Volume: 10 Issues: 76 [September, 2025] pp. 674 -686
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.academicinspired.com/jised
DOI: 10.55573/JISED.107651

EXPLORATORY FACTOR ANALYSIS (EFA) AND REALIBILITY ANALYSIS OF FINANCIAL LITERACY AMONG WORKERS

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Article history
Received date : 11-7-2025
Revised date : 12-7-2025
Accepted date : 7-9-2025
Published date : 25-9-2025

To cite this document:
Mohd Hassan, N., Ab Rani, N. Z. A., Zahari, N. S., Nik Hassan, N. S., & Azizan, N. H. (2025). Exploratory factor analysis (EFA) and reliability analysis of financial literacy among workers. *Journal of Islamic, Social, Economics and Development (JISED),* 10 (76), 674 – 686.

Abstract: *This study investigates the validity and reliability of financial literacy constructs among workers by employing Exploratory Factor Analysis (EFA) on data collected through a 15-item questionnaire measured using a 5-point Likert scale. A pilot study was conducted with 53 respondents, deemed sufficient based on previous literature. EFA results identified three core dimensions of financial literacy like financial behaviour, financial attitude, and financial knowledge, which collectively accounted for 68.75% of the total variance. It indicate a strong construct validity. All items demonstrated factor loadings above 0.50 and were retained. Reliability analysis using Cronbach's alpha confirmed high internal consistency across all components, with values ranging from 0.735 to 0.908. The findings establish a robust and valid measurement tool for assessing financial literacy among workers and provide a foundational framework for future research and policy interventions aimed at enhancing financial literacy, education and well-being in the workforce for a variety sector.*

Keywords: *Financial Literacy, Financial Behavior, Financial Attitude, and Financial Knowledge, Workers*

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Introduction

In a progressively complicated financial landscape, individuals are anticipated to make crucial decisions concerning savings, investments, debt management, and retirement planning. Financial literacy is essential for workers to achieve personal financial well-being and long-term security since it demonstrates the ability to comprehend and use various financial skills, such as personal financial management, budgeting, and investing. Financial literacy is crucial for daily decision-making and significantly impacts life outcomes, including property ownership, asset accumulation, and readiness for unexpected financial issues.

Financial literacy among employees more essential since they take greater responsibility for their financial futures; the ability to analyze financial information and make informed decisions has become an important life skill. Individuals deficient in financial literacy may struggle to manage their income, be unable to manage their debt, or fail to prepare efficiently for the future, thus leading to higher financial stress and reduced quality of life. According to Lestari et al. (2024), financial literacy initiatives within organizations greatly improve employees' financial behaviors, resulting in enhanced budgeting, savings, and debt management. These enhancements foster more financial security and less stress, thereby enhancing job satisfaction and engagement.

In the current challenging economic environment, financial literacy has emerged as an important skill for individuals, especially employees, who must manage an abundance of financial issues. Despite its acknowledged significance, employees' financial literacy skills remain a concern. This deficiency not only hampers individuals' financial well-being but also impacts organizational productivity and economic stability. According to Bank Negara Malaysia, financial literacy in Malaysia has increased greatly, surpassing the global average, although issues remain. 61% of Malaysians lack emergency savings, and 26% of working individuals experience financial stress, potentially compromising their job performance. Financial literacy is critical for individual well-being because it can diminish productivity and increase job turnover.

Hamzah et al. (2024) indicated that many Malaysian employees lack adequate financial literacy, which leads to poor financial behavior and higher debt levels. The study highlighted the need for targeted financial education programs to effectively address these issues. Furthermore, a study by Hamzah et al. (2024) also reveals that this issue is pronounced within the millennial workforce. Despite receiving direct financial education, millennial continue to struggle with weak and proficient money management habits. Research on the Malaysian workforce remains limited, despite global studies supporting the relevance of financial literacy in enhancing household well-being and lowering financial stress. Despite its progress in financial literacy, Malaysia still shows significant weaknesses, particularly in emergency savings, debt management, and regular financial behaviors.

Current research suggests that insufficient financial literacy among Malaysian employees leads to stress, diminished productivity, and elevated turnover rates. Nevertheless, little research has produced a thorough and dependable instrument for assessing financial literacy within the Malaysian setting. There is a lack of extensive research into the factors affecting employees' financial attitudes, behaviors, and knowledge, particularly among diverse demographic groups, such as millennial.

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The deficiency in financial literacy among employees has wider implications for organizational performance. Financial strain can result in diminished productivity, elevated absenteeism, and increased turnover rates. Employers are motivated to foster financial literacy among their staff in order to improve overall organizational efficiency. Insufficient financial literacy renders employees more vulnerable to undesirable financial behavior; it increases stress and diminishes job performance.

In light of these issues, this study aims to fill the gap by creating and evaluating a valid and reliable tool for measuring financial literacy among Malaysian workers, with a focus on financial behavior, attitudes, and knowledge. It is imperative to assess the current level of financial literacy among employees, determine the factors leading to financial illiteracy, and formulate specific interventions to enhance financial knowledge and behavior. These initiatives are crucial for the financial welfare of employees, as well as the health and productivity of organizations.

Literature Review

Overview of Financial Knowledge

The information and abilities required to make wise financial decisions are all included in financial literacy. It is becoming more widely acknowledged as a crucial element impacting people's financial security and general economic stability. Many adults around the world lack fundamental financial knowledge, which hinders their ability to successfully manage personal resources (Organization for Economic Co-operation and Development (OECD), 2020). Financial literacy is crucial in the workplace because it affects workers' capacity to manage debt, save for retirement, and choose wisely when making investments, all of which have an impact on their output and level of job satisfaction.

Financial literacy is a multidimensional construct, encompassing various components such as budgeting, saving, investing, and understanding financial products. Rehman & Mia (2024) conducted a systematic review identifying seven key dimensions influencing financial literacy: demographic, socio-economic, psychological, financial, societal, Islamic, and technological factors. This comprehensive framework underscores the complexity of financial literacy and the need for multifaceted approaches in its evaluation and enhancement.

Importance of Financial Literacy Among Workers

Financial literacy among workers is crucial for both individual well-being and organizational performance. Rahman, Isa, Masud, and Chowdhury (2021) examined the B40 income group in Malaysia and found that financial literacy significantly affects financial behavior and stress levels, which in turn influence overall financial well-being. Furthermore, financial stress among employees has been linked to decreased productivity and increased absenteeism, emphasizing the need for employers to support financial education initiatives (Financial Times, 2022).

Empirical Studies on Financial Literacy of Workers

Recent empirical studies have shed light on the financial literacy levels among different worker demographics. Sholahuddin, Wulandari, Sartika, and Helmi (2025) analyzed Generation Z workers in Indonesia, revealing that financial knowledge, attitudes, and behaviors are

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significantly influenced by factors such as education, income, and parental guidance. Similarly, Jiang & Shimizu (2024) investigated Japanese workers and found that while financial literacy positively correlates with investment participation and retirement planning, the relationship is complex and influenced by cultural and systemic factors.

Methods of Measuring Financial Literacy

Measuring financial literacy involves assessing both knowledge and behavior. The OECD (2020) survey utilized a standardized toolkit to evaluate financial knowledge, behaviors, and attitudes across various countries, providing a comprehensive overview of adult financial literacy levels. Additionally, Frees, Gangal, and Shaviro (2024) employed causal inference methods to quantify the impact of financial literacy courses on individuals' financial health, demonstrating the effectiveness of structured financial education programs.

Multiple factors influence financial literacy among workers. Rehman and Mia (2024) identified demographic variables (age, gender), socio-economic status (income, education), psychological aspects (confidence, anxiety), and technological exposure as significant determinants. Ben Belgacom, Khatoon, Bala, and Alzuman (2024) further emphasized the role of financial technology in bridging or widening the financial literacy gap, depending on individuals' access and adaptability to digital financial tools.

Enhancing financial literacy among workers requires targeted strategies. Employers are encouraged to implement workplace financial education programs, which have been shown to improve employees' financial behaviors and reduce stress (Financial Times, 2022). Moreover, integrating financial education into school curricula can lay a strong foundation for future workers, as advocated by financial literacy experts (The Australian, 2023). Tailoring financial education to address specific needs, such as those of women facing unique retirement challenges, is also crucial.

Gaps in the Literature and Future Research Directions

Despite growing interest, gaps remain in understanding the long-term effects of financial literacy interventions among workers. Future research should focus on longitudinal studies to assess the sustained impact of financial education programs. Additionally, exploring the interplay between financial literacy and emerging digital financial platforms can provide insights into developing effective strategies for diverse worker populations.

The literature consistently indicates that financial literacy has a positive impact on financial behaviour and well-being; however, there are contradictions regarding the strength of its dimensions. Some studies indicate that financial knowledge is insufficient because of a lack of supportive attitudes and behaviours (Rehman & Mia, 2024), while other studies suggest that behaviour is the primary predictor of financial stability (Rahman et al., 2021). Cultural and institutional contexts, such as those in Japan, Indonesia, and Malaysia, seem to moderate these relationships, indicating that findings from one setting may not be fully applicable to another (Jiang & Shimizu, 2024; Sholahuddin et al., 2025). The discovered inconsistencies highlight the necessity for context-specific validation of financial literacy constructs. This study employs Exploratory Factor Analysis (EFA) to empirically examine the distinct but interrelated constructs of financial behaviour, attitudes, and knowledge among Malaysian workers, addressing an identified gap in the literature. This method ensures cultural and contextual

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relevance while establishing a foundation for future hypothesis-driven research using Confirmatory Factor Analysis (CFA).

Methodology

The pilot study recruited 53 workers from both public and private sector organisations in Kelantan, Malaysia, comprising clerical staff, junior executives, and technical employees, which aligns with recommendations for pilot research in scale development and factor analysis. Although modest, the sample size falls within the commonly accepted range of 30–100 participants for pilot studies, sufficient to examine instrument clarity, factor structure, and reliability (Hair et al., 2020; Zainudin et al., 2018). Methodological literature further supports that pilot studies do not require formal power calculations since their primary aim is feasibility, refinement, and reliability testing rather than hypothesis confirmation (Lim et al., 2024; Teresi & Jones, 2022). Reviews of practice similarly note that most pilot studies use between 20–60 participants per group or up to 100 overall, with justification based on study objectives (Kaba et al., 2023; Walters et al., 2025). Thus, the present pilot with 53 respondents is methodologically appropriate for the study's aims.

Research Instrument

This study utilised a 15-item instrument adapted from previous validated studies to measure the construct of Financial Literacy, tailored to suit the context and characteristics of working individuals. Respondents were instructed to respond confidently to the statements that best reflected their current financial situation. The instrument encompassed three sub-constructs identified in the literature: financial behaviour, financial attitude, and financial knowledge. Each item was measured using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), allowing for the assessment of the respondents' levels of agreement with various financial literacy-related statements.

Pilot Test

A pilot study is a preliminary investigation conducted on a smaller scale using respondents drawn from the target population of the main study. The primary purpose of a pilot study is to evaluate the feasibility of the research design and to identify any potential issues before proceeding with the full-scale investigation. Specifically, it helps ensure that the sample shares similar characteristics with the target population, identifies shortcomings in the research instrument, and provides initial insights into the viability of the study hypotheses.

The pilot study is essential for refining the instrument, enhancing the clarity of the items, and ensuring the overall reliability and validity of the measurement tools. As noted by Ehido et al. (2020), Bahkia et al. (2019), Hoque et al. (2018), Rahlin et al. (2023), and Shkeer and Awang (2019), pre-testing and pilot testing are critical steps in validating a modified instrument. This is particularly important when the original instrument was developed in a different cultural or industrial context than that of the current study (Baistaman et al., 2020). Conducting a pilot study therefore ensures that the actual research can be implemented smoothly by addressing any deficiencies or errors identified during the preliminary phase.

Exploratory Factor Analysis (EFA)

The research data were analysed using IBM SPSS version 22.0. Instrument validity and construct validity were assessed through Exploratory Factor Analysis (EFA), applying the varimax rotation method. EFA is essential for uncovering the underlying structure of a set of

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variables, especially when the number and nature of latent constructs (factors) are not clearly known in advance. These factors represent underlying dimensions that group related items together, even though they cannot be measured directly. EFA is particularly valuable when researchers aim to explore the dimensionality of a construct without predefined expectations (Ehido et al., 2020; Hair et al., 2020; Zainudin et al., 2018).

EFA was conducted for each sub-construct in order to examine whether the factor structure of the instrument aligned with prior research or if there were any changes in item grouping, especially due to differences in the characteristics of the target population. This process enables researchers to detect potential shifts in item dimensions and, if necessary, rename or redefine the identified factors (Bahkia et al., 2019; Dehisat & Awang, 2020; Rahlin et al., 2021; Shkeer & Awang, 2019; Yahaya et al., 2018).

In addition to construct validity, the reliability of the instrument was assessed using Cronbach's Alpha, a statistical test commonly used to determine the internal consistency of measurement scales. This analysis was critical in evaluating whether the items within each factor consistently measure the intended construct (Ali et al., 2021; Jani et al., 2023; Zakaria et al., 2016). By applying EFA and reliability analysis to the pilot study data, the dimensionality and coherence of the measurement instrument were confirmed, providing a solid foundation for subsequent research stages (Mahdzan et al., 2020; Sahid & Habidin, 2018; Zainudin et al., 2018).

Result

Exploratory Factor Analysis (EFA) of Financial Literacy

Exploratory Factor Analysis (EFA) of Financial Literacy was conducted using 15 items (Q1 to Q15). Table 1 presents each of these questionnaire items. The analysis was guided by three fundamental components identified in the literature as key constructs of Financial Literacy which are financial behaviour, financial attitude, and financial knowledge. These subcomponents were examined simultaneously through the EFA process. The analysis included the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, Total Variance Explained, Scree Plot, Rotated Component Matrix, and Reliability Analysis.

Table 1 Items to measure Financial Literacy

Item	Statement
Q1	I have my financial goals in terms of short-term (less than one year)/long-term (more than a year).
Q2	I have my own financial plan and I strictly go accordingly.
Q3	Before I buy something, I consider whether I can afford it.
Q4	I consider several products from different companies before making the decision to buy.
Q5	I keep close personal watch on my financial affairs.
Q6	I find more satisfying to spend than save money for the future.
Q7	I believe in developing a regular pattern of saving and stick to it.
Q8	Money is to be spent; saving is less important for now.
Q9	As long as I meet monthly payments, there is no need to worry about the length of time it will take me to pay off outstanding debts.
Q10	It does not matter how much I save as long as I do save.

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Q11	Fundamental knowledge of finance helped me for effective economic decision making.
Q12	Inflation does shrink the value of money over time.
Q13	Investing money into multiple avenues keeps me safer rather investing into single avenue.
Q14	I know the difference among a pension fund, an investment account, an insurance policy and a credit card.
Q15	I know about interest rates charged by bank, borrowing rates charged by financial institution, Credit ratings done by companies and why it is done.

Kaiser-Meyer-Olkin (KMO)

The results of the KMO and Bartlett's Test indicate that the data is suitable for factor analysis. The Kaiser-Meyer-Olkin (KMO) is 0.820, which exceeds the threshold of 0.6 and meets the required conditions (Dehisat & Awang, 2020; Munisamy et al., 2022). The result of Bartlett's Test of Sphericity is also significant for financial literacy, with a p-value < 0.05. This indicates that the correlations among the items are adequate for factor analysis.

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.820
Bartlett's Test of Sphericity	Approx. Chi-Square	518.225
	df	105
	Sig.	.000

Components and Total Variance

Table 3 demonstrate the result of EFA with regard to Eigenvalues larger than 1.0. Component 1, Component 2, and Component 3 account for 47.68%, 14.23%, and 6.83% of the total variance, respectively. Collectively, these three components explain a cumulative variance of 68.75%, indicating the emergence of three distinct underlying constructs. This suggests that the number of components and the associated items are appropriate for assessing the financial literacy construct, as the total explained variance exceeds the recommended threshold of 60% (Dehisat & Awang, 2020; Munisamy et al., 2022).

Table 3 Components and Total Variance Explained for The Financial Literacy Constructs

Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	**7.152**	**47.680**	**47.680**	**7.152**	**47.680**	**47.680**
2	2.135	14.233	61.913	2.135	14.233	61.913
3	1.025	6.833	68.746	1.025	6.833	68.746

The scree plot for the financial literacy construct is provided in Figure 1. This scree plot supports the division of the 15 items into three components which consistent with the results of the EFA. The EFA procedure grouped the items into three distinct components, as also reflected in the rotated component matrix, where each item loads significantly under its

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respective component (Ehido et al., 2020; Jani et al., 2023). In summary, based on the Eigenvalues, cumulative variance, and scree plot, the financial literacy construct comprises three components.

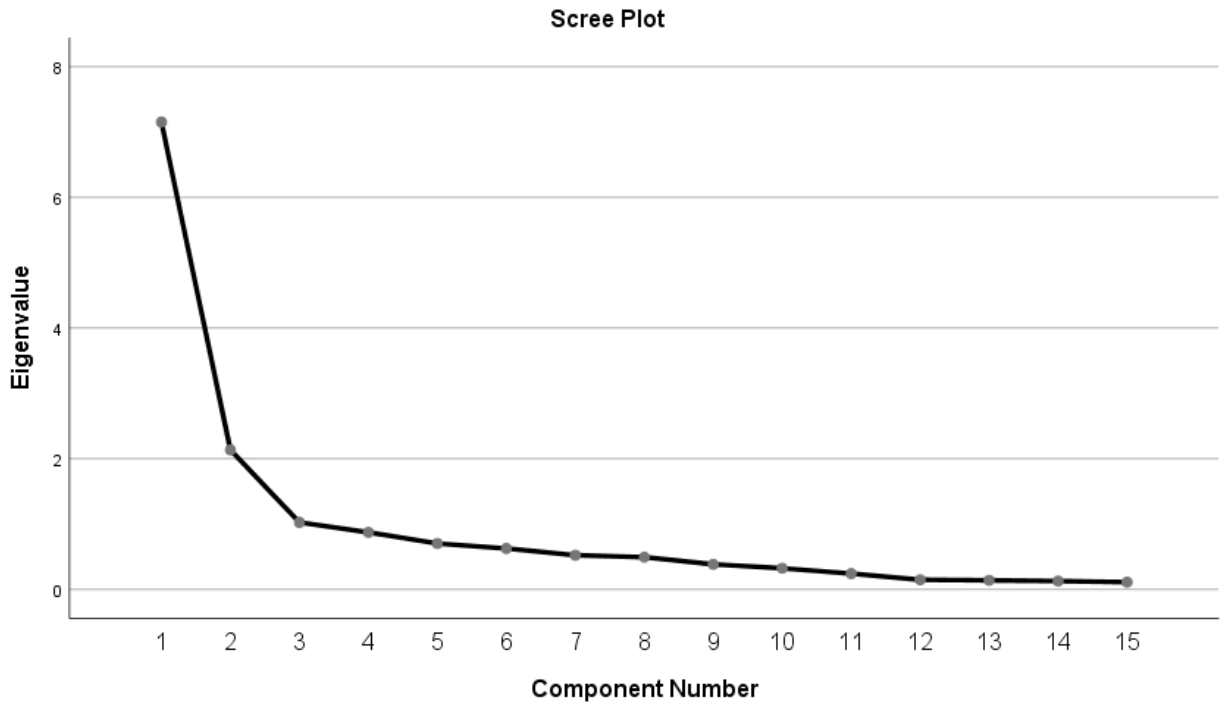

Figure 1. Scree Plot of The Financial Literacy Construct

Rotation Component Matrix

The final decision regarding the division of dimensions or components is made according to result of the rotation component matrix presented in Table 4. This table shows the three components derived from the EFA procedure applied to 15 items. Each item has a factor loading above 0.5, indicating acceptable contribution to the respective component. Therefore, all items were retained within the three components. Component 1 includes seven items (Q1, Q2, Q3, Q4, Q5, Q7, and Q10); Component 2 comprises three items (Q6, Q8, and Q9), and Component 3 consists of five items (Q11, Q12, Q13, Q14, and Q15).

Table 4 EFA and Each Item in The Components

Item	Component 1	Component 2	Component 3
Q1	0.803		
Q2	0.756		
Q3	0.743		
Q4	0.747		
Q5	0.914		
Q7	0.795		
Q10	0.769		
Q6		0.827	
Q8		0.678	

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Q9	0.835	
Q11		0.794
Q12		0.727
Q13		0.760
Q14		0.804
Q15		0.548

Reliability

Following the EFA, it was necessary to assess the internal consistency of the measurement scale for each of the three Financial Literacy components previously extracted. This reliability assessment is essential to ensure the robustness of the measurement model. As shown in Table 5, the Cronbach's Alpha values for all three components exceed the acceptable threshold of 0.7, indicating satisfactory levels of reliability in line with established guidelines (Ali et al., 2021; Dehisat & Awang, 2020; Ehido et al., 2020; Munisamy et al., 2022).

Table 5 Cronbach's Alpha for Each Component and Construct

No	Component	Number of items	Cronbach's Alpha
1	Financial Behaviour	7	0.908
2	Financial Attitude	3	0.735
3	Financial Knowledge	5	0.854

Discussion

This study aimed to evaluate the validity and reliability of Financial Literacy items among workers through the application of Exploratory Factor Analysis (EFA). A 5-point Likert scale was employed for item measurement. A pilot study was conducted with a sample of 53 respondents, which is deemed sufficient for EFA, as supported by previous research (Abdol Jani et al., 2023; Baistaman et al., 2020; Munisamy et al., 2022).

The EFA results revealed that the three underlying components of the Financial Literacy construct collectively accounted for 68.0% of the total variance, indicating a strong explanatory power in capturing the relationships among the items. All 15 questionnaire items were retained, as each demonstrated a factor loading greater than 0.50, confirming their significant contribution to the construct.

The final outcome of the analysis identified three distinct and meaningful components representing Financial Literacy, namely Financial Behaviour, Financial Attitude, and Financial Knowledge. These components demonstrated high internal reliability, with Cronbach's Alpha values of 0.908, 0.735, and 0.854, respectively, all exceeding the commonly accepted threshold, and thus confirming the reliability of each construct (Dehisat & Awang, 2020; Hoque et al., 2018; Munisamy et al., 2022).

Conclusion

The findings from the Exploratory Factor Analysis (EFA) indicate that the construct of Financial Literacy can be effectively measured through multiple components, with each component represented by a distinct set of related items. Specifically, the analysis confirmed

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the presence of three core component are financial behaviour, financial attitude, and financial knowledgewhich collectively capture the underlying structure of the Financial Literacy construct.

With respect to the instrument's reliability, all three components demonstrated satisfactory internal consistency, as evidenced by Cronbach's Alpha values exceeding the commonly accepted threshold of 0.70. These results confirm that the items within each component reliably measure their respective constructs.

Based on these findings, the instrument is deemed valid and reliable for use in subsequent data collection for the main study. The researcher may proceed by reorganizing the items under their respective components, ensuring that the refined instrument aligns with the established factor structure identified through the pilot study.

Recommendations For Future Research

Financial literacy remains a critical factor in shaping economic stability, decision-making, and long-term financial security among workers. While this study provides valuable insights into key determinants influencing financial literacy, future research can further enhance understanding by refining methodologies, expanding sample sizes, and exploring additional variables. Increasing the depth and scope of research will allow policymakers and institutions to develop more comprehensive strategies to improve financial education and economic outcomes. This part is focus on recommendations for future research that will strengthen the study's contributions to financial literacy area. Despite the promising findings, further research is recommended to explore the structural validity of the identified components. This can be achieved by employing Confirmatory Factor Analysis (CFA) to verify the relationships among latent variables and to strengthen the overall measurement model. Besides that, to enhance the depth and reliability of findings on financial literacy among workers, future research could explore the following improvements like:

Increasing Sample Size

Expanding the number of respondents beyond 53 to ensure broader representation across various sectors and demographic groups. A larger sample size would improve statistical significance and allow for stronger conclusions regarding financial literacy trends.

Streamlining Question Structure

This survey includes redundant questions so for future research. The researcher should focus on refining the questionnaire to enhance clarity, improve data validity, and ensure respondents provide meaningful responses. Also need to remove overlapping questions that assess similar financial literacy aspects and also ensure each question targets a distinct financial behavior, knowledge area, or attitude without redundancy (Mokhtar, N. et.al, 2018).

Diversifying Sampling Techniques

Implementing suitable sampling techniques like stratified sampling to ensure better representation across income levels, education backgrounds, and occupational sectors. It is also important to include participants from different geographical locations to identify regional differences in financial literacy.

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Exploring Additional Variables

There many additional variables can be applied for future research to examine the role of digital financial tools, social influences, and psychological factors affecting financial literacy. Investigating the impact of workplace financial wellness programs on improving employees' financial knowledge and habits is also interesting (Abdallah, W., Tfaily, F., & Harraf, A., 2024)

Comparative Studies Across Sectors

Another one is by comparing financial literacy levels between government employees, private sector workers, and self-employed individuals. Identifying sector-specific challenges and opportunities for financial education programs.

Policy Implication

The findings from this research highlight areas where policy interventions can enhance financial awareness, promote responsible financial management, and improve access to economic resources. By addressing gaps in knowledge and financial preparedness, policymakers can implement strategic initiatives that empower workers with the tools necessary to navigate economic challenges, reduce financial vulnerabilities, and foster long-term financial stability.

Enhancing Financial Education Programs

The findings suggest varying levels of financial literacy across different income groups and sectors. Policymakers should design targeted financial education initiatives, especially for lower-income workers, to strengthen their ability to make informed financial decisions.

Promotion of Financial Planning and Savings Culture

Respondents show mixed behaviors toward savings and investment habits. According to Report on Financial Incentives and Retirement Savings, OECD. (2018), Governments and institutions could introduce incentives such as tax benefits, matching contributions to savings, or employer-based financial wellness programs to encourage proactive financial planning.

Improved Access to Financial Instruments

Some respondents lack knowledge of financial products like pension funds, investment accounts, and interest rates. Policies should focus on improving financial literacy concerning these areas, possibly through mandatory financial orientation sessions or digital tools that simplify financial concepts.

Debt Management and Responsible Borrowing Strategies

Given the responses on attitudes toward debt and monthly payments, financial institutions and policymakers could explore regulatory frameworks that promote responsible borrowing while discouraging excessive reliance on credit (Clark, R. L. ,2023)

Workplace-Based Financial Initiatives

Since a significant portion of respondents are from the government and private sectors, employers could play a key role in improving financial literacy. Workplace-based seminars, financial counseling, or employer-sponsored retirement plans can help employees make better financial decisions.

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Tailored Policies for Different Demographic Groups

Differences in financial behaviors between younger and older respondents, as well as gender-based insights, suggest that financial literacy programs should be tailored to address the specific needs of different demographic groups.

References

Abdallah, W., Tfaily, F., & Harraf, A. (2024). The impact of digital financial literacy on financial behavior: Customers' perspective. *Competitiveness Review.*

Bank Negara Malaysia. (2024). Malaysians' financial literacy surpasses global average, but 61% still lack emergency savings. *Malay Mail*. Retrieved from https://www.malaymail.com/news/money/2024/11/17/malaysians-financial-literacy-surpasses-global-average-but-61pc-still-lack-emergency-savings-says-bnm-deputy-governor/157181

Ben Belgacem, S., Khatoon, G., Bala, H., & Alzuman, A. (2024). The role of financial technology on the nexus between demographic, socio-economic, and psychological factors, and the financial literacy gap. *SAGE Open, 14*(1).

Clark, R. L. (2023). Effectiveness of employer-provided financial education programs. *Journal of Financial Literacy and Wellbeing, 1*(1), 154-168. https://doi.org/10.1017/flw.2023

Financial Times. (2022). Employers urged to help workers navigate stresses of cost of living crisis. Retrieved from https://www.ft.com/content/ce396934-23f0-4721-abcd-d5b491d8c828

Frees, D., Gangal, A., & Shaviro, C. (2024). Quantifying the causal effect of financial literacy courses on financial health. *arXiv preprint arXiv:2405.01789*.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2020). *Multivariate data analysis* (8th ed.). Cengage Learning.

Hamzah, M. F., Yazid, Z. E., Che Ku Yahaya, C. K. H., & Abu Bakar, A. (2024). To Examine Financial Literacy Among Millennials in Malaysia: The Gap Between Theory and Practice. *International Journal of Accounting, Finance and Business*, 9(55).

Hamzah, S. R., Ahmad Tajudin, A. N., Ishak, N., & Rasedee, A. F. N. (2024). Financial Literacy and Financial Anxiety in Malaysia: Determinants and Behavioural Influences. *International Journal of Advanced Research in Education and Society, 6*(3), 309–322.

Jiang, Y., & Shimizu, S. (2024). Does financial literacy impact investment participation and retirement planning in Japan? *arXiv preprint arXiv:2405.01078*.

Kaba, A., Johnson, M., & Sun, H. (2023). Sample size justification in pilot and feasibility studies: A methodological review. *Pilot and Feasibility Studies, 9*(1), 112. https://doi.org/10.1186/s40814-023-01345-7

Lestari, S. D., Muhdaliha, E., Firdaus, P. M., Suhendra, E. S., & Brabo, N. A. (2024). Financial Literacy at Work: Enhancing Organizational Performance through Employee Training Investments. *Atestasi: Jurnal Ilmiah Akuntansi*, 7(2), 721–741.

Lim, S. Y., Tan, H. W., & Wong, K. C. (2024). Considerations for reliability testing in pilot studies: Sample size and methodological rigor. *Journal of Research Methods, 17*(2), 55–66.

Mokhtar, N., Sabri, M. F., Ho, C. S. F., & Dass, M. (2018). Profile and differences in financial literacy: Empirical evidence. *Malaysian Journal of Consumer and Family Economics, 21*, 164-185.

Nikmohamed, N., Sahid, S., Mahmud, M. I., & Azman, N. (2023). Exploratory factor analysis (EFA) and reliability analysis of financial well-being instrument among trainee teachers.

Volume: 10 Issues: 76 [September, 2025] pp. 674 -686
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.academicinspired.com/jised
DOI: 10.55573/JISED.107651

International Journal of Academic Research in Accounting, Finance & Management Sciences, 12(3), 487–497. https://doi.org/10.6007/IJARAFMS/v12-i3/19070

Organisation for Economic Co-operation and Development (OECD). (2020). *OECD/INFE 2020 international survey of adult financial literacy*. OECD Publishing.

OECD. (2018). *Financial incentives and retirement savings*. OECD Publishing. https://doi.org/10.1787/9789264306929-en

Rahman, M., Isa, C. R., Masud, M. M., & Chowdhury, N. T. (2021). The role of financial behaviour, financial literacy, and financial stress in explaining the financial well-being of B40 group in Malaysia. *Future Business Journal, 7*(1), 52.

Rehman, K., & Mia, M. A. (2024). Determinants of financial literacy: A systematic review and future research directions. *Future Business Journal, 10*(1), 75.

Sholahuddin, M. W., Wulandari, D., Sartika, D., & Helmi, S. (2025). Analysis of factors influencing financial literacy in Gen Z. *Indonesian Journal of Business Analytics, 4*(6), 2160–2173.

Teresi, J. A., & Jones, R. N. (2022). Design and analysis of pilot studies in health research. *Journal of Clinical Epidemiology, 145,* 144–150. https://doi.org/10.1016/j.jclinepi.2022.01.005

The Australian. (2023). Why we need to teach money skills in school ... urgently. Retrieved from https://www.theaustralian.com.au/business/wealth/why-we-need-to-teach-money-skills-in-school-urgently/news-story/1849a015aa24065093061adb189adae2

Rohani M.M., & Yusoff, A. S. (2015). Tahap Kesediaan Pelajar Dalam Penggunaan Teknologi, Pedagogi, Dan Kandungan (TPACK). *Proceeding of the 3rd International Conference on Artificial Intelligence and Computer Science*, Pulau Pinang.

Walters, S. J., Bonacho dos Anjos Henriques-Cadby, I., Bortolami, O., Flight, L., Hind, D., Jacques, R. M., ... & Julious, S. A. (2025). Recruitment and sample size in pilot and feasibility trials: A review of current practice. *Trials, 26*(1), 79. https://doi.org/10.1186/s13063-025-07890-9

Zainudin, A., Khadijah, S., & Noraini, I. (2018). Pilot testing and validation in scale development research. *Malaysian Journal of Social Sciences and Humanities, 3*(2), 17–24.