366.
- Ansong, A., & Gyensare, M. A. (2012). Determinants of university working-students' financial literacy at the University of Cape Coast, Ghana. *International Journal of Business and Management*, 7(9), 126.
- Antoni, X., Rootman, C. & Struwig, F. W. (2019). The Influence of Parental Financial Socialisation Techniques on Student Financial Behaviour. *International Journal of Economics and Finance Studies*, 11(2), 72-88.
- Ashaari, N. N. & Yusof, Z. B. (2019). Relationship between Financial Literacy and its Component: A Research on Working Women. *Asian Journal of Probability and Statistics*, 5(2), 1-6.
- Atkinson, A., & Messy, F. A. (2012). Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) pilot study.
- BenDavid-Hadar, I. (2015). An analysis of personal financial literacy among educators. *Journal of Financial Education*, 50-89.
- Bharucha, J. P. (2019). Determinants of financial literacy among Indian youth. In *Dynamic Perspectives on Globalization and Sustainable Business in Asia* (pp. 154-167). IGI Global.
- Bongini, P., Trivellato, P., & Zenga, M. (2012). Measuring financial literacy among students: An application of Rasch analysis. *Electronic Journal of Applied Statistical Analysis*, 5(3), 425-430.

- Boyland, J., & Warren, R. (2013). Assessing the financial literacy of domestic and international college students.
- Borodich, S., Deplazes, S., Kardash, N., & Kovzik, A. (2010). Comparative analysis of the levels of financial literacy among students in the US, Belarus, and Japan. *Journal of Economics and Economic Education Research*, 11(3), 71.
- Chan, S. F., Chau, A. W. L., & Chan, K. Y. K. (2012). Financial knowledge and aptitudes: Impacts on college students' financial well-being. *College Student Journal*, 46(1), 114-133.
- Cull, M., & Whitton, D. (2011). University students' financial literacy levels: Obstacles and aids. *The Economic and Labour Relations Review*, 22(1), 99-114.
- Department of Social Welfare. (DSW). (2022). Policy/Plan of Action.
- Department of Statistics Malaysia. (DOSM). (2022). Current Population Estimates, Malaysia, 2022.
- Fatoki, O. (2014). The Financial literacy of non-business university students in South Africa. *International Journal of Educational Sciences*, 7(2), 261-267.
- Fernandes, D., Lynch Jr, J. G., & Netemeyer, R. G. (2014). Financial literacy, financial education, and downstream financial behaviors. *Management Science*, 60(8), 1861-1883.
- Heekkenda, S. (2014). Inequalities in the Financial Inclusion in Sri Lanka: An Assessment of the Functional Financial Literacy. *Journal of Economic Policy*, 1(1), 1-30.
- Huston, S. J. (2010). Measuring financial literacy. *Journal of Consumer Affairs*, 44(2), 296-316.
- Ibrahim, D. I. D., Harun, R., & Isa, Z. M. (2010). A study on financial literacy of Malaysian degree students. *Cross-cultural communication*, 5(4), 51-59.
- Jayakumar, K. L., Larkin, D. J., Ginzberg, S., & Patel, M. (2017). Personal financial literacy among US medical students. *MedEdPublish*, 6.
- Jing, J. X., Sun, Y. A., Serido, J., & Shim, S. (2014). Earlier financial literacy and later financial behaviour of college students. *International Journal of Consumer Studies*, 38(6), 593-601.
- Khan, M. T. I., Tan, S. H. & Goh, G. G. (2018). Advanced Financial Literacy of Malaysian Gen Y Investors and Its Consequences. *Margin - The Journal of Applied Economic Research*, 13(1), 83-108.
- Khoong, T. W. (2014). A Practical Comparison between Conventional Housing Loans and Islamic Home Financing. *Journal of Wealth Management & Financial Planning*, 1, 4-11.
- Khoong, T. W. (2015). Evidence of Behavioural Finance Theory in Financial Planning: An Empirical Study of the Employees Provident Fund (EPF) Retirement Scheme in Malaysia. *Journal of Wealth Management & Financial Planning*, 2, 3-16.
- Loke, Y. J. (2017). The Influence of Socio-demographic and Financial Knowledge Factors of Financial Management Practices of Malaysians. *International Journal of Business & Society*, 18(1), 33-50.
- Lusardi, A., Mitchell, O. S., & Curto, V. (2010). Financial literacy among the young. *Journal of consumer affairs*, 44(2), 358-380.
- Mahdzan, N. S., and S.Tabiani. (2013). "The Impact of Financial Literacy on Individual Saving: An Exploratory Study in the Malaysian Context." *Transformations in Business & Economics* 12(1): 41-55.
- Malaysian Department of Insolvency (Mdi). 2021.
- Mohd, A. N. I. & Kassim, S. (2020). Does Financial Literacy Really Matter for Malaysian? A Review. *Advances International Journal of Banking, Accounting and Finance*, 2(2), 13-30.

- Nidar, S. R., & Bestari, S. (2012). Personal financial literacy among university students (case study at Padjadjaran University students, Bandung, Indonesia). *World Journal of Social Sciences*, 2(4), 162-171.
- Ning, T., Baker, A. & Peter, P. C (2015). Investigating the Disconnect between Financial Knowledge and Behavior: The Role of Parental Influence and Psychological Characteristics in Responsible Financial Behaviors among Young Adults. *The Journal of Consumer Affairs*, 49(2). 376-406.
- Otto, A. (2013). Saving in childhood and adolescence: Insights from developmental psychology. *Economics of Education Review*, 33, 8-18.
- Robb, C. A. (2011). Financial knowledge and credit card behavior of college students. *Journal of family and economic issues*, 32(4), 690-698.
- Sabri, M. F., Abdul, R. H. & Magli, A. S. (2020). The Influence of Financial Attitude, Financial Behavior and Self-Belief towards Financial Vulnerability among Public Employees in Malaysia. *Malaysian Journal of Consumer and Family Economics*, 25, 175-193.
- Sabri, M. F. & Teo, T. J. (2014). The Effects of Financial Literacy, Financial Management and Saving Motives on Financial Well-Being among Working Women. *Journal of Wealth Management and Financial Planning*, 1, 20-32.
- Salim, A. S. & Pamungkas, A. S. (2021). The Influence of Financial Literacy, Parental Socialization, and Peer Influences on Saving Behavior. 3rd Tarumanagara International Conference on the Applications of Social Sciences and Humanities (TICASH 2021). Vol 655.
- Sarigul, H. (2014). A Survey of Financial Literacy Among University Students. *Journal of Accounting & Finance*, (64).
- Susan, M., & Djajadikerta, H. (2017). Understanding Financial Knowledge, Financial Attitude, and Financial Behavior of College Students in Indonesia. *Advanced Science Letters*, 23(9), 8762–8765. Retrieved from <https://doi.org/10.1166/asl.2017.9966>
- Taherdoost, H. (2016). Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research. *International Journal of Academic Research in Management (IJARM)*, vol. 5 (2), 18-27.
- Tan, H. B., Hoe, S. Y., & Hung, W. T. (2011). Financial literacy and personal financial planning in Klang Valley, Malaysia. *International Journal of Economics and Management*, 5(1), 149-168.
- Teh, L. T. & Sapuan, N. M. (2018). Retirement Planning in Malaysia: Issues and Challenges to Achieve Sustainable Lifestyle. *The Turkish Online Journal of Design, Art and Communication*, September 2018 Special Edition, 1222-1229.
- Thapa, B. S. (2015). Financial literacy in Nepal: A survey analysis from college students. *NRB Economic Review*, 27(1), 49-74.
- Ying, T. L., Chan, C. & Siang, T. G. (2020). Financial Literacy Among Gen Y in Malaysia. In N. S. Othman, A. H. B. Jaaffar, N. H. B. Harun, S. B. Buniamin, N. E. A. B. Mohamad, I. B. M. Ali, N. H. B. A. Razali, & S. L. B. M. Hashim (Eds.), *Driving Sustainability through Business-Technology Synergy*, vol 100. *European Proceedings of Social and Behavioural Sciences* (pp. 484-493). European Publisher.