Jurnal Pengurusan 72 (2024)
https://doi.org/10.17576/pengurusan-2024-72-4

Financial Literacy and Behavior in Student Financial Planning Action: The Role of SECI Strategy

(*Literasi Kewangan dan Tingkah Laku dalam Tindakan Perancangan Kewangan Pelajar: Peranan Strategi SECI*)

Adilah A. Wahab
Wan Marhaini Wan Ahmad
Aimi Syahirah Abu Hashim
Mas Nordiana Rusli
(Faculty of Business and Economics, Universiti Malaya)

ABSTRACT

Research on the relationship between financial literacy, financial behavior, and financial planning actions (FPAs) in Malaysia is limited, with existing studies focusing mainly on financial well-being. This gap is concerning given the rising trend of bankruptcy and debt issues among young Malaysian employees. Understanding how financial literacy and behavior impact FPAs is crucial, particularly for individuals transitioning from academic to professional financial responsibilities. This paper examines these relationships among 1,105 undergraduate students in Malaysia. Using Ordinary Least Squares (OLS) regression, the study finds significant positive relationships between financial literacy, financial behavior, and FPAs, consistent with human capital and reasoned action theories. Additionally, it explores the moderating role of Socialization, Externalization, Combination, and Internalization (SECI) strategies. The results highlight that parental guidance, personal finance websites, and college information effectively moderate the relationship between financial literacy, financial behavior, and FPAs. Financial workshops also significantly moderate the relationship between financial behavior and FPAs. Overall, the findings demonstrate that both financial literacy and behavior are critical factors influencing FPAs among undergraduate students, emphasizing the need for effective financial education and support.

Keywords: Financial behavior; financial literacy; financial planning action; SECI strategy

ABSTRAK

Penyelidikan mengenai hubungan antara literasi kewangan, tingkah laku kewangan, dan tindakan perancangan kewangan (FPAs) di Malaysia adalah terhad, dengan kajian sedia ada tertumpu terutamanya kepada kesejahteraan kewangan. Jurang ini membimbangkan memandangkan tren peningkatan kebankrapan dan isu hutang di kalangan pekerja muda Malaysia. Memahami bagaimana literasi kewangan dan tingkah laku mempengaruhi FPAs adalah penting, terutamanya untuk individu yang sedang beralih dari tanggungjawab akademik ke pengurusan kewangan profesional. Kajian ini mengkaji hubungan ini di kalangan 1,105 pelajar sarjana muda di Malaysia. Dengan menggunakan regresi Ordinary Least Squares (OLS), kajian ini mendapati hubungan positif signifikan antara literasi kewangan, tingkah laku kewangan, dan FPAs, selaras dengan teori modal insan dan teori tindakan beralasan. Selain itu, kajian ini meneroka peranan moderasi strategi Sosialisasi, Eksternalisasi, Kombinasi, dan Internaliasi (SECI). Hasil kajian menekankan bahawa panduan ibu bapa, laman web kewangan peribadi, dan maklumat kolej berfungsi dengan berkesan sebagai moderator dalam hubungan antara literasi kewangan, tingkah laku kewangan, dan FPAs. Bengkel kewangan juga secara signifikan memoderasi hubungan antara tingkah laku kewangan dan FPAs. Secara keseluruhan, penemuan ini menunjukkan bahawa literasi kewangan dan tingkah laku adalah faktor penting yang mempengaruhi FPAs di kalangan pelajar sarjana muda, menekankan keperluan untuk pendidikan dan sokongan kewangan yang berkesan.

Kata kunci: Tingkah laku kewangan; Literasi kewangan; Tindakan perancangan kewangan; Strategi SECI

INTRODUCTION

Malaysia has emerged as a significant player in the financial planning industry, as evidenced by a 42% increase in the number of financial planning firms from 2015 to 2022 (Malaysian Financial Planning Council Report 2022). Similarly, there was a 145% increase in the number of licensed financial planners in Malaysia during this period. The aim of developing the industry in Malaysia is to provide personal financial planning services for citizen and investors, promoting improved financial wellbeing. This objective resonates with human capital theory, which posits that enhanced financial literacy contributes to improved financial outcomes. Nevertheless, recent data from the Securities Commission of Malaysia in 2022 reveals that a significant proportion of Malaysians either do not save or save inadequately, with the majority saving less than MYR 500 per month. Additionally, findings from the Malaysian Employee Provident Fund (EPF) Report (EPF 2021), indicate a concerning trend in retirement savings, with 2.6 million EPF contributors possessing a mere MYR 1,000 in their accounts in 2021, an alarming 84% increase from the previous year. In summary, a gap exists between the industry's developmental trajectory of the financial planning industry and the financial planning actions (FPAs) and overall financial well-being of the Malaysian population. In response, the Malaysia Financial Planning Council (MFPC) recently introduced the 'My Money & Me Guide,' which emphasizes the importance of disciplined FPAs as essential in achieving financial stability and long-term goals. FPA provides a vital strategy for long-term financial stability, as it allows individuals to update their financial status, monitor spending, manage cash flow, and track financial progress. Hence, this study aims to examine the level of FPAs among Malaysians, targeting undergraduate students who will soon enter the workforce. The aim is to identify the factors that could enhance FPAs to ensure their financial resilience throughout their careers.

Past research has explored various determinants of financial wellbeing, including financial literacy (Philippas & Avdoulas 2021; Sabri et al. 2023), financial behaviour (Falahati and Paim 2011; Gutter and Copur 2011), financial management (Chan et al. 2012), and financial self-efficacy (Sang 2021). However, few studies examine the determinants of FPAs. Human capital theory emphasizes the importance of financial literacy in individual financial wellbeing, hence prompting this study to examine the role of financial literacy in students' FPA. Additionally, as consistent with the Theory of Reasoned Action (TRA), this study will examine the impact of financial behaviour on FPAs. According to the theory, an individual's attitudes and beliefs influence their intentions and actions suggesting that positive financial behaviours may significantly shape FPAs among students. Earlier studies on FPAs have not examined the moderating role of SECI (socialization, externalization, combination, and internalization) strategies on the relationship between financial literacy, financial behaviour and FPAs. By integrating the SECI strategy, it is possible to identify specific activities or platforms that facilitate the transfer of explicit knowledge related to financial literacy and financial behaviour, thereby enhancing the FPAs. While Okoh et al. (2022) successfully applied the SECI strategy to improve household tax administration, these strategies are predominantly employed to foster innovation or project success within corporate settings. The lack of empirical research on SECI strategy thus motivates this study.

To investigate these relationships, this study collected survey data from 1105 undergraduate students using the Ordinary Least Squares (OLS) regression analysis. The stratified sampling method was employed in data collection. Empirical findings support both human capital theory and reasoned action theory, indicating that financial literacy and financial behaviour are indeed correlated with FPAs. Parental guidance was notably identified as a key indicator within the SECI strategy framework, emerging as a significant moderator, reinforcing the links between financial literacy, financial behaviour, and FPAs. This underscores the importance of knowledge sharing in shaping FPAs, as emphasized in the SECI strategy. This study enhances its robustness by examining five SECI strategy indicators (namely parental guidance, personal finance websites, college information, workshops, and social media) and deepens its analysis on knowledge sharing factors.

The rest of the paper are structured as follows: Section 2 presents the literature review and hypotheses; Section 3 describes the proposed framework; Section 4 outlines the research methodology. Section 5 analyses the results. Section 6 discusses the conclusions. Section 7 covers implications, limitations, and future research directions. The references and appendix are located at the end of the paper.

LITERATURE REVIEW AND HYPOTHESES

FINANCIAL PLANNING ACTIONS (FPAS)

Human capital theory posits that education enhances individuals' human capital, which comprises psychological and cognitive components (Schultz 1961). This theory has widely served as a foundation in healthcare literature to examine the impact of education on psychological human capital (development of attitudes) and cognitive human capital (skills ranging from basic reading to reasoning abilities) (LeVine 2012; Smith-Greenaway 2017). This foundation in human capital theory is relevant to understanding the causal effect of financial literacy on financial planning actions (FPAs) which concern the behaviours and processes individuals adopt to manage their finances effectively (Rea et al. 2019). In this context, FPAs serve as indicators of both psychological and cognitive aspects of human capital. For undergraduate students, FPAs are crucial components in navigating their academic journey and securing their future financial stability (LeBaron et al. 2018). No study to date has specifically examined the determinants of FPAs among undergraduates although several have examined factors influencing financial wellbeing including financial literacy, socio-economic background, financial socialisation, financial anxiety and continuation-generation college students (Jia et al. 2021; Kaur et al. 2023; Xin et al. 2023).

Given the importance of financial literacy and related factors in shaping financial well-being, it is crucial to explore how these elements drive specific FPAs among undergraduate students. Assessing FPAs among them requires an approach that is tailored to their unique context. Earlier literature suggests various objective measures for evaluating FPAs, including assessments of financial literacy and awareness of personal financial planning (Ouachani et al. 2021; Xian and Poh 2022). Surveys and questionnaires specifically designed for the undergraduate demographic, have also been used to gather data on financial planning behaviours and actions (Ng et al. 2022), providing insights into students' knowledge, awareness, and engagement in financial planning activities. According to the Malaysia Financial Industry Collective Outreach (FINCO 2022), baseline data for the majority of Malaysian undergraduates indicate moderate levels of financial knowledge (55%) and financial awareness (45%). To further clarify the level of FPAs among undergraduates, this study proposes the following hypothesis:

H_1 The level of financial planning actions is moderately high among undergraduate students.

FINANCIAL LITERACY AND FINANCIAL PLANNING ACTION

Building on human capital theory, Becker (2009) emphasizes the role of education in enhancing economic standing and well-being, with financial literacy as a key factor influencing financial outcomes. Studies have established significant links between financial literacy, financial well-being (Philippas and Avdoulas 2021; Sabri et al. 2023), and retirement planning (Fornero and Monticone 2011; Lusardi and Mitchell 2007). However, the specific relationship between financial literacy and FPAs among undergraduates remains underexplored. Although financial literacy encompasses the knowledge and skills needed for effective financial management, research directly connecting it to FPAs among undergraduates is rather limited.

The lack of research on FPAs among undergraduates is a cause for concern, as these actions are crucial for securing their future financial stability. As students enter the workforce, their ability to engage in effective FPAs is key to achieving long-term financial resilience. While previous studies on Malaysian undergraduates have mainly examined factors affecting financial literacy or well-being, the translation of financial literacy into tangible FPAs remains insufficiently studied. For instance, Albeerdy and Gharleghi (2015) identified education and money attitudes as determinants of financial literacy, while Md. Shafik and Wan Ahmad (2020) found that exposure to financial education and Islamic-based courses improved financial literacy among Malaysian Muslim undergraduates. Additionally, childhood consumer experiences and financial socialization have been recognized as important factors in financial well-being (Fazli Sabri et al. 2012). Yong et al. (2021) discovered a positive link between financial literacy and financial planning in a sample of 400 young adults aged 18–35 in the Klang Valley. Despite these findings, the link between financial literacy and FPAs among Malaysian undergraduates remains under-explored. Addressing this gap is crucial for designing strategies to enhance financial resilience in this population. To investigate this relationship, the study posits the following hypothesis:

H_2 Financial literacy is significantly positive related to the financial planning action of Malaysian undergraduate students.

FINANCIAL BEHAVIOR AND FINANCIAL PLANNING ACTION

The Theory of Reasoned Action (TRA) provides a valuable framework for understanding how financial behavior influences financial planning among undergraduate students. According to TRA, an individual's intention to engage in a specific behavior is shaped by their attitudes toward it and by subjective norms (Fishbein & Ajzen, 1975). This theory has been widely applied in financial behavior research to examine financial planning, retirement savings, and investment decisions (Gazali et al. 2019), highlighting its effectiveness in analyzing financial decision-making. Financial behavior, which includes activities such as saving, investing, borrowing, and spending (Song et al. 2023), is crucial for understanding how these actions translate into FPAs among undergraduates. Financial behavior is influenced by various factors, including social circles, parental guidance, childhood experiences, and financial stress (Sachitra et al. 2019).

Research shows that financial behavior positively influences financial well-being and satisfaction among undergraduate students (Falahati et al. 2012; Jariwala 2022; Sachitra et al. 2019; Vijaykumar 2022; Yahaya et al. 2019). Engaging in discussions on financial matters with parents and observing their financial practices have been found to enhance students' confidence in managing their own finances, fostering more independent financial decision-making (Jariwala 2022; Noh 2022; Vijaykumar 2022). Childhood financial experiences further reinforce these behaviors, helping to reduce financial strain and enhance overall financial satisfaction (Falahati et al., 2012; Rajanderan & Wai-Yan 2021). These early experiences shape students' financial attitudes, providing a foundation for future financial practices. However, despite evidence of positive impact of financial behavior on financial management, the Malaysian Department of Insolvency (2020) reported an increase in bankruptcies among young employees (ages 18 to 35), many of whom are burdened by serious debt. This concerning trend, particularly among recent graduates entering the workforce with student loans and modest salaries, highlights the need for a stronger focus on financial planning. Despite financial behavior playing a crucial role in fostering financial stability, research into its relationship with FPAs among undergraduate students is rather limited. Understanding this relationship is crucial, as it could equip undergraduates with the financial skills needed for long-term stability. To further investigate this relationship, the study proposes the following hypothesis:

H_3 Financial behavior is significantly positive related to the financial planning actions of Malaysian undergraduate students.

SOCIALIZATION, EXTERNALIZATION, COMBINATION, AND INTERNALIZATION (SECI) STRATEGIES AS MODERATORS

The Socialization, Externalization, Combination, and Internalization (SECI) strategy, introduced by Nonaka and Takeuchi (1995), outlines four key modes of knowledge transfer within organizational contexts: socialization, externalization, combination, and internalization. This strategy highlights the dynamic interaction between tacit and explicit knowledge in facilitating knowledge creation and dissemination within organizations. The SECI strategy has been implemented in various fields to enhance knowledge transfer and foster innovation. For instance, Songkram and Chootongchai (2020) demonstrated that the SECI model significantly improved knowledge transfer and innovation creation among 540 undergraduate students. Canonico et al. (2020) employed the SECI model in the automotive industry, specifically within Fiat Chrysler Automobiles' engine project, achieving significant knowledge-sharing outcomes. Similarly, A. Wahab et al. (2024) explored the moderating role of the SECI model in facilitating knowledge-sharing among contractors, leading to stronger relationships between human management factors and the success of housing projects in Malaysia. Collectively, these studies highlight the SECI strategy's adaptability and its positive impact on knowledge management and innovation across diverse sectors, thereby enhancing both individual and organizational performance.

In contrast, research on financial behavior has largely focused on the moderating and mediating roles of financial socialization and information sources in the relationship between financial literacy, behavior, and financial well-being or planning. However, the SECI strategy has yet to be applied as a framework for understanding the role of financial information sources. For example, Mimura et al. (2015) examined eight sources of financial information - parents, family members, friends, high school instructors, college courses, educators, media, and the internet - finding that financial knowledge obtained from college professors had a greater impact on financial well-being than information from parents or friends. Similarly, Pahlevan Sharif and Naghavi (2020) highlighted the importance of parents in shaping students' financial behavior through teaching, monitoring, and modeling. Suyanto et al. (2021) further emphasized the positive effects of financial socialization (i.e. social media as social agent) on financial literacy and behavior, while Chawla et al. (2022) explored how parental financial behavior shapes financial literacy and investment decisions in young adults. Meanwhile, Bernheim et al. (2001) proves that long-term formal secondary school financial education could increase saving rates. Building on this foundation, the present study aims to apply the SECI strategy as a moderating variable to examine its role in strengthening the relationship between financial literacy and financial behavior in enhancing effective financial planning actions (FPAs) among Malaysian undergraduate students. This study will focus on five SECI strategy indicators: (i) parental guidance, which imparts practical financial habits and values by modeling appropriate behaviors, consistent with the findings of Pahlevan Sharif and Naghavi (2020); (ii) personal finance websites, which provide accessible resources such as budgeting tools and investment advice; (iii) college information, which offers structured resources to help students contextualize financial concepts; (iv) workshops, which facilitate hands-on practice, allowing students to apply financial principles in real-life scenarios, as supported by Berheim et al. (2001); and (v) social media, which, as noted by Suyanto et al. (2021), can strengthen the relationship between financial literacy and financial behavior through peer learning and expert advice, thereby promoting ongoing engagement with financial topics. The following hypotheses are thus proposed:

H_{4a} SECI strategies significantly moderate the relationship between financial literacy and FPA of Malaysian undergraduate students.

H_{4b} SECI strategies significantly moderate the relationship between financial behavior and FPA of Malaysian undergraduate students.

PROPOSED FRAMEWORK

Figure 1 presents the proposed conceptual framework model illustrating the relationships between financial literacy, financial behavior, the SECI strategy, and financial planning actions (FPAs). Grounded in human capital theory and the theory of reasoned action, this framework reflects the direct relationships in hypotheses H_2 and H_3, while the SECI framework supports the indirect relationships in hypotheses H_{4a} and H_{4b}.

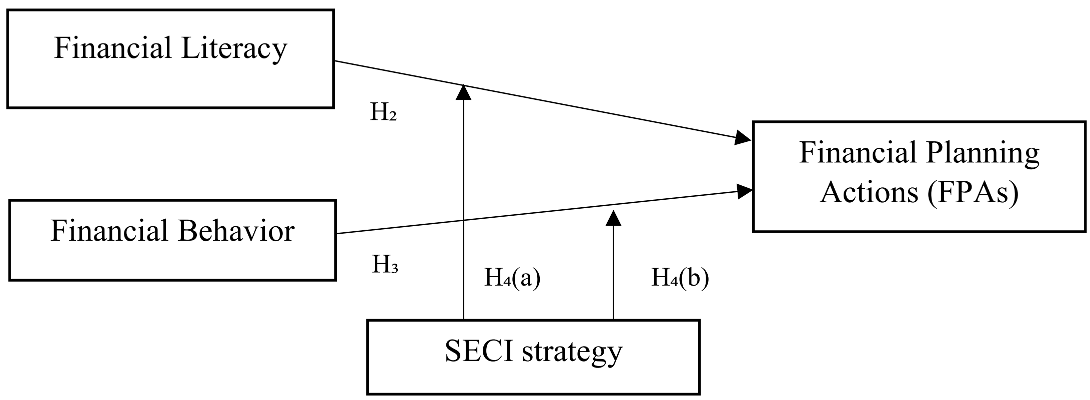

FIGURE 1. Proposed framework

RESEARCH METHODOLOGY

SAMPLE SELECTION

The study employed a quantitative approach utilizing a questionnaire survey to gather responses aimed at examining the financial literacy, financial behavior and financial planning action among the undergraduates in Malaysian university. Samples of this study comprised undergraduate student meeting specific criteria:

1. Undergraduate students of Universiti Malaya
2. Year 1 to Year 4 undergraduate students

The selection of undergraduate students from Universiti Malaya is due to the institution's esteemed position as the leading academic institution in Malaysia, ranked first domestically and 65th globally, as per the QS World Ranking (2022). Admittance to the university's undergraduate programs necessitates adherence to stringent eligibility criteria, with certain faculties conducting supplementary screening interviews subsequent to the initial online application phase to identify and enrol high-achieving candidates. Consequently, an examination of the cognitive and behavioral patterns exhibited by undergraduates at Universiti Malaya yields invaluable insights into their levels of financial literacy, behavioral tendencies, and practices in financial planning action.

DATA COLLECTION

Data collection commenced on October 1st, 2022, and concluded on December 31st, 2022, spanning a duration of twelve weeks. A total of 1,105 usable responses were collected and applied for analysis. The sample was limited to currently enrolled undergraduate students of Universiti Malaya and in their first to fourth year of study. Prior to field deployment, the survey instrument underwent comprehensive validation procedures. The validation included a Cronbach's Alpha test, which yielded reliability coefficients of 0.69, 0.67, and 0.70 for the constructs of financial literacy, financial behaviour, and FPA, respectively (refer Appendix B). These values indicate that the questions are reliable. For the validity test, as shown in Appendix B, item correlation values exceeded 0.195, meeting the 0.05 r-critical value threshold confirming that all questions related to the financial literacy, financial behaviour, and FPA constructs are valid. Consistent with Khalisharani et al. (2022), who examined financial literacy and behaviour among undergraduate students, this study has included gender, faculty, accommodation, and knowledge of loans as control variables.

To ensure the representativeness of the sample, a stratified sampling technique was employed. The stratified sampling process involved four steps: (1) defining strata by year of study (Year 1 to Year 4), gender and faculty to ensure diverse representation; (2) drawing proportionate samples from each group; (3) randomly selecting and inviting participants within each stratum for an online survey; and (4) conducting data collection for broad reach and high response rates. Participants were invited to participate in an online survey, to maximise accessibility and efficiency. The survey link was distributed across multiple digital platforms, including email, WhatsApp and Facebook, enabling broad outreach and comprehensive representation. Leveraging these platforms facilitated extensive engagement and ensured the inclusion of diverse perspectives.

MODELS AND VARIABLES

This study investigates five hypotheses. The first hypothesis measures the mean value of the financial planning action (FPA) in identifying the level of FPA among undergraduates. The second hypothesis utilizes Model (1) to explore the relationship between financial literacy and financial planning action. The third hypothesis employs, Model (2) to examine the relationship between financial behavior and financial planning action. The fourth hypothesis incorporates both Model (3) and (4) to investigate the influence of SECI strategy (i.e. using parental guidance as the indicator) on the relationships between financial literacy, financial behavior, and FPA. The models are as follows:

$$FPA_i = \beta_0 + \beta_1 FinLiteracy_i + \beta_2 Gender_i + \beta_3 Faculty_i + \beta_4 Accommodation_i + \beta_5 KnowledgeOnLoan_i + \varepsilon_i \tag{Model 1}$$

$$FPA_i = \beta_0 + \beta_1 FinBehavior_i + \beta_2 Gender_i + \beta_3 Faculty_i + \beta_4 Accommodation_i + \beta_5 KnowledgeOnLoan_i + \varepsilon_i \tag{Model 2}$$

$$FPA_i = \beta_0 + \beta_1 FinLiteracy_i + \beta_2\ Fin\ Literacy * ParentalGuidance_i + \beta_3 Gender_i + \beta_4 Faculty_i + \beta_5 Accommodation_i + \beta_6 KnowledgeOnLoan_i + \varepsilon_i \tag{Model 3}$$

$$FPA_i = \beta_0 + \beta_1 FinBehavior_i + \beta_2\ FinBehavior * ParentalGuidance_i + \beta_3 Gender_i + \beta_4 Faculty_i + \beta_5 Accommodation_i + \beta_6 KnowledgeOnLoan_i + \varepsilon_i \tag{Model 4}$$

MEASURES AND DATA ANALYSIS

This study developed a survey instrument by adapting constructs and items from previous studies (Cong & Feng 2022; Jacob 2002; Koonce et al. 2008; Lusardi & Mitchell 2011; Mokhtar et al. 2020). The survey comprised two sections: the first section included demographic questions such as gender, faculty, current semester, parental income, and accommodation. The second section aimed to investigate four constructs: financial literacy, financial behavior, SECI strategy and financial planning action. The survey questionnaire consisted of a total of 4 variables with 31 items. The independent variables in this research are financial literacy, measured using scales developed by Lusardi and Mitchell (2011), and financial behavior, based on the measurement scales from Jacob (2002) and Mokhtar et al. (2020), both assessed using a 1-5 Likert scale. The dependent variable is financial planning actions (FPAs), with measurement sources from Cong and Feng (2022) and Koonce et al. (2008), also utilizing a 1-5 Likert scale. The objective of this study is to examine the relationship between financial literacy, financial behavior, SECI strategy and FPAs using the Ordinary Least Squares (OLS) regression model. STATA 17 software was selected to assess the measurement model and test hypotheses. Firstly, descriptive statistics are presented to better understand the sample, followed by correlation analysis to address multicollinearity issues before proceeding with the regression analysis.

RESULTS AND ANALYSIS

DEMOGRAPHIC ASSESSMENT

Table 1 presents an overview of the demographic profile of the respondents. The study encompassed 679 female respondents (61.45%) and 426 male respondents (38.55%), illustrating female dominant within this university. The majority of respondents were enrolled in the Faculty of Science, comprising 134 students (12.13%), followed closely by the Faculty of Business and Economics with 129 students (11.67%). Concerning the current semester, 319 students (28.87%) were enrolled in semester 3 and 4, reflecting a similar number of respondents to those in semester 5 and 6. Furthermore, regarding parental income, 305 students (27.60%) fell within the income range of RM 2,001 – RM 4,000, 298 students (26.97%) reported an income less than RM 2,000, and 187 students (16.92%) reported an income within the range of RM 4,001 – RM 6,000, indicating a majority representation within the B40 and M40 income groups. In terms of accommodation preferences, the majority of respondents chose to reside in campus residential colleges (47.42%), while a significant proportion preferred living with parents or family (39.28%), likely to mitigate rental expenses outside the campus.

TABLE 1. Respondent's profile

Demographic/characteristics	Frequency	%
Gender:		
Male	426	38.55
Female	679	61.45
Faculty:		
Academy of Islamic Study	123	11.13
Arts and Social Science	98	8.87
Business and Economics	129	11.67
Built Environment	101	9.14
Computer Science and Information Technology	110	9.95
Education	97	8.78
Engineering	121	10.95
Language and Linguistics	99	8.96
Law	93	8.42
Science	134	12.13
Current semester:		
1 & 2	288	26.06
3 & 4	319	28.87
5 & 6	319	28.87
>7	179	16.20
Parental Income:		
< RM 2,000	298	26.97
RM 2,001 – RM4,000	305	27.60
RM 4,001 – RM6,000	187	16.92
RM 6,001 – RM8,000	100	9.05
RM 8,001 – RM10,000	85	7.69
RM 10,001 – RM 12,000	46	4.16
> RM 12,000	84	7.60
Accommodation:		
Campus residential college	524	47.42
Living with parents/ family	434	39.28
Rental house / apartment / room	147	13.30

Source (s): Authors' own work.

DESCRIPTIVE STATISTICS

Table 2 presents descriptive statistics for the total sample of 1,105 observations, aiming to explore the relationship between financial literacy, financial behavior, and financial planning action (FPA). Referring to the mean value, the FPA is 0.7249. Consequently, based on this mean value, it can be inferred that more than half of the undergraduate students practice FPA. This finding addresses H_1 regarding the level of FPA among undergraduate students is moderately high. In terms of financial literacy and financial behavior, the averages are 0.1982 and 1.7520 respectively. As for the SECI model indicators, the average scores are as follows: parent guidance (0.7493), college information (0.4651), social media (0.7186), personal finance website (0.3122), and workshop (0.2334). The mean values for gender, faculty, accommodation, and knowledge on loans are 1.6144, 0.5584, 1.6588, and 0.2624 respectively.

TABLE 2. Descriptive statistics

Variable	Obs.	Mean	Std. dev.	Min	Max
Financial planning action	1105	0.7249	0.1794	0.0000	1.0000
Financial literacy	1105	0.1982	0.0648	0.0000	0.4063
Financial behavior	1105	1.7520	0.4764	0.1667	3.3333
Parent guidance	1105	0.7493	0.4336	0.0000	1.0000
College information	1105	0.4651	0.4990	0.0000	1.0000
Social media	1105	0.7186	0.4499	0.0000	1.0000
Personal Finance Website	1105	0.3122	0.4636	0.0000	1.0000
Workshop	1105	0.2334	0.4338	0.0000	2.0000
Gender	1105	1.6144	0.4869	1.0000	2.0000
Faculty	1105	0.5584	0.4968	0.0000	1.0000
Accommodation	1105	1.6588	0.7009	1.0000	3.0000
Knowledge on loan	1105	0.2624	0.4503	0.0000	2.0000

Source (s): Authors' own work.

Next, a correlation test was conducted to assess the relationships among the main variables in the model. Appendix A reports a high correlation of 0.2013 between financial literacy and financial behavior. To mitigate potential multicollinearity issues in the model, financial literacy and financial behavior were estimated separately. In addition, the SECI indicators (parental guidance, college information, social media, personal finance website, and workshop) exhibited high correlation scores. Therefore, to examine the moderating role of SECI, each SECI indicator was estimated separately.

REGRESSION RESULTS

The results of Model (1) and (2) are summarized in Table 3. Both financial literacy and financial behavior were found to be significantly related to FPA. Therefore, H_2 and H_3 are accepted. These findings align with previous studies (Sabri et al. 2023; Surendar and Sarma 2018; Xian and Poh 2022), which indicate that financial literacy positively related to FPA. This suggests that students with higher financial literacy are more likely to exhibit better FPA. Sabri et al. (2023) observed that students with high financial literacy tend to possess strong financial management skills, enabling them to define their financial goals, manage their finances, and make investments. Consequently, students equipped with these financial management skills are more inclined to engage in FPA. Furthermore, Xian and Poh (2022) emphasized that individuals with high financial literacy tend to be more proactive in planning for their financial future.

TABLE 3. Regression Analysis Result Model (1) and (2)

	Model (1)	Model (2)
Financial literacy	0.1356[a]***(6.17)	
Financial behaviour		0.0313***(2.77)
Gender	0.0309***(2.80)	0.0240**(2.15)
Faculty	0.0214**(1.97)	0.0268**(2.44)
Accommodation	-0.0194***(-2.57)	-0.0180**(-2.36)
Knowledge on loan cost	0.0348***(2.94)	0.0430***(3.59)
_cons	0.5779***(19.01)	0.6349***(20.03)
Obs	1105	1105
R^2	0.0589	0.0331

Note(s): This table shows the OLS regression analysis of Model (1) and (2). The value "a" represents the value of the coefficient and the value in brackets "()" represents the t value. ***, ** and * are significance levels at 1%, 5% and 10%, respectively.

Regarding financial behavior, the H_2 results have demonstrated significance, consistent with Gutter and Copur (2011), who found that students exhibiting good financial behavior such as prudent saving habits, responsible credit card usage, and reduced inclination towards impulsive buying are associated with higher financial well-being. This implies that students with stronger financial behavior are more likely to demonstrate better FPA. The finding for gender was consistent with previous studies which had indicated that females tend to exhibit higher financial well-being, attributed to their generally higher levels of financial literacy, prudent saving practices, and engagement in investments (Falahati and Paim 2011). Other control variables of the study, faculty, accommodation, and knowledge of loan costs were found to be significant.

Table 4 presents the results of testing H_{4a} and H_{4b}. According to H_{4a}, the moderating variable parental guidance enhances the relationship between financial literacy and FPA, while H_{4b} focuses on financial behavior and FPA. For the dependent variable, FPA, the coefficient and t-value for the moderator variable (Financial Literacy * Parental Guidance) are 0.0458 and 3.10, respectively. Meanwhile, for the moderator variable (i.e., Financial behavior * Parental guidance), the coefficient and t-value are 0.0313 and 4.66, respectively. With a p-value < 1%, the moderating variable exhibits a positive and significant effect. The results showed that a strong parental guidance can strengthen the association between financial literacy/financial behavior and FPA. Therefore, the H_{4a} and H_{4b} are accepted. This finding aligns with the theory of family financial socialization, which posits that young adults develop their financial knowledge, behavior, and attitudes consequently impact on the financial well-being through the socialization process (Danes 1994) which parental guidance plays a crucial role in this process (Noh 2022). Parental financial guidance is essential for enhancing a child's financial knowledge (Tang & Peter 2015), as well as their self-esteem and self-efficacy (Causey et al. 2015). This guidance plays a pivotal role in mitigating issues such as compulsive buying and credit card misuse among college students (Noh & Hasan 2017).

TABLE 4. Regression Analysis Result Model (3) and (4)

	Model (3)	Model (4)
Financial literacy	0.0979[a]***(3.91)	
Financial literacy*Parental guidance	0.0458***(3.10)	
Financial behaviour		0.0084(0.69)
Financial behaviour*Parental guidance		0.0313***(4.66)

Gender	0.0271***(2.45)	0.0196*(1.77)
Faculty	0.0197*(1.83)	0.0245**(2.25)
Accommodation	-0.0186***(-2.48)	-0.0175**(-2.31)
Knowledge on loan cost	0.0346***(2.92)	0.0422***(3.56)
_cons	0.5860***(19.28)	0.6417***(20.41)
Obs	1105	1105
R^2	0.0671	0.0519

Note(s): This table shows the OLS regression analysis of Model (3) and (4). The value "" represents the value of the coefficient and the value in brackets "()" represents the t value. ***, ** and * are significance levels at 1%, 5% and 10%, respectively.

ROBUSTNESS

To have a robust perspective of SECI strategy in financial literacy, financial behavior and FPA. Table 5 and 6 presents the results of estimating Model (5) and (6) using OLS regression. Model (5) and (6) are as below:

$$FPA_i = \beta_0 + \beta_1 FinLiteracy_i + \beta_2\ Fin\ Literacy * SECI_i + \beta_3 Gender_i + \beta_4 Faculty_i + \beta_5 Accommodation_i + \beta_6 KnowledgeOnLoan_i + \varepsilon_i \quad \text{(Model 5)}$$

$$FPA_i = \beta_0 + \beta_1 FinBehavior_i + \beta_2\ Fin\ Behavior * SECI_i + \beta_3 Gender_i + \beta_4 Faculty_i + \beta_5 Accommodation_i + \beta_6 KnowledgeOnLoan_i + \varepsilon_i \quad \text{(Model 6)}$$

For a more robust analysis, the study utilized a sub-sample comprising four closely related faculties that involve in personal finance course offered by the university: Faculty Business and Economics, Engineering, Built Environment, and Social Science, totalling 617 observations. Tables (5) and (6) present the results of estimating H_4(a) and H_4(b), Models (5) and (6) using OLS regression. The findings indicate that parental guidance, personal finance website, and college information play significant moderating roles in strengthening the relationship between financial literacy, financial behavior, and FPA. Therefore, H_{4a} and H_{4b} for Models (5) and (6) are accepted, as the majority of the SECI indicators show significant moderating roles. The results align with the SECI strategy, as mentioned by Hoe (2006), which emphasizes that knowledge sharing can occur through various mediums. Workshop exhibits a significant moderating role only for the relationship between financial behavior and FPA. This could be due to the short duration of finance-related workshops attended by students. According to Faith and Seeam (2018), based on the SECI strategy, knowledge transfer needs regular reinforcement and updates. Hence, as workshops are attended by students only once or twice, the knowledge may not be updated in a timely manner. Hence, workshop shows insignificance for the relationship between financial literacy and FPA. The impact of financial literacy and financial behavior on FPAs appears to be insignificant when assessed through social media platforms. According to Estelami (2009), the influence of financial literacy on social media is minimal due to the poor quality of information disseminated through these channels. Consequently, undergraduate students with higher levels of financial literacy are less inclined to rely on social media as a credible source for their FPAs. Moreover, the majority sample in the study was female (61.45%), which may partially explain the insignificant results. This finding is consistent with Estelami's (2009), which indicates that females are less likely to utilize social media for financial information. Females are generally more risk-averse and uncertain in their financial behavior compared to males, leading them to seek information from more reliable sources, such as college information and financial workshops.

TABLE 5. Regression Analysis -Financial Literacy*SECI

	(1)	(2)	(3)	(4)	(5)
Financial literacy	0.1247***(4.30)	0.1410***(4.58)	0.1140***(3.88)	0.1344***(4.66)	0.1002***(3.19)
Financial literacy*College Information	0.0423***(2.55)				
Financial literacy*Social Media		0.0091(0.52)			
Financial literacy*PersFin Website			0.0524***(3.22)		
Financial literacy*Workshop				0.0293(1.61)	
Financial literacy*Parent Guidance					0.0586***(3.14)
Gender	0.0294**(2.17)	0.0333***(2.45)	0.0353***(2.62)	0.0341***(2.52)	0.0291**(2.15)
Accommodation	-0.0240**(-2.42)	-0.0233**(-2.43)	-0.0240**(-2.43)	-0.0250***(-2.150)	-0.0224**(-2.27)
Knowledge on loan cost	0.0242(1.58)	0.0357**(2.43)	0.0297**(2.02)	0.0267*(1.70)	0.0365***(2.51)
_const	0.6027***(16.79)	0.5919***(16.53)	0.6032***(16.90)	0.5998***(16.61)	0.5985***(16.82)
R-squared	0.0851	0.0757	0.0908	0.0792	0.0900
No. observation	617	617	617	617	617

Note(s): The value "" represents the value of the coefficient and the value in brackets "()" represents the t value. ***, ** and * are significance levels at 1%, 5% and 10%, respectively.

TABLE 6. Regression Analysis -Financial Behavior*SECI

	(1)	(2)	(3)	(4)	(5)
Financial behavior	0.0243(1.62)	0.0289*(1.84)	0.0214(1.43)	0.0309**(2.11)	0.0125(0.81)
Financial behavior *College Information	0.0245***(3.11)				
Financial behavior *Social Media		0.0130(1.55)			
Financial behavior *PersFin Website			0.0285***(3.65)		
Financial behavior *Workshop				0.0220***(2.46)	
Financial behavior*Parent Guidance					0.0376***(4.33)
Gender	0.0239*(1.74)	0.0270**(1.96)	0.0298**(2.19)	0.0295**(2.16)	0.0227*(1.67)
Accommodation	-0.0217**(-2.16)	-0.0201**(-1.98)	-0.0220**(-2.20)	-0.0228**(-2.26)	-0.0197**(-1.98)
Knowledge on loan cost	0.0314**(2.04)	0.0446***(3.02)	0.0368***(2.48)	0.0289*(1.78)	0.0459***(3.15)
_const	0.6609***(17.63)	0.6475***(17.31)	0.6598***(17.71)	0.6550***(17.48)	0.6483***(17.57)
R-squared	0.0584	0.0473	0.0640	0.0529	0.0720
No. observation	617	617	617	617	617

Note(s): The value "" represents the value of the coefficient and the value in brackets "()" represents the t value. ***, ** and * are significance levels at 1%, 5% and 10%, respectively.

CONCLUSION

In 2022, Malaysia experienced a notable increase in bankruptcy and debt cases among young employees. Financial Planning Actions (FPAs) are vital in addressing these challenges; however, a comprehensive understanding of FPAs and their determinants is essential before young individuals enter the workforce to facilitate informed financial decision-making. This study investigates the relationship between financial literacy, financial behavior, and FPAs among 1,105 undergraduate students in Malaysia. Additionally, it explores the moderating role of parental guidance in shaping these relationships. Utilizing an Ordinary Least Squares (OLS) regression model, the analysis reveals a positive and significant association between financial literacy, financial behavior, and FPAs.

Consistent with human capital theory and the theory of reasoned action, the findings suggest that individuals with higher levels of financial literacy and sound financial behavior are more likely to engage in FPAs. To ensure the robustness of these results, further analyses were conducted using SECI strategy indicators—parental guidance, personal finance websites, college information, workshops, and social media within faculties offering personal finance courses. The findings underscore the critical role of parental guidance, personal finance websites, and college information in enhancing financial literacy and promoting greater engagement in FPAs among undergraduate students. Moreover, the results demonstrate that financial workshops significantly moderate the relationship between financial behavior and FPAs, though they have no moderating effect on the relationship between financial literacy and FPAs.

IMPLICATIONS

The findings of this study hold significant implications for theory, policymakers, parental guidance, universities, and undergraduates' students. Consistent with human capital theory, our results emphasize the critical role of education in enhancing individual well-being. Specifically, the study identifies a positive relationship between financial literacy and FPAs. Additionally, by incorporating financial behavior into the analysis, the research lends support to the theory of reasoned action, illustrating a strong association between financial behavior in shaping FPAs. From a policy standpoint, particularly for the Ministry of Higher Education, these findings suggest the need to introduce mandatory financial literacy courses across university curricula. Such courses would contribute to a deeper understanding of FPAs and encourage responsible financial behavior among students. Furthermore, early parental involvement is essential in fostering financial literacy and sound financial habits, both of which are closely linked to effective FPAs.

Beyond theoretical contributions to human capital and reasoned action theories, this study highlights the moderating role of the SECI strategy in the relationship between financial literacy, financial behavior, and FPAs. The analysis suggests that universities can play a central role in disseminating financial knowledge and behavior through multiple channels, including providing access to personal finance resources and organizing financial literacy workshops.

In this context, government agencies such as the Malaysian Financial Planning Council (MFPC) and Agensi Kaunseling dan Pengurusan Kredit (AKPK) can enhance financial literacy and behavior by expanding access to financial knowledge through their online platforms and promoting the importance of FPAs within academic institutions. The SECI strategy's emphasis on diverse knowledge dissemination pathways can significantly improve financial literacy, financial behavior and contribute to both individual and organizational well-being.

LIMITATIONS AND FUTURE RESEARCH DIRECTION

The current study highlights several limitations that could serve as potential avenues for future research. Firstly, focusing solely on one university to explore the relationship between financial literacy, financial behavior, and FPAs may restrict the generalizability of the findings. Therefore, future studies could benefit from investigating multiple universities to better represent the diverse population of university students within a particular country. Secondly, this study primarily considers internal factors such as financial literacy and financial behavior in relation to FPAs. Future research could expand upon this by examining external factors that might influence FPAs, such as economic stability, fluctuations in tuition fees, and currency instability. Lastly, it would be valuable for future studies to explore different age categories within the sampling frame. This is because the factors influencing FPAs may vary across different age groups. By including a broader range of age categories, researchers can gain a more comprehensive understanding of the determinants of FPAs across diverse demographic segments.

ACKNOWLEDGEMENT

We would like to acknowledge financial support provided by the Faculty of Business and Economics Special Research Grant: UMG0031-2023. This publication is partially funded by the Faculty of Business and Economics, Universiti Malaya Special Publication Fund.

REFERENCES

A. Wahab, A., Bohari, S.A. & Sheng, W.C. 2024. Critical success factors in Malaysian housing projects: Examining contractual, process and human management with knowledge sharing moderation. *International Journal of Housing Markets and Analysis* 1(7).

Adil, M., Singh, Y. & Ansari, M.S. 2021. How financial literacy moderate the association between behaviour biases and investment decision? *Asian Journal of Accounting Research* 7(1): 17-30.

Albeerdy, M.I. & Gharleghi, B. 2015. Determinants of the financial literacy among college students in Malaysia. *International Journal of Business Administration* 6(3): 15-24.

Barno, L.J., Cheboi, J. & Muganda, C. 2020. Overconfidence bias, Financial Literacy and Investment Decisions; Moderation approach; A reflection from Small and Micro Enterprises in Nairobi County, Kenya. *African Journal of Education, Science and Technology* 6(1): 221-232.

Becker, G.S. 2009. *Human Capital: A Theoretical and Empirical Analysis, With Special Reference to Education*. University of Chicago press.

Causey, S.T., Livingston, J. & High, B. 2015. Family structure, racial socialization, perceived parental involvement, and social support as predictors of self-esteem in African American college students. *Journal of Black Studies* 46(7): 655-677.

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): 114-132.

Chawla, D., Bhatia, S. &Singh, S. 2022. Parental influence, financial literacy and investment behaviour of young adults. *Journal of Indian Business Research* 14(4): 520–539.

Canonico, P., De Nito, E., Esposito, V., Pezzillo Iacono, M. & Consiglio, S. 2020. Knowledge creation in the automotive industry: Analysing obeya-oriented practices using the SECI model. *Journal of Business Research* 112: 450–457.

Danes, S.M. 1994. Parental perceptions of children's financial socialization. *Journal of Financial Counseling and Planning* 5: 127-149.

Employee Provident Fund Report 2021. Available at https://www.kwsp.gov.my/corporate/news-highlights /publications

Estelami, Hooman. 2009. Cognitive drivers of sub-rational financial decisions: Implications for financial literacy campaigns. *Journal of Financial Services Marketing* 14 (4): 273–283.

Faith, C.K. & Seeam, A.K. 2018. Knowledge sharing in academia: A case study using a SECI model approach. *Journal of Education* 9: 53-70.

Falahati, L. & Paim, L.H. 2011. Gender differences in financial literacy among college students. *Journal of American Science* 7(6): 1180-1183.

Fazli Sabri, M., Cook, C.C. & Gudmunson, C.G. 2012. Financial well-being of Malaysian college students. *Asian Education and Development Studies* 1(2): 153–170.

Fishbein, M. & Ajzen, I. 1975. *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research.* Massachusetts, Addison-Wiley Publishing Company.

Fornero, E. & Monticone, C. 2011. Financial literacy and pension plan participation in Italy. *Journal of Pension Economics & Finance* 10(4): 547-564.

Gazali, H.M., Syed Jaafar Alhabshi, S.M. & Adeyemi, A.A. 2019. The applicability of the theory of reasoned action in predicting the intention to save for retirement. In *Islamic Development Management: Recent Advancements and Issues*, 317-328.

Gerrans, P. 2021. Undergraduate student financial education interventions: Medium term evidence of retention, decay, and confidence in financial literacy. *Pacific-Basin Finance Journal* 67.

Gerrans, P. & Heaney, R. 2019. The impact of undergraduate personal finance education on individual financial literacy, attitudes and intentions. *Accounting & Finance* 59*(*1): 177–217.
Gutter, M. & Copur, Z. 2011. Financial behaviors and financial well-being of college students: Evidence from a national survey. *Journal of Family and Economic* 32: 699-714.
Hoe, S.L. 2006. Tacit knowledge, Nonaka and Takeuchi SECI model and informal knowledge processes. *International Journal of Organization Theory & Behavior* 9(4): 490-502.
Jacob, K. 2002. Evaluating your financial literacy program: A practical guide. Woodstock Institute. Available at https://woodstockinst.org/research/reports/evaluating-your-financial-literacy program/practical-guide/
Jariwala, H.V. 2023. Do financial education workshops enhance parent–adolescent communication about money? *Managerial Finance* 49(5): 829-846.
Jia, D., Li, R., Bian, S. & Gan, C. 2021. Financial planning ability, risk perception and household portfolio choice. *Emerging Markets Finance and Trade* 57(8): 2153–2175.
Kaur, G., Singh, M. & Gupta, S. 2023. Analysis of key factors influencing individual financial well-being using ISM and MICMAC approach. *Quality & Quantity* 57(2): 1533–1559.
Kawamura, T., Mori, T., Motonishi, T. & Ogawa, K. 2021. Is financial literacy dangerous? Financial literacy, behavioural factors and financial choices of households. *Journal of the Japanese and International Economies* 60.
Khalisharani, H., Johan, I.R. & Sabri, M.F. 2022. The influence of financial literacy and attitude towards financial behaviour amongst undergraduate students: A cross-country evidence. *Pertanika Journal of Social Sciences & Humanities* 30(2): 449-474.
LeBaron, A.B., Rosa-Holyoak, C.M., Bryce, L.A., Hill, E.J. & Marks, L.D. 2018. Teaching children about money: Prospective parenting ideas from undergraduate students. *Journal of Financial Counseling and Planning* 29*(*2): 259–271.
Lusardi, A. & Mitchell, O.S. 2007. Financial literacy and retirement planning: New evidence from the Rand American Life Panel. Michigan Retirement Research Center Research Paper No. WP, 157.
Lusardi, A. & Mitchell, O.S. 2011. Financial literacy around the world: An overview. *Journal of Pension Economics and Finance* 10(4): 497-508.
Malaysian Financial Planning Council Report 2022. Available at https://www.mfpc.org.my/wp-content/uploads/2023/06/AR22web.pdf.
Md.Sapir, A.S. & Wan Ahmad, W.M. 2020. Financial literacy among Malaysian Muslim undergraduates. *Journal of Islamic Accounting and Business Research* 11(8): 1515–1529.
Mimura, Y., Koonce, J., Plunkett, S.W. & Pleskus, L. 2015. Financial information source, knowledge and practices of college students from diverse backgrounds. *Journal of Financial Counseling and Planning* 26(1): 63-78.
Mokhtar, N., Sabri, M.F. & Ho, C.S.F. 2020. Financial capability and differences in age and ethnicity. *The Journal of Asian Finance, Economics and Business* 7(10): 1081-1091.
Ng, P., Raghavan, S., Zhang, C., Pan, J.Y., O'Rourke, P. & Wong, R. 2022. Money talks: Pilot financial wellness programs to promote positive financial planning behaviors among resident. *Academic Medicine* 97(3): 380-384.
Noh, M. 2022. Effect of parental financial teaching on college students' financial attitude and behavior: The mediating role of self-esteem. *Journal of Business Research* 143: 298-304.
Noh, M. & Hasan, H.M.R. 2017. Moderating effect of personality traits on relationships between retail therapy, compulsive buying, and hoarding for fashion products. *Journal of Global Fashion Marketing* 8(3): 180-192
Nonaka, I. & Takeuchi, H. 1995. The knowledge-creating company. How Japanese companies create the dynamics of innovation. *In Book Summary.* Oxford University Press.
Ouachani, S., Belhassine, O. & Kammoun, A. 2021. Measuring financial literacy: A literature review. *Managerial Finance* 47(2): 266-281.
Pahlevan Sharif, S., Naghavi, N., Waheed, H. & Ehigiamusoe, K.U. 2023. The role of education in filling the gender gap in financial inclusion in low-income economies. *International Journal of Emerging Markets* 18(12): 5755-5777.
Philippas, N.D.& Avdoulas, C. 2021. Financial literacy and financial well-being among generation-Z university students: Evidence from Greece. In *Financial Literacy and Responsible Finance in the FinTech Era*, 64-85. Routledge.
Rajanderan, P. & Wai-Yan, W. 2021. Financial health of undergraduates in Malaysia: An empirical study on the underlying factors. *Journal of Contemporary Issues and Thought* 11: 113-125.
Rea, J.K., Danes, S.M., Serido, J., Borden, L.M. & Shim, S. 2019. Being able to support yourself: Young adults' meaning of financial well-being through family financial socialization. *Journal of Family and Economic Issues* 40(2): 250–268.

Sabri, M.F., Wahab, R., Mahdzan, N.S., Magli, A.S., Rahim, H.A., Suhaimi, S.S.A. & Nazuri, N.S. 2023. An enigma of Malaysia's low-income young adults: Mediation of financial behaviour on financial well-being and locus of control cohesion. *Plos one* 18(7): 1-27.
Sachitra, V., Wijesinghe, D. & Gunasena, W. 2019. Exploring undergraduates' money-management life: Insight from an emerging economy. *Young Consumers* 20(3): 167-189.
Sang, N.M. 2021. Financial well-being of Vietnamese students. *Investment Management and Financial Innovations* 18(4): 355-365.
Songkram, N. & Chootongchai, S. 2022. Adoption model for a hybrid SEM-neural network approach to education as a service. *Education and Information Technologies* 27(5): 5857-5887.
Suyanto, S., Setiawan, D., Rahmawati, R. & Winarna, J. 2021. the impact of financial socialization and financial literacy on financial behaviors: An empirical study in Indonesia. *Journal of Asian Finance, Economics and Business* 8(7): 169–180.
Tang, N. & Peter, P. 2015. Financial knowledge acquisition among the young: The role of financial education, financial experience and parents' financial experience. *Financial Services Review: The Journal of Individual Financial Management* 24(2): 119-137.
Vijaykumar, J.H. 2021.The association of financial socialization with financial self-efficacy and autonomy: A study of young students in India. *Journal of Family and Economic Issues* 43(2): 397-414.
Xian, T.K. & Poh, R. 2022. Factors influencing working adults' awareness of individual financial planning. *Global Journal of Business Social Sciences Review* 10(3): 148-162
Xin, Z., Xiao, H. & Lin, G. 2023. Math anxiety and financial anxiety predicting individuals' financial management behavior. *Depression and Anxiety* 2023: 1–10.
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, K.C., Chung, J.F. & Al-Khaled, A.A.S. 2021. The relationship between socio-demographics and financial literacy with financial planning among young adults in Klang Valley, Malaysia. *Jurnal Pengurusan* 63: 17-30.

Adilah A. Wahab (corresponding author)
Department of Finance
Faculty of Business and Economics
Universiti Malaya
50603 Kuala Lumpur, MALAYSIA.
E-Mail: adilahw@um.edu.my

Wan Marhaini Wan Ahmad
Department of Finance
Faculty of Business and Economics
Universiti Malaya
50603 Kuala Lumpur, MALAYSIA.
E-Mail: wmarhaini@um.edu.my

Aimi Syahirah Abu Hashim
Faculty of Business and Economics
Universiti Malaya
50603 Kuala Lumpur, MALAYSIA.
E-Mail: 22083317@siswa.um.edu.my

Mas Nordiana Rusli
Department of Accounting
Faculty of Business and Economics
Universiti Malaya
50603 Kuala Lumpur, MALAYSIA.
E-Mail: annarusli@um.edu.my

APPENDIX

APPENDIX A. Pearson correlation coefficient result

	Financial literacy	Financial behavior	Parent guidance	College information	Social media	Personal Finance Website	Workshop
Financial literacy	1.0000						
Financial behavior	0.2013	1.0000					
Parent guidance	0.0760	0.0028	1.0000				
College information	0.1032	0.0500	0.1459	1.0000			
Social media	0.0997	0.0439	0.0930	0.1479	1.0000		
Personal Finance Website	0.2217	0.1588	-0.0113	0.1861	0.1655	1.0000	
Workshop	0.2132	0.1416	0.0273	0.1715	0.0632	0.2813	1.0000

Note(s): The table reports the Pearson Correlation matrix for full sample of (1105 observations).

Source(s): Authors' own work.

APPENDIX B. Reliability and Validity Test

Variable	Item	Cronbach's Alpha	Item test correlation
Financial literacy	8	0.6919	0. 2521 – 0.6105
Financial behavior	7	0.6708	0.3932 – 0.5985
Financial planning action	12	0.7010	0.3315 – 0.4865

Note(s): The table reports the reliability and validity test

Source(s): Authors' own work.