



Measuring Financial Knowledge Among Muslim Women: The Case of Indonesia and Malaysia

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Abstract

Financial literacy is taking an important role in supporting the development of women's empowerment. To determine the action for financial education for women, the level of financial literacy among women is needed to be observed. This study aims to measure the level of financial knowledge among Muslim women in Indonesia and Malaysia. A quantitative method of study is employed by distributing 411 questionnaires that consists of Islamic financial knowledge and general financial knowledge questions. As the sample of this study focuses on women in Indonesia and Malaysia, the findings of this study could not be generalized to other Muslim women in other countries. The research found that Muslim women in Indonesia and Malaysia have a moderate Islamic and general financial knowledge level. Several areas of weaknesses found in this study are; the understanding of the role of parties in *mudharabah* contract, knowledge on *zakat*, and the simple time value of money calculation. These three areas of weaknesses could be emphasized in the financial education program.

Keywords: financial literacy, women financial literacy, Islamic financial literacy, financial knowledge, financial attitude


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1. Introduction

Women empowerment is a cornerstone of the 2030 Agenda for Sustainable Development. Women in OECD high-income economies were around 20% less likely than men to report borrowing from a financial institution in 2014, according to Demirgüç-Kunt et al. (2015). The majority of women cannot comprehend how various financial products and financial services operate, especially in the areas of mortgages and investing (Melissa, 2011). Entry to financial services is more difficult for women than it is for men. Women in many countries have less financial literacy than men, owing to limited access to education, employment, entrepreneurship, formal financial markets, and discriminatory social norms and legal treatment.

Understanding the level of financial literacy among women is needed to determine further action for financial education. Financial literacy is taking an important role in supporting the development of women's empowerment. However, there are still few studies observing Islamic financial literacy compared to general financial literacy. Islamic financial literacy is essential for Muslim women making their financial decision because it is part of understanding the principles of Islam. It is not sufficient to know about Islamic from the product information of the bank or the news; a specific education programme on Islamic financial literacy should be considered.

According to the OECD report by Messy and Monticone (2013), women tend to have lower levels of financial knowledge, particularly less well-educated women. Women also show different financial attitudes whereby they appear to be aware of their lack of financial knowledge and low confidence in financial matters. However, it is reported that women are more likely to have a budget and keep a close watch on everyday financial expenses. Given the fact that women are less likely to engage in working activities (Atikson and Messy, 2012), women tend to cut down their spending instead of earning extra money (Messy and Monticone, 2013).

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This study takes the sample population from Indonesia and Malaysia. The two countries are selected in this study because the development of the Islamic economy in both countries is growing rapidly. According to the [Global Islamic Finance Report \(2019\)](#), Indonesia and Malaysia are the highest ranks in the Islamic Finance Country Index (IFCI, 2019). Indonesia ranked first, followed by Malaysia in the second position. Regarding the women's financial literacy in both countries, the report shows evidence that women lag behind men in terms of financial wellbeing. Although women were reported to have higher savings behaviour than men, women typically accumulate significantly less savings than men. OJK (Indonesian Financial Service Authority) reported that there is a gender gap in financial literacy and financial inclusion indexes between men and women. Women are reported to have 3.81% and 2.09% lower in financial literacy and financial inclusion indexes. Meanwhile, in Malaysia, [Haotanto \(2018\)](#) reported that men are still better at monthly savings than women. Men were also found to have financial planning with 32%, compared to 28% of women. A study by [Sawandi et al. \(2018\)](#) also found that Malaysian female respondents were found to have a lower level of financial knowledge than male respondents.

In the current economic circumstances, consumers are required to make many complex financial decisions. In the last decade, the efforts to improve the community's financial literacy have been widely carried out and became an important agenda by various countries, which transformed into various government programs and research in measuring financial literacy. However, it is still relatively rare to find a study discussing measuring financial literacy among Muslims ([Setiawati et al., 2018](#)). It is necessary to observe Muslim's financial literacy because some of the criteria used to determine financial literacy are distinct from Islamic values. The Muslim community encourages Muslims to practice Islamic financial literacy not only because it is an obligation to obey Islamic values per se but also because of the availability of complex financial instruments that raise awareness of Islamic financial products. It assists Muslims in making financial decisions based on Islamic financial understanding.

2. Literature Review

2.1 Financial Literacy

The President's Advisory Council on Financial Literacy (PACFL, 2008) defined financial literacy as the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial wellbeing. A financially literate individual can boost their financial situation. In addressing the financial issue, women have to be financially literate in order to handle their cash flow and financial resources wisely to ensure their long-term financial condition and support their families.

The [OECD \(2018\)](#) defines financial literacy for adults as "a combination of awareness, knowledge, skill, attitude, and behaviour necessary to make a sound financial decision and achieve financial wellbeing". In the context of small-medium enterprises, financial literacy is defined as "the combination of awareness, knowledge, skill, attitude, and behaviour that an entrepreneur or an owner of the micro, small, medium businesses should have to for an effective financial decision making to start, run, and ensure the sustainability and growth of the business" ([OECD, 2018](#)).

In today's world, financial literacy is just as important as basic literacy, which includes the ability to read and write. Individuals and societies cannot reach their full potential without it. [Lusardi \(2019\)](#) described financial literacy as a global passport that allows individuals to take advantage of the market's wide range of financial products and make sound financial decisions. Financial literacy should be viewed as a fundamental right and universal need rather than a privilege enjoyed by a small number of people who have special access to financial knowledge.

Financial literacy, in most situations, is a model for financial education that describes variations in financial outcomes. The terms "financial literacy" and "financial education" are often interchanged in the literature and mass media. Understanding the educational influence and obstacles to financial decision-making requires defining and assessing financial literacy. The Institute for Financial Literacy measured financial literacy using five criteria as follows:

1. Money management is the use of cash-flow management and net worth analysis to accomplish financial objectives.
2. Credit: knowing how to get credit and the consequences of using/misusing it.
3. Debt Management: knowing how to use debt to accumulate assets and understand how to assess and resolve the debt issue.
4. Risk Management: Using risk management strategies to secure the assets and improve the quality of life.
5. Investing and Retirement Planning: Using savings and retirement plans to achieve financial goals.

On the other hand, [Huston \(2010\)](#) defined four standards to measure financial literacy:

1. Money basics: understanding the fundamentals of finance, such as personal financial accounting principles, purchasing power, and the time value of money.
2. Investing: consider how to bring existing capital to good use in the future.
3. Borrowing: consider how to carry money from the future into the current.
4. Asset protection: understanding the approaches for securing properties.

[Huston \(2010\)](#) described financial literacy as comprehending personal finance knowledge and implementing it in financial applications. The first dimension is knowledge; it is an understanding of the financial product gained through education and practice. The other is the implementation dimension, which is the ability to apply knowledge to personal finance decisions efficiently.

Financial literacy is a form of human capital that has the potential to influence consumption utility. Other factors such as behavioural/cognitive bias, self-control, family, social, economic, and institutional factors have an impact on a person's financial behaviour and wellbeing. At the same time, financial education is characterized as an input to improve human capital through understanding and application of financial knowledge ([Huston, 2010](#)). Financial literacy improves people's understanding of financial products, services, and principles to make the best financial decisions possible. A well-structured financial literacy plan will help people make better financial decisions and develop their financial skills.

[Thomas and Subhashree \(2020\)](#), in their study on financial literacy among the students, found that financial literacy is influenced by financial knowledge, financial attitude, family influence, and peer-group pressure. The outcome of being financially literate, someone can have positive economic returns related to better planning, investment, borrowing, financial wellbeing, financial capability, and financial inclusion ([Goyal and Kumar, 2020](#)). Additionally, a study on financial literacy and female entrepreneurs by [Tumba et al. \(2022\)](#) found that financial education helps the performance of micro-businesses owned by female entrepreneurs.

In a recent study, financial literacy was found to have a positive relationship with financial behaviour ([Widyastuti et al., 2020](#)). Furthermore, a study by [Shankar et al. \(2022\)](#) found that financial behaviour is positively related to financial wellbeing. They added that gender, parental education, employment status, and monthly income change influence financial wellbeing.

2.2 Islamic Financial Literacy

There have been some studies related to Islamic financial literacy but the studies barely defined the definition of Islamic financial literacy explicitly. Islamic financial literacy was mainly defined as general financial literacy, which is tailored to the system and obligations that must meet the principles of Islamic finance. [Salehudin \(2010\)](#) came up with the term "*halal* literacy," which he described as the ability to differentiate between *halal* and *haram* ruling. *Halal* is a *Quranic* term that means permitted, allowed, legal, or lawful in the Holy *Quran*. *Haram*, on the other hand, means forbidden, illegal, or unlawful. In Islam, there are things that are *halal* and things that are forbidden and designated as *haram*. As Muslims, we should strive to follow what is permissible and strictly avoid what is forbidden ([The Concept of Halal & Haram in Islam according to Quran Hadith, 2020](#)).

In contrast, [Razak and Abdullah \(2015\)](#) described Islamic financial literacy as a broader concept that encompasses financial or basic wealth management (income, consumption, and savings), as well as financial planning (*takaful*, pension schemes, and *Shariah*-compliant investment). The research also stressed the responsibilities that he believes should be enforced in Islamic finance, such as *zakat*, inheritance law (*faraid*), and charitable donations (*wasiyyah*) (*waqf* and alms). A study by [Antara et al. \(2016\)](#) also defined "*halal* literacy as a person's ability by combining a set of knowledge, awareness, and skills to distinguish between *halal* and *haram* on products and services based on *Shariah* law."

[Rahim et al. \(2016\)](#) proposed the conceptual definition of Islamic financial literacy as "the ability of a person to use financial knowledge, skill and attitude ([OECD, 2016](#)) in managing financial resources according to the Islamic teachings". They studied Islamic financial literacy determinants among university students and found that religiosity is the most influential determinant, followed by hopelessness and financial satisfaction. [Setyowati et al. \(2018\)](#) tested the effect of the level of financial literacy and personal financial planning. People

with a good level of Islamic financial literacy tend to have better management and personal finances and prefer investing in *Shariah*-compliant assets.

2.3 Financial knowledge

Financial literacy has been defined as not merely being knowledgeable on financial matters but also the ability to make such financial decisions based on financial knowledge. [Huston \(2010\)](#) elaborated that there are two dimensions of financial literacy: knowledge and application. Huston argued that financial knowledge is not the same as financial literacy; rather than it is a component of it. The ability and confidence to use financial information to make a financial decision is also an additional application dimension of financial literacy.

[Huston \(2010\)](#) defined financial knowledge as understanding key financial terms and concepts for financial decisions. A financially literate individual would have a clear understanding of financial principles and the ability to apply numeracy skills to a financial situation ([Atkinson and Messy, 2012](#)). Financial literacy requires individuals to be able to compare financial products and services in order to make the best financial decisions. Basic financial principles and the ability to apply numeracy skills in a financial context assist an individual in managing their finances and responding to financial conditions and economic events that can affect their financial wellbeing ([OECD, 2016](#)). [Yahaya et al. \(2019\)](#) found that financial knowledge significantly influences financial attitude. It is further supported by a study by [Hussain et al. \(2018\)](#), which found that financial knowledge enables SMEs to access external finance, which assists the firm to operate at an optimum level and growth. According to a study by [Yong et al. \(2018\)](#), young working adults should know about budgeting, controlling their expenditures, practicing living within their means, constantly tracking expenses, saving and retirement planning, and unforeseen expenses to perform better financial wellbeing.

2.4 Islamic principles of financial knowledge

Islamic finance is the knowledge and implementation of *Shariah* (Islamic law) injunctions and rules that prevent unfairness in the acquisition and disposal of material or asset resources in order to satisfy people and enable them to obey Allah and society. As Allah said in the *Qur'an*:

"But seek, through that which Allah has given you, the home of the Hereafter; and [yet], do not forget your share of the world. And do good as Allah has done good to you. And desire not corruption in the land. Indeed, Allah does not like corrupters." (*Al-Quran*, 28:77).

Islamic financial knowledge is not merely understanding the basic knowledge of finance and numeracy skills for a financial decision but also understanding the spirit and principles of Islamic economics so Muslims would understand their right and obligation to manage resources and wealth and make better decision-making. According to [Ma'rifa Academy \(2014\)](#), several principles in the Islamic economy are derived from *Quran* and *Sunnah* that every Muslim should understand before involving in economic activity.

1. Ownership: All wealth and resources on the earth and in the heavens were created by Allah. Allah is the true owner of this universe, including all resources, wealth, and production factors. Therefore, every human being has an equal right to use the resources created by Allah.
2. Men and his position on earth: Human beings have been created in the best stature. They have the ability to select between good and evil. They also have rights and obligations. Therefore, they have to fulfill both the rights of Allah and His creation and will be rewarded based on what they did.
3. Wealth and resources: Allah created abundant wealth and resources to support human existence on this earth. Every human is encouraged to work hard to earn and utilise those resources to collect the wealth prescribed by Allah and avoid engaging in prohibited activities.
4. Economic activities: This includes production, distribution, and consumption. In the distribution process, whatever is being produced should be divided among those involved in the production, according to their share, without any deception. There should not be exploitation of the weak and the poor in the activity of production.
5. Trade and Business: The Prophet Muhammad (Peace be upon Him) too preferred trade and always encouraged businesses. Trade is allowed by mutual consent without harming one another. "...they say: trade is (just) like interest. But Allah has permitted trade and has forbidden interest..." (*Al Quran* 2:275).
6. Debt: Excessive debt is discouraged in Islam except under conditions where it becomes a necessity ([Sipon et al., 2014](#)). People who are engaging in debt-based transactions should ensure they have the ability and capability to repay the debt in accordance with the terms and conditions of the debt arrangement. If someone is contracted to debt and not repaying it, or without intention to repay, it means that he has committed a sin.

7. **Zakat and Charity:** *Zakat* is a determined amount of wealth that is paid annually from a person's wealth according to the methods and rulings of Islam to those who have the right to receive it as specified in the *Quran*. Giving *zakat* is regarded as purifying one's wealth in order to receive Allah's blessing and grow in goodness. Meanwhile, charity is a voluntary act of giving money to all those in need in order to please Allah.
8. **Savings:** Islam encourages saving for future needs. Without savings, Muslims cannot perform *zakat* and charity. One can save as much as he likes as long as he gives to the poor, the needy, and the one who asks for help.
9. **Reward:** In Islam, self-satisfaction, benefit, and self-development are essential, but not to the degree that Islam values the afterlife. In the form of heaven and true achievement in eternal life, success goes far beyond these materialistic rewards. Allah says in the *Quran*: "And whatever you spend in good, it will be repaid to you in full, and you shall not be wronged..." (*Al-Quran*, 2:272).

Apart from understanding the fundamental principles of Islamic economics, every Muslim should also be aware of Islamic finance's fundamental and most critical features. *Riba*, *gharar*, *maysir*, and unlawful goods and services are all prohibited in Islamic finance.

Usury or interest is how the word *riba* is translated into English. Interest is expressly forbidden in Islam and is a major sin. *Riba* literally translates to "excess", "increase", or "growth". Technically it is defined as an excess over and above the principal of loan without any counter-value. Usurious transactions were categorised into two, namely *riba al-fadl* and *riba al-nasi'ah*. *Riba al-fadl* is generated when one of the six *ribawi* items (gold, silver, dates, wheat, salt, and barley) is traded for the same type of commodity with a different volume or weight. *Riba al-nasi'ah*, on the other hand, is the product of a selling transaction that unduly rewards one of the counterparties in the form of a surplus or extra sum as a result of a delay or failure to be immediate. The *Qur'an* mentions the prohibition on *riba* from the judgment of value, followed by an implicit prohibition, then a limited one and finally, a total and conclusive prohibition (*Al-Rum*, 30:39; *Al-Nisa*, 4:161; *Ali-Imran*, 3:130 and *Al-Baqarah*, 2:275).

Gharar is a broad term that literally means deception, risk, fraud, uncertainty, or hazard that could result in loss or destruction. Hanafi scholars describe *gharar* as something whose outcome is unknown. Scholars of the Shafi'i school characterized it as something hidden in its manner and consequence. Al-Sarakshi defined it as "anything that the end result is hidden or the risk is equally uncommon, whether it exists or not". Therefore, in Islam, *gharar* refers to any agreement in which the object's presence or description is uncertain due to a lack of details and understanding about the contract's ultimate outcome. *Maysir* literally translates to a gambling. It is a game of upheaval. All types of gambling are also forbidden in Islam. *Maysir* refers to the simple acquisition of wealth by chance, regardless of whether it deprives others of their rights. In *maysir*, people share a desire to gain return through deliberate risk-taking, as noted earlier in the *Quran*, Allah clearly prohibits gambling (*Al-Baqarah*, 2:219 and *Al-Maidah*, 5:93).

3. Research Methodology

This study is designed using a quantitative methodology. The data were collected by distributing the questionnaires to 411 Muslim women in Indonesia and Malaysia. The questionnaires consist of two parts; the first part is the demographic questions. The second part is true or false questions about the basic knowledge of Islamic and general financial literacy measured using the score on the correct answer.

4. Demographic Profile of Respondents

The total respondents collected for this study is 411. The participation of Indonesian women contributes 50.1%, and Malaysian women contribute 49.9% to this study. Respondents dominate this survey with the age of 23-29 years old, which contributes 64.5%. The majority of women in this study are single, 54.5%, followed by married women, 42.3%. Concerning education, most of the respondents hold a Bachelor's degree 56.0% and a Master's degree 34.8%. Lastly, the private employee, with 30.2%, dominates the occupation of the respondents.

Table 1: Demographic profile of respondents

Indonesian Respondents		Malaysian Respondents		Total percentage
Age	Total	Age	Total	
18-21	1	18-22	27	6.8%
23-29	135	23- 29	130	64.5%
30-45	65	30-45	42	26.0%
46 Above	5	46 Above	6	2.7%
Marital Status		Marital Status		
Single	81	Single	143	54.5%
Married	119	Married	55	42.3%
Widowed	6	Widowed	4	2.4%
Divorced		Divorced	3	0.7%
Education		Education		
Primary school	0	Senior High School	7	1.7%
Junior high school	0	Junior High School	3	0.7%
Diploma	9	Diploma	12	5.1%
Bachelor	118	Bachelor	112	56.0%
Master	74	Master	69	34.8%
PhD	5	PhD	2	1.7%
Occupation		Occupation		
Undergraduate Student	3	Undergraduate Student	60	15.3%
Postgraduate Student	30	Postgraduate Student	42	17.5%
Self-employed (Entrepreneur)	20	Self-employed (Entrepreneur)	8	6.8%
Civil Servant / government employee	22	Civil Servant / government employee	30	12.7%
Private employee	69	Private employee	55	30.2%
Housewife	40	Housewife	8	11.7%
Other	22	Other	2	5.8%
Monthly Income		Monthly Income		
Rp1.000.000-3.000.000	73	Less than RM 1000	90	39.7%
Rp3.000.000-5.000.000	67	RM 1,000- RM 3,000	63	31.6%
Rp5.000.000-10.000.000	36	RM 3,000- RM 5,000	41	18.7%
Rp 10.000.000-20.000.000	26	RM 5,000 & above	11	9.0%
Rp 20.000.000 & above	4			1.0%
Total	206	Total	205	100.0%

5. Results and Discussion

The questions to measure financial knowledge among women are divided into two parts. The first part is a question about the knowledge of Islamic finance. Six questions on basic Islamic finance, which consist of the Islamic method of finance, *gharar*, *mudharabah*, *zakat*, and *takaful*, were asked to measure Islamic finance

knowledge. The second part is questions pertaining to general financial knowledge. Four questions consisting of the basic time value of money, speculation on investment, investment risk, and inflation were asked to measure the general knowledge of finance among women in Indonesia and Malaysia.

Table 2: Questions on Islamic and General Financial Knowledge

Construct	No	Items/ statements	Reference
Islamic Financial Knowledge (IFK)	1	Islamic method of finance is interest-free (True)	Antara et al. (2016)
	2	<i>Gharar</i> refers to any transaction in which its existence or description of the object is not certain due to a lack of information and knowledge on the ultimate result of the contract (True)	Ma'rifa Academy (2014)
	3	An Islamic financial institution may invest with you according to the profit-sharing method (<i>Mudharabah</i>) (True)	Antara et al. (2016)
	4	In <i>Mudharabah</i> , the capital provider is the only party that born the losses (True)	Antara et al. (2016)
	5	<i>Zakat</i> is a determined amount of wealth that is paid annually from a person's wealth according to the methods and rulings of Islam to those who have the right to receive it. How much is the amount of <i>nisab</i> for <i>Zakat Mal</i> ? (85 gram of gold)	Ma'rifa Academy (2014)
	6	<i>Takaful</i> can provide coverage and benefits similar to conventional insurance (True)	Hassan R., et al. (2018)
	7	Suppose you put \$100 into a (no fee, tax-free) savings account with a profit rate of 2.78% per year. You don't make any further payments into this account, and you don't withdraw any money. Once the profit is paid, your money in the account at the end of the first year would be \$102.8 (True)	OECD (2016)
	8	Buying shares on a short-term price fluctuation is not speculation (False)	Antara et al. (2016)
	9	An investment with a high return is likely to be high risk/ or if someone offers you the chance to make a lot of money, it is likely that there is also a chance that you will lose a lot of money (True)	OECD (2016)
	10	Inflation does not affect the living cost (False)	OECD (2016)

Most women in both countries understand that Islamic finance is interest-free, which is indicated by question IFK 1. They also understand the definition of *gharar* and the profit-sharing method on *mudharabah* contract, which is shown by questions IFK 2 and IFK 3, respectively. However, despite knowing that *mudharabah* contract is using the profit-loss sharing method, only a few of them know that the capital provider in *mudharabah* contract (*rabbul maal*) is the one who bears the losses in the case of default (this is represented by question IFK 4). Although Muslims know the definition of *zakat*, in this study, less than half of the Malaysian women do not know the amount of *nisab* for *zakat mal*, which is 85 grams of gold.

For general financial knowledge, this study found that women in Indonesia and Malaysia still do not know how to calculate the basic time value of money. This result is represented by question GFK 1. However, most women in both countries have a good score when asked about investment speculation. The respondents also understand the consequence of high risk and high return on investment. Finally, most women in both countries also realize that inflation affects living costs. Muslim women in both countries have moderate financial knowledge, with the average scores for Indonesian women are 6.95 and Malaysian women are 6.54, respectively.

Table 3: Financial knowledge score

Item No	Questions	Indonesian Women	Malaysian Women
IFK 1	Islamic method of finance is interest-free (True)	195	170
IFK 2	Gharar refers to any transaction in which its existence or description of the object is not certain due to a lack of information and knowledge on the ultimate result of the contract (True)	167	150
IFK 3	An Islamic financial institution may invest with you according to the profit-sharing method (Mudarabah) (True)	192	179
IFK 4	In Mudarabah, the capital provider is the only party that born the losses (True)	62	63
IFK 5	Zakat is a determined amount of wealth paid annually from a person's wealth according to the methods and rulings of Islam to those who have the right to receive it. How much is the amount of <i>nisab</i> for Zakat Mal? (85 grams of gold)	133	83
IFK 6	Takaful can provide coverage and benefits similar to conventional insurance (True)	117	143
GFK 1	Suppose you put \$100 into a (no fee, tax-free) savings account with a profit rate of 2.78% per year. You don't make any further payments into this account, and you don't withdraw any money. Once the profit is paid, your money in the account at the end of the first year would be \$102.8 (true)	80	47
GFK 2	Buying shares on a short-term price fluctuation is not speculation (False)	130	157
GFK 3	An investment with a high return is likely to be high risk/ or If someone offers you the chance to make a lot of money, it is likely that there is also a chance that you will lose a lot of money (True)	184	172
GFK 4	Inflation does not affect the living cost (False)	171	177
	Islamic Financial Knowledge Average score	4.20 /6	3.84 /6
	General Financial Knowledge Average score	2.74 /4	2.70 /4
	Total Average	6.95 /10	6.54 4/10

Based on the financial knowledge score obtained in this study, the average score on Islamic financial knowledge among Indonesian women is 4.20, and the average for general financial knowledge is 2.74. Indonesian women obtained a total average score of 6.95. There are two questions that most Indonesian women are weak in—first, the understanding of the role of parties in *mudharabah* contract. Most Indonesian women understand that *mudharabah* contracts use the profit-sharing method, but only a few know the role of each party in *mudharabah* contract. The second area of their weakness is the time value of money calculation. When they were asked about the basic calculation of the time value of money, only 38% of the respondents answered correctly.

On the other hand, Malaysian women are weak in three questions. Similar to Indonesian women, they are weak in understanding the role of *mudharabah* parties and the basic calculation of the time value of money. Only 23% of Malaysian women answer the time value of money question correctly. In addition, most Malaysian women do not know the amount of *nisab* for *zakat mal*. Only 40% of them answer the question about the amount of *nisab* correctly.

Indonesian women were found to have slightly higher scores in Islamic financial knowledge. Indonesian women have an average score of Islamic financial knowledge 4.20 out of 6 questions, while Malaysian women

obtained an average score of 3.84. However, both Indonesian and Malaysian respondents have the same average score on general financial knowledge of 2.74 and 2.70 out of 4 questions, respectively. The total average for both Indonesian and Malaysian women are 6.95 and 6.54 out of 10, respectively. It can be inferred that women in both countries have a moderate level of financial knowledge.

The result implies that Muslim women need to understand more about Islamic financial knowledge. Women in this study showed a low score when they were asked about the Islamic contract; the contract, in this case, is *mudharabah*. In addition, Muslim women may know the definition of *zakat*, but many of them do not know the amount of *nisab* for *zakat mal*. The knowledge about *zakat* is something that every Muslim needs to know because they are obliged to pay *zakat* when their wealth has reached the *nisab*. Muslim women also need to be taught the importance of understanding the time value of money. The time value of money will allow them to calculate their savings and investment. Women in this study were found to be weak in these three areas, namely *mudharabah* contract, *zakat*, and the time value of money.

6. Conclusion and Recommendation

Measuring financial knowledge is important to understand the level of understanding for both Islamic and general financial literacy. This study aims to measure the level of financial knowledge among women in Indonesia and Malaysia. Therefore, the area of strengths and weaknesses in financial knowledge can be identified.

Indonesian Financial Authority (OJK, 2019), Messy and Monticone (2013), and Sawandi et al. (2018) stated that women have low financial literacy. Furthermore, a study by Mohta and Shunmugasundaram (2022) found that female respondents have acute financial illiteracy. However, the study found that Muslim women in Indonesia and Malaysia have moderate Islamic and general financial knowledge. This finding does not support the previous studies and reports by OJK that women have low financial literacy levels. Although the finding challenges the previous report that stated a low level of financial knowledge among women, a continuous learning program by considering strengths and weaknesses still needs to be taken to improve the financial literacy among women.

Women in Indonesia and Malaysia were found to have a moderate level of both Islamic and general financial knowledge. In a rough score, women in both countries have four correct answers out of six Islamic financial knowledge questions and three correct answers out of four general financial knowledge questions. Both scores weight 67% and 75% of the total questions, respectively. It can be concluded that both Islamic and general financial knowledge among women in Indonesia needs to be improved.

Several areas of weaknesses found in this study are; the understanding of the role of parties in *mudharabah* contract, knowledge about *zakat*, and the simple time value of money calculation. These three areas of weakness could be emphasized in the financial education program. Understanding the *mudharabah* contracts and the role of its parties is important when women are intended to invest in a particular *mudharabah* project or in an Islamic banking product that is offered with such a contract. Knowledge about *zakat* also reflects the understanding of Muslim's obligation on their wealth. Lastly, it is also essential for women to understand the time value of money to estimate their profit on some investments or savings and even avoid financial scams.

Besides the significant efforts made to achieve the research objectives and answer the research questions, there have been inevitable limitations due to time constraints. This study can be expanded to explore the antecedents and the outcomes of financial literacy among Muslim women. The sample of this study focuses on women in Indonesia and Malaysia; therefore, the findings of this study could not be generalized to other women in other countries. Regarding the sample size limitation, the researcher suggests a larger respondent for future research. The larger sample size would indicate a larger population of Muslim women, and the generalizability issue would be resolved. More questions related to Islamic and general financial knowledge also could be asked to observe more areas of strengths and weaknesses among women. Therefore, financial literacy programs can focus more on increasing financial knowledge that women still do not widely understand.

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References

- Antara, P.M., Musa, R. & Hassan, F. (2016). Bridging Islamic Financial Literacy and Halal Literacy: The Way Forward in Halal Ecosystem. *Procedia Economics and Finance* 37, 196 – 202.
- Atkinson, A. & Messy, F.-A. (2012). Measuring Financial Literacy: Results of the OECD / International Network on Financial Education (INFE) Pilot Study. *OECD Working Papers on Finance, Insurance and Private Pensions*, No. 15. OECD Publishing.
- Demirgüç-Kunt, A., L. Klapper, D., Singer P. & Van O. (2015). The Global Findex Database 2014: Measuring Financial Inclusion Around the World. *World Bank Group Policy Research Working Paper* 7255.
- Global Islamic Financial Report (2019). Islamic Finance Country Index- IFCI 2019, Retrieved from: <http://gifr.net/publications/gifr2019/ifci.pdf>
- Goyal, K. & Kumar, S. (2020). Financial literacy: A Systematic Review and Bibliometric Analysis. *International Journal of Consumer Studies*, 1–26.
- Haotanto, A. (2018). Financial Literacy Trends for Women in Asia: Singapore, Hong Kong Malaysia, the Philippines and Indonesia. *The New Savvy*. Retrieved from: <https://thenewsavvy.com/life/success/financial-literacy-women-asia/> Accessed on 27/11/2020.
- Hassan R, Salman S. A., Kassim S., Majdi H. (2018). Awareness and Knowledge of Takaful in Malaysia: A Survey of Malaysian Consumers, *International Journal of Business and Social Science* 9 (1), 45-53
- Hussain, J., Salia, S. & Karim, A. (2018). Is Knowledge that Powerful? Financial Literacy and Access to Finance; an Analysis of Enterprises in the UK. *Journal of Small Business and Enterprise Development* 25 (6), 985-1003.
- Huston, S. J. (2010). Measuring Financial Literacy. *The Journal of Consumer Affairs* 44 (2), 296-316
- Lusardi (2019). Financial Literacy and the Need for Financial Education: Evidence and Implications. *Swiss Journal of Economics and Statistics* 155 (1), 1-8.
- Ma'rifa Academy. (2014). Islamic Banking and Finance: Principles and Practices, retrieved from: <https://islamicbankers.files.wordpress.com/2014/09/marifas-practical-guide-to-islamic-banking-and-finance.pdf>
- Melissa, D. (2011). Financial Literacy and Women: A Mixed Method Study of Challenges and Needs. *Dissertation Submitted to the Graduate School of the University of Massachusetts*.
- Messy F. A., & Monticone C. (2013). Gender Differences in Financial Literacy: Identifying Barriers and Addressing Women's' and Girls' Needs Through Financial Education, *Women and Financial Literacy. OECD/INFE Evidence, Survey and Policy Responses*, OECD, Paris.
- Mohta, A., & Shunmugasundaram, V. (2022). Financial Literacy among Millennials. *International Journal of Economics and Financial Issues*, 12 (2), 61-66.
- OECD. (2016). *OECD/INFE International Survey of Adult Financial Literacy Competencies*. OECD, Paris.
- OECD. (2018). *OECD/INFE Core Competencies Framework on Financial Literacy for MSMEs*. OECD, Paris.
- OJK. (2019). *Siaran Pers Survei OJK 2019: Indeks Literacy dan Inklusi Keuangan Meningkatkan*. Retrieved from: <https://www.ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Pages/Siaran-Pers-Survei-OJK-2019-Indeks-Literasi-Dan-Inklusi-Kuangan-Meningkat.aspx>.
- President's Advisory Council on Financial Literacy (PACFL) (2008). *2008 Annual Report to the President*. Retrieved from <https://www.slideshare.net/StevenReta/pacfl-annual-report11609>.
- Rahim, S. H. A., Rashid, R. A. & Hamed, A. B. (2016). Islamic Financial Literacy and Its Determinants among University Students: An Exploratory Factor Analysis. *International Journal of Economics and Financial Issues*, 6 (7), 32-35.
- Razak, A. L. H. A. & Abdullah, H. R. (2015). Exploratory Research into Islamic Financial Literacy in Brunei Darussalam. *Islamic Financial Literacy*. Universiti Islam Sultan Sharif Ali. 59-83
- Salehudin, I. (2010). Halal Literacy: A Concept Exploration and Measurement Validation. *ASEAN Marketing Journal*, 2(1), 1-12.
- Sawandi, N. Abu Bakar, A. S., Shaari, H., Saad, H. A. & Amran, N. A. (2018). Financial Literacy Among Malaysian: Level of Financial Knowledge Score. *The Journal of Social Sciences Research*. Special Issues 6, 300-304.
- Setiawati, R., Nidar, S. R., Anwar, M., & Masyita, D. (2018). Islamic Financial Literacy: Construct Process and Validity. *Academy of Strategic Management Journal*. 17(4), 1-12.
- Setyowati, A., Harmadi & Sunarjanto (2018). Islamic Financial Literacy and Personal Financial Planning: A Socio-Demographic Study, *Jurnal Keuangan dan Perbankan*, 22(1), 63–72.
- Shankar, N., Vinod, S., & Kamath, R. (2022). Financial Well-Being – A Generation Z Perspective using a Structural Equation Modeling approach. *Investment Management and Financial Innovations*, 19(1), 32-

50.

- Sipon, S., Othman, K., Ghani, Z. A., & Radzi, H. M. (2014). *The Impact of Religiosity on Financial Debt and Debt Stress*, *Procedia - Social and Behavioral Sciences*, 140, 300 – 306.
- The Concept of Halal & Haram in Islam According to *Quran & Hadith*. *Islamic Articles*. (2020, December 1). Retrieved from <http://www.Quranreading.com/blog/the-concept-of-halal-haram-in-islam-according-to-Quran-hadith/>.
- Thomas, B., & Subhashree, P. (2020). Factors that Influence the Financial Literacy among Engineering Students. *Procedia Computer Science*, 172, 480–487.
- Tumba, N. J., Onodugo, V. A., Akpan, E. E., & Babarinde, G. F. (2022). Financial Literacy and Business Performance among Female Micro-Entrepreneurs. *Investment Management and Financial Innovations*, 19(1), 156-167.
- Widyastuti, U., Sumiati A., Herlitha & Melati, I. S. (2020). Financial Education, Financial Literacy, and Financial Behaviour: What does Really Matter?. *Management Science Letters*. 10, 2715–2720.
- Yahaya, R., Zainol, Z., Abidin, J. H. O. @ Z., & Ismail, R. (2019). The Effect of Financial Knowledge and Financial Attitudes on Financial Behavior among University Students. *International Journal of Academic Research in Business and Social Sciences*, 9(8), 22–32.
- Yong, C., Yew, S. Y., & Wee, C. K. (2018). Financial Knowledge, Attitude and Behaviour of Young Working Adults in Malaysia. *Institutions and Economies*, 10 (4), 21-48.

