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Financial Literacy, Financial Behavior, Self-Efficacy, and Financial Health among Malaysian Households: The Mediating Role of Money Attitudes

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Abstract
Financial health is defined as the ability to manage spending, plan for and recover from financial shocks, have minimum debt, and develop wealth; however, the antecedents to this vital idea are inconsistent. As a result, the study's main goal is to reveal the antecedents, and their direct and indirect consequences on people's financial health. Malaysian households were chosen using the multi-stage random sampling procedure, and a questionnaire survey was conducted. According to PLS-SEM analyses, only financial behavior, and money attitudes had a direct influence on financial health, and accounted for 46.7% of the total variance in financial health. Surprisingly, all three antecedents had a favorable impact on individual financial health through their money attitudes. Furthermore, all three antecedents revealed substantial, and positive correlations with money attitudes, explaining 45.6% of the overall variance. The current study contributed to filling research gaps on the factors that influence money attitudes, and financial health, guiding policymakers in their efforts to improve people's financial health through effective policy implementations.
Keywords: Financial Behaviour, Financial Health, Financial Literacy, Money Attitudes, PLS-SEM, Self-Efficacy.

Introduction
"Financial health is a comprehensive assessment of finances that includes the ability to support meeting basic needs, which also encompasses opportunities to save and build wealth" (Weida et al., 2020, p. 2). There are several aspects to financial health, including the quantity of money saved, how much money is saved for retirement, and how much of one's personal income is spent on fixed or non-discretionary expenses (Kagan, 2021). Individuals' financial health, and overall well-being are both harmed when they are exposed to prolonged

economic hardship (Kahn & Pearlin, 2006). "Despite widespread acceptance of economic hardship as a social determinant of financial health, the ways in which it has been measured are limited to income in relation to the federal poverty line or issues such as, food insecurity, housing insecurity, healthcare trade-offs, and other tangible basic needs measures" (Whitehead & Bergeman, 2017, p. 867).

Despite the fact that the topic of financial health has been debated for decades, there is very little literature on the subject, as well as did not explain well the current state of the global financial health (Weida et al., 2020). According to a statement on the financial health of an Americans, "financial health is not just a problem of the poorest of the poor or a problem of those who are unbanked or underbanked-it is actually a problem of the majority of Americans" (Levy, 2022), and over 57% of the Americans (138 million people) lack financial health (Parker et al., 2016). Moreover, economic hardships, such as food insecurity, and homelessness are signs of a more serious financial health problem (Weida et al., 2020). Most of the available literature on global financial health mentioned that the necessity of consistent definition, and measurement for the concept.

When considering the context of Malaysia, in the last five years, several Malaysians between the ages of 18 and 44 have been declared bankrupt. According to data from the Malaysian Insolvency Department, the highest number of adolescent bankruptcy cases occurred in 2021, with a total of 300,00 cases (Local Content Hub, 2021). The majority of bankruptcies are caused by financial hardship rather than irresponsible spending, and many are low-income individuals who are unable to cope with unforeseen big costs, such as job loss or hospital bills. Employers may want to think about debt consolidation options, such as debt management techniques, debt consolidation loans, and debt settlement as a way to avoid bankruptcy.

According to academics, various indicators have all the earmarks of being reliably linked to financial health. Demographic and socioeconomic characteristics, for example, age, ethnicity, gender, education, income, and marital status are the most frequently known factors (Hira & Mugenda, 1999). In addition to the demographics, other factors are also revealed as influential determinants of financial health for the context of Malaysia, for example, money attitude financial practices, emotion coping, and self-efficacy (Sabri et al., 2020a), financial behaviour, financial strain, financial socialization, and financial knowledge (Sabri et al., 2021a), financial capability, and financial literacy (Sabri & Zakaria, 2015), debt management (Abdullah et al., 2019).

Even though, financial experts have identified several important factors that influence the financial health, inconsistencies are still prevailing in the context of family economics and management. Furthermore, because financial health is a complicated phenomenon with multiple variables that are intricately linked to one another, and a comprehensive framework that includes effective antecedents is required to fully analyze the idea. As a result, this study filled that gap, and to the best of the authors' knowledge, this is the first effort to look into the mediation effect of money attitudes on the associations between financial health antecedents (self-efficacy, financial behavior, financial literacy), and financial health. Given the scarcity of research on the factors that influence financial health, particularly among low-income people, current research aims to: 1) develop a comprehensive research framework to study the concept of financial health deeply, 2) identify the significant antecedents of financial health, and 3) demonstrate the mediating role of money attitudes between self-efficacy, financial literacy, financial behavior, and financial health.

Literature Review

Financial Health

The state and stability of an individual's own money, and financial affairs are referred to as financial health. A steady source of income, little variation in expenditure, strong investment returns, and a growing cash balance are all signs of good financial health.

A person's financial health can be improved by assessing his or her existing net worth, creating a budget that can be adhered to, building an emergency fund, and paying off debts (Kagan, 2021).

Financial Knowledge

According to Robb & Woodyard (2011), "the ability to understand financial concepts and positively related to financial practices such as, cash flow management, credit management, savings, and investment" is defined as financial knowledge (p. 65). Falahati and Sabri (2015) found a correlation between financial knowledge and financial health. A positive impact of financial knowledge on money attitude was also revealed by Sabri et al. in 2020b.

Financial Behaviour

Topa et al. (2018) have defined the financial behavior as "the acquisition, allocation, and use of financial resources oriented toward some goal" (p. 3). Individuals with positive financial behaviors reported to have good financial health (Sabri et al., 2020c). Based on the findings of Sabri et al. (2020b), a positive relationship was found between financial behaviour, and money attitudes.

Self-efficacy

"An individual's beliefs in their capacity to execute behaviors necessary to produce specific performance attainments" are considered as self-efficacy of an individual (Bandura, 2010, p. 2). Money attitude was positively influenced by self-efficacy (Amani & Shabahang, 2017), and money attitude positively influenced the financial health (Sabri et al., 2020c).

Money Attitudes

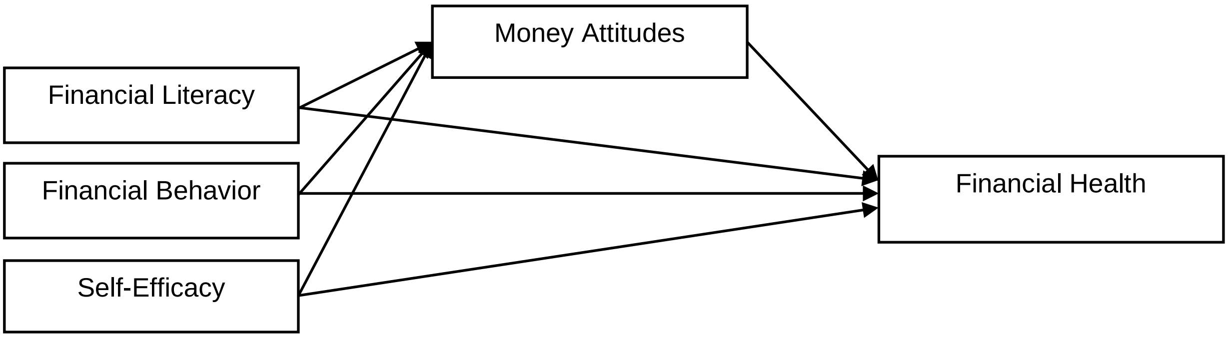
"People's attitudes which portray behavior in money matters" is called money attitudes (Nadeem et al., 2020, p. 9). Money attitude was revealed one of the major determinants of the financial health (Sabri et al., 2020a). Money attitude was reported to mediate the associations between financial behavior, financial literacy, and financial vulnerability (Sabri et al., 2020b), and financial literacy, self-efficacy, financial behavior negatively influenced the financial vulnerability (Fei et al., 2020). Moreover, financial vulnerability affects negatively on financial health (Warmath et al., 2018). In a recent research, money attitude mediated the associations between self-efficacy, financial literacy, financial behavior, and financial health (Sabri et al., 2021b).

Therefore, the discussed literature above helped authors to develop following hypotheses, and the theoretical framework (Figure 1).

H_1: Financial literacy has a positive impact on financial health.

H_2: Financial behavior has a positive impact on financial health.
H_3: Self-efficacy has a positive impact on financial health.
H_4: Money attitudes has a positive impact on financial health.
H_5: Financial literacy has a positive impact on money attitudes.
H_6: Financial behavior has a positive impact on money attitudes.
H_7: Self-efficacy has a positive impact on money attitudes.
H_8: Money attitudes mediates the association between financial literacy and financial health.
H_9: Money attitudes mediates the association between financial behavior and financial health.
H_{10}: Money attitudes mediates the association between self-efficacy and financial health.

Figure 1: Theoretical Framework



Research Methodology

Participants, Design, and Instrument

Total number of 590 Malaysian households who were above 18 years old were chosen for the study using multi-stage random sampling method to represent the population. To begin with, "Peninsular Malaysia was separated into five zones: North (Perlis, Kedah, Penang), South (Johor, Melaka, Negeri Sembilan), East (Terengganu, Pahang, Kelantan), West (Perak, Selangor, Wilayah Persekutuan), and East Malaysia (Sabah & Sarawak)". Second, a ballot was used to select one state at random from each zone. As a result, the states of Penang in the north, Johor in the south, Terengganu in the east, Perak in the west, and Sabah in the east were chosen. The quantity of samples needed for each zone is proportionally divided. To ensure the clarity and conciseness of the questionnaire items, a pre-test with 40 randomly chosen individuals from the selected areas was conducted (Podsakoff et al., 2003). Variables of the study, their items, evaluating scale, and adapted references were summarized (Table 1).

Table 1
Variables and Scales

Variables	No. of items	Scale	References
Financial Literacy	27	"Yes" or "No"	Malaysian Financial Planning Council (2018)
Financial Behavior	28	"Five point of Likert Scale	Rajna (2011)
Self-efficacy	15	1 (strongly disagree) to 5	Chen et al. (2001)
Money Attitudes	24	(strongly agree)"	Furnham (1996)
Financial Health	14	"Three point scale"	Parker et al. (2016)

Data Analyses
Normality of the gathered data were tested, and Table 2 shows the results. Both skewness and kurtosis are ranged in between -2 and +2, which indicated that the data set is distributed normally (George & Mallery, 2003).

Table 2
Normality test results

Dimensions	**Skewness**	**Kurtosis**
Financial Literacy	0.455	-0.231
Financial Behavior	0.247	-0.982
Self-efficacy	0.555	-0.578
Money Attitudes	-0.134	-1.474
Financial Health	-0.136	-1.428

The multicollinearity test was performed, and according to the results (Table 3), all the variance inflation factor (VIF) values are below five. Hair et al. (2014) described that if the VIF values are below five, they have low level of redundancy, and anonymity and confidentiality were also guaranteed.

Table 3
Multicollinearity test results

Variables	**Collinearity Statistics**
	VIF
Financial Literacy	1.507
Financial Behavior	2.520
Self-efficacy	3.585
Money Attitudes	2.653
Financial Health	1.365

Reliability, and validity tests were also conducted. Composite reliability (CR), and average variance extracted (AVE) values were used to check the reliability, and convergent validity, respectively (Table 4). All the CR values are above 0.7, and AVE values are above 0.4. Hence, the both reliability and convergent validity for the constructs were indicated appropriate.

Table 4
Composite reliability and convergent validity results

Dimensions	**Composite Reliability (CR)**	**Average Variance Extracted (AVE)**
Financial Literacy	0.784	0.454
Financial Behavior	0.896	0.417
Self-efficacy	0.824	0.514
Money Attitudes	0.854	0.521
Financial Health	0.960	0.495

The heterotrait-monotrait ratio (HTMT) approach by Henseler et al (2015) was utilized to evaluate the discriminant validity, and all values were under the threshold value 0.85 (Table 5). Therefore, the discriminant validity was also confirmed.

Table 5
HTMT Criterions

	FH	FL	FB	SE	MA
FH					
FL	0.831				
FB	0.756	0.705			
SE	0.842	0.843	0.785		
MA	0.827	0.741	0.689	0.548	

Notes: FH-Financial health; FL-Financial literacy; FB-Financial behavior; SE-Self-efficacy; MA-Money attitudes

SPSS version 26, and PLS-SEM 3.3 were used to analyze descriptive statistics, and path coefficient statistics, respectively.

Results and Discussion
Demographic Profile of the Respondents
Females made up the majority of the responses (58%). In terms of the ethnicity, most of them were Malay (92.6%), followed by Chinese (2.7%), and Indians (2.2%). Marital status wise, 71.6% was married. Most of the households were in the age group of 30-39 (52.9%), followed by the age groups 20-29 (23.7%), and 40-49 (15.9%) respectively.

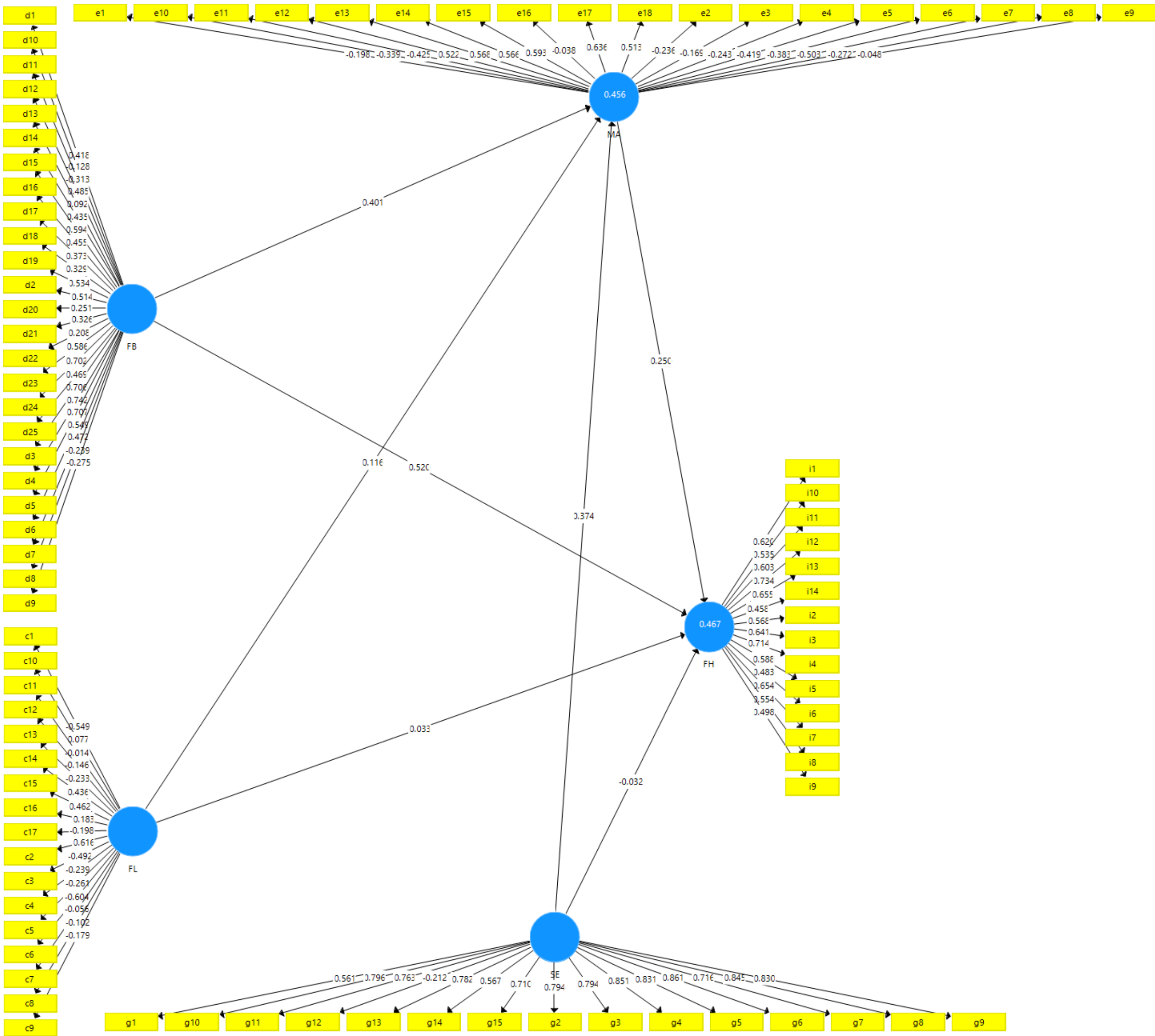
Hypotheses Testing
The path coefficient analysis via PLS-SEM was carried out to examine the direct relationships (Table 6; Figure 2). The financial health was strongly and positively influenced by only two antecedents; financial behavior (β=0.522), followed by money attitudes (β=0.244), and 46.7% of variance of the financial health was clarified by them. Moreover, financial behavior (β=0.409), self-efficacy (β=0.365), and financial literacy (β=0.125) were found as positive drivers of money attitudes, and explained the 45.6% variance of money attitudes. Hence, only five direct hypotheses; H_2, H_4, H_5, H_6, and H_7, were accepted.

Table 6
Hypotheses testing for direct relationships

Hypothesis	Path	Std. Beta	Std. Error	t-value	Result
H_1	FL ->FH	0.039	0.043	0.776	Not Supported
H_2	FB -> FH	0.522	0.035	14.894**	Supported
H_3	SE ->FH	-0.033	0.040	0.811	Not Supported
H_4	MA -> FH	0.244	0.048	5.193**	Supported
H_5	FL -> MA	0.125	0.055	2.113*	Supported
H_6	FB -> MA	0.409	0.048	8.354**	Supported
H_7	SE -> MA	0.365	0.054	6.888**	Supported

Significant at *p<0.05, **p<0.001, FL- Financial literacy, FB- Financial behavior, SE- Self-efficacy, MA- Money attitudes, FH- Financial health

Figure 2: PLS algorithm for the antecedents of financial health



Then, the mediation test of bootstrapping was performed to reveal the mediation effect of money attitudes between the associations self-efficacy, financial behavior, financial literacy, and financial health. The results of the mediation test are given in the Table 7, and all three mediated pathways were significant. Thus, H_8, H_9, and H_{10} were accepted.

Table 7
Path coefficients for indirect effects

Hypothesis	Relationship	Std. Beta	Std. Error	t-value	Result
H_8	FL -> MA -> FH	0.031	0.014	2.062*	Supported
H_9	FB -> MA -> FH	0.100	0.023	4.371**	Supported
H_{10}	SE -> MA -> FH	0.089	0.022	4.303**	Supported

Significant at *p<0.05, **p<0.001, FL- Financial Literacy, FB- Financial Behavior, SE- Self-efficacy, FH- Financial Health

Individuals with a higher level of financial knowledge made better financial decisions in general (Atkinson & Messy, 2012). According to Utkarsh et al (2020), financial literacy has a non-significant effect on financial health. Moreover, a positive influence of financial behavior

(Chikezie & Sabri, 2017), money attitudes (Sabri et al., 2020c) on financial health was confirmed. A non-significant influence of self-efficacy on financial health was revealed, and contradictory with the previous literature (Zia-ur-Rehman et al., 2021). Self-efficacy is varying with individual beliefs, and might be different from nation to nation, ethnicity to ethnicity. Hence, the results for the Malaysian context with multicultural composition could be accepted. In previous studies, financial literacy and financial behavior (Sabri et al., 2020b), self-efficacy (Amani & Shabahang, 2017) were revealed positively influence the money attitudes. Therefore, all the direct relationships which were found in the current study were validated by the previous researchers.

Furthermore, money attitude successfully mediated the influence of financial literacy and perceived financial confidence on students' financial behavior, resulting in improved financial health (Susilowati & Latifah, 2017). As a result, the mediating effect of money attitudes on financial factors, and financial health has been previously recognized. Hence, the mediation effect of money attitudes was also confirmed, and validated. Moreover, according to the authors' best knowledge, current study is the first study that examined the money attitudes as a mediating variable on the associations between financial related factors, self-efficacy, and financial health. As a result, the findings were theoretically, and practically contributed to the existing body of literature in the field of family economics and management.

Conclusion and Implications

Total of eight hypotheses out of ten were empirically supported, and in line with the past studies. Hence, financial behavior, and money attitudes positively influenced the financial health level of Malaysian households, and 46.7% of the variance in financial health was also explained. Even though, financial literacy and self-efficacy did not influence the financial health, it was positively influenced by all three antecedents; self-efficacy, financial behavior, financial literacy through money attitudes.

Understanding financial health, and its determinants is important for policy makers and financial specialists to integrate financial health into the overall well-being and physical health of the individuals in order to enhance their life satisfaction as well as reduce their poverty (Wijekoon et al., 2021). Furthermore, the findings will aid in the development of more effective and far-reaching interventions by providing a framework for solutions that do not rely on isolated approaches to food, housing, energy, or other economic insecurities, but instead aim to improve financial health in its four domains; spend, save, borrow, and plan to address all of these issues.

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