

Examining the Roles of Educational, Social and Psychological Factors in Financial Literacy: A Mediation Analysis

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Abstract. This research aims to identify and explain systematically and accurately the influence of preference for family and peers, preference for media, preference for education and mindfulness on financial literacy, as well as exploring the role of mindfulness as a mediating variable. The type of research used is explanatory research by explaining the influence and relationship between variables through hypothesis testing and analyzed using the PLS-SEM method approach. The population in the study was Indonesian people aged 17 years and over, sampling used quota sampling and a sample size of 990 respondents was obtained. Variable measurement is based on a 4 point gradation with an itemized rating scale. The research results show that there is an influence of preference of education on financial literacy. While preference for family and peers and preference for media are not proven to directly influence financial literacy, it is also proven that there is a need for a mindfulness variable to link these two variables. This means that psychological factors, such as mindfulness, can be a good mediation for increasing people's financial literacy.

Keywords:

1. Introduction

Academic literature indicates very strongly that the world of finance has become more complex, while in everyday life each individual makes financial decisions (Riaz et al., 2022). Financial behavior is a reality that every individual must face in their daily activities in the current modern era (Hussain et al., 2023). Everyone must adopt appropriate financial behavior to be able to balance income and expenses effectively. Financial decision making can be developed among individuals through increased financial literacy, especially when they are involved in planning life events, household budgets, home purchases, and retirement (Atkinson & Messy, 2012).

Many countries around the world recognize financial literacy as a central part of developing skills among their citizens through financial education (Bhushan & Medury, 2013). They are focusing on developing strategies to increase financial literacy among various groups, both the younger generation and the general public (Raiz et al., 2023). Unfortunately, many developed and developing countries have reported suboptimal levels of public literacy (Sabri et al., 2019). The results of the 2022 national financial literacy survey conducted by the Financial Services Authority (OJK) reported that the Indonesian public's financial literacy index reached 49.68%, this is an increase compared to the 2019 survey which was only 38.03% (OJK, 2022). However, this achievement is still far from the financial literacy figure targeted by the OJK of 65% by 2027. Therefore, it is important to equip individuals with financial concepts and financial literacy (Arrondel et al., 2014).

Financial literacy in Indonesia is poor as a human development index indicator. The National Survey of Literacy and Finance (SNLIK) in 2013, 2016, 2019, and 2022 found financial literacy index data in Indonesia to be 21.84%, 29.70%, 38.03%, and 49.68%. Compared to the financial inclusion index statistics in the same years (59.47%, 67.80%, 76.19%, and 85.10%), financial literacy is still substantially lower than inclusion. This is supported by 2022 financial literacy and inclusion index gap data in Table 1.

Table 1. Gap between Financial Literacy and Inclusion of 34 Provinces in Indonesia
Financial Literacy and Inclusion Survey Results in 2022

No	Province	Literacy (%)	Inclusion (%)	GAP (%)
1	Bengkulu	30.39	88.05	57.66
2	Sulawesi	31.95	84.05	52.47
3	South Sulawesi	36.88	88.57	51.69
4	South Kalimantan	31.73	81.3	49.57
5	North Sumatra	51.69	95.58	43.89
6	DKI Jakarta	52.99	96.62	43.63
7	Banten	45.19	85.71	40.52
8	Aceh	49.87	89.87	40.00
9	Central Kalimantan	42.08	81.56	39.48
10	Jambi	46.49	85.19	38.70
11	Riau Islands	48.57	87.01	38.44
12	Maluku	40.78	78.7	37.92
13	East Java	55.32	92.99	37.67
14	Gorontalo	52.21	88.57	36.36
15	East Kalimantan	57.14	93.25	36.11
16	North Sulawesi	50.13	86.23	36.10
17	West Sumatra	40.78	76.88	36.10
18	South Sumatra	52.73	88.57	35.84
19	Bali	57.66	92.21	34.55

20	Central Java	51.59	85.97	34.28
21	East Nusa Tenggara	51.95	85.97	34.02
22	Lampung	41.3	74.81	33.51
23	North Kalimantan	58.7	91.69	32.99
24	West Java	56.1	88.31	32.21
25	West Kalimantan	51.95	84.16	32.21
26	North Maluku	49.35	81.04	31.59
27	Papua	45.19	76.36	31.17
28	Special Region of Yogyakarta	54.55	82.08	27.53
29	West Papua	54.29	81.3	27.01
30	West Sulawesi	46.49	70.39	23.90
31	Central Sulawesi	56.36	78.44	22.08
32	Riau	67.27	85.19	17.92
33	Bangka Belitung	62.34	79.48	17.14
34	West Nusa Tenggara	65.45	82.34	16.89

Source: Infographics SNLIK OJK 2022 (processed)

Table 1 shows a large financial literacy disparity across all Indonesian provinces. Financial literacy currently includes attitudes and behaviors in managing finances as well as knowledge, skills, and beliefs about financial institutions, goods, and services (Adiandari, A. M., & Sos, S., 2023). Many consumers don't comprehend their financial products, indicating low financial literacy. Many consumers have been defrauded by fake investment and other digital financial goods from less reliable companies. Thus, improving Indonesian financial literacy is crucial.

Financial literacy encourages a positive attitude towards money which shapes financial well-being (Ameliawati & Setiyani, 2018). On the other hand, a lack of financial literacy will have an impact on choosing unwise financial products, poor debt management, and insufficient savings behavior (Yong & Tan, 2017). Even though financial literacy is an issue with major implications for economic health, there are still inconsistencies in scientific research in the field of financial literacy from various developed to developing countries (Goyal & Kumar, 2021). Moreover, research highlighting the importance of financial literacy and financial skills is still limited throughout the world (Riaz et al., 2023).

High financial literacy is the result of applying people's behavior and knowledge about individual finances. The Theory of Planned Behavior (Ajzen, 1985) explains that individual attitudes, perceived behavioral control, and subjective norms can predict intentions to behave in a certain way (Ajzen, 1991; Ogiemwonyi & Harun, 2021). Behavioral control and subjective norms can be formed from family and peers (Sabri et al., 2019; Thomas, B., & Subhashree, P. 2020, Hasyim et al., 2021; Yanto et al., 2021), awareness (Hussain et al., 2021; al., 2023; Riaz et al., 2023), and social media (Sabri et al., 2019; Yanto et al., 2021). Ajzen et al. (2011) proposed that a person's level of knowledge can be a prerequisite for effective behavior such as financial education (Lee, ES, & Ida, I, 2022; Stella et al., 2020).

Based on previous research reporting that parents and peer groups have a significant impact on children's financial behavior (Shim et al., 2010; Wagner, 2015), peers have been found to influence financial decisions in children (Isomidinova et al., 2017; Shim et al., 2010; Shon et al., 2012). Apart from that, Wagner (2015) also found that students who are accustomed to discussing financial affairs with parents and peers are more interested in saving and making a financial budget. In contrast, Sohn et al., (2012)'s study states that gaining financial knowledge through daily interactions with family, peers and co-workers shows a passive form of information seeking. Another problem is that information conveyed through social interactions, such as family and peers, is often biased (Liang & Guo, 2015).

This regressive tendency is proven by a study conducted by Sabri et al., (2019) which reports that someone who relies on family and friends as a source of financial information has a negative relationship.

Most consumers rely on traditional media, such as radio and television, to obtain information as the basis for financial management. However, now the massive presence of the internet has replaced traditional media as the main source of information in the last few decades (Sabri et al., 2023). Media sources such as television, newspapers, radio and the internet are considered to be effective sources of independent learning for financial information (Hira & Loibl, 2005). Wolla's (2017) study found that online learning was found to be an effective learning source in increasing financial literacy. Cao & Liu's (2017) study also found that adults' search for financial information via the internet showed good financial satisfaction. However, studies discussing the influence of the internet on financial literacy are still very limited, so further research is needed.

Another factor that might be able to develop financial literacy levels is education about financial literacy for young people (Finke & Huston, 2014). To date, many countries have developed various national initiatives to adopt financial education in the education system and ensure access for the entire school-age population (Cordero & Pedraja, 2019). Cameron et al., (2014) stated that education providers must realize that strengthening financial literacy through high-quality educational programs for students is valuable. Mandell (2006) stated that financial management should be part of young people's basic education. Through research results it is shown that the financial knowledge of students who take financial education programs significantly increases (Walstad et al., 2010). So more and more researchers are recommending financial education programs to increase the population's financial literacy (Lusardi et al., 2010; Lusardi, 2015). However, several studies show different results where financial education is reported not to have a positive and significant effect on financial literacy (Fernandes et al., 2014). Meta analysis conducted by Fernandes et al., (2014) shows that financial education plays a very small role in increasing financial literacy.

Researchers recommend that individuals can control emotions when making large investments because emotions can lead to unbalanced investment decisions (Iram et al., 2023). The correlation between mindfulness and financial literacy implies that adopting a thoughtful attitude towards financial matters has the potential to improve one's financial understanding (Hussain et al., 2023). Shao & Skarlicki's (2009) study notes that the use of the concept of mindfulness at the level of individual behavior is common in clinical research. Limited studies have begun to examine the link between mindfulness practices and personal finances (Kasser, 2008). A literature review argues that only a few studies have examined the relationship between mindfulness and financial literacy (Riaz et al., 2023). Kinder (2012) stated that transformations that combine mindfulness practices and financial literacy are worthy of further research.

Another contributing aspect to the lack of financial preparedness and financial literacy may be the absence of mindfulness, which refers to a mental state where an individual fully focuses their attention on the present moment, enabling them to comprehend and accept their financial situation more effectively. As per Baer et al. (2008), mindfulness refers to the act of devoting complete attention to an action, enabling individuals to have a comprehensive awareness of the ongoing events and their own responses to them. This study focuses on investigating the notion that students often lack awareness of the consequences of their financial decisions or have a limited understanding of financial matters. Mindfulness is a mental state characterized by complete focus and awareness on the present moment, allowing for a calm and accepting understanding of the practice at hand (Baer et al., 2008). Siegel (2007) emphasizes that awareness, which is a component of attention, encompasses our cognitive processes, emotional experiences, and focus on external stimuli. The research proposes that mindfulness will enhance the connection between media and family preferences in respect to financial literacy. The influence of media and family preferences is anticipated to grow in importance alongside the integration of mindfulness into all educational processes. This will enable individuals to develop a strong

understanding of financial matters and make informed decisions regarding their finances.

Thus, considering the importance of financial literacy, the limited number of studies, and the inconsistency of previous research results described previously, researchers will further explore the role of financial information sources such as family and peers, social media, financial education and individual financial awareness and planning in increasing the financial literacy of the Indonesian people.

2. Theoretical, empirical and conceptual hypothesis development

2.1. Financial literacy

The term financial literacy was coined by a non-profit organization in the United States, Jumpstart Coalition for Personal Financial Literacy (Lusardi et al., 2014). One definition of financial literacy that has been widely accepted comes from the Organization for Economic Cooperation and Development (OECD), which defines financial literacy as knowledge and understanding of financial concepts and risks, skills, motivation and confidence to apply this understanding to make effective decisions in financial context, to improve individual and societal welfare (OECD, 2014). The term financial literacy is defined by various researchers in various ways. Financial literacy according to Hastings et al., (2013) is an individual's ability to make informed financial decisions and the skills to use financial resources effectively. According to Huston (2010), financial literacy refers to a person's knowledge, awareness and ability to apply financial knowledge in everyday life.

2.2. Preference for family and peers towards financial literacy

Family influence is defined as an opinion, attitude or action that will in some way become a child's behavioral preference (Nebor, 1986). The literature reports that parents have the greatest influence on the financial socialization of their children (Clark et al., 2005). Social learning theory explains that a child gains financial learning experiences through observation, positive or negative reinforcement, practice, participation and intentional instruction within the family (Lachance & Choquette-Bernier, 2004). Direct influences such as discussions within the family, monitoring pocket money or obtaining gifts can increase knowledge and shape children's attitudes, values and behavior towards money (Allen et al., 2007). Family efforts to build financial stability, obtain a home, support children's education, or secure retirement income are influenced by financial literacy (Adiandari et al., 2020). Peers are one of an individual's preferences for thinking, perceiving and behaving (Yanto et al., 2021). In a learning process, peers play an important role for individuals, where peers are usually able to help friends in solving learning problems (Wentzel, 2017). So that individual relationships with peers can function as a forum for joint learning. The strong role of peers can be used as a basis for collaborative learning that is feasible for various knowledge (Erkens & Bodemer, 2019). Studies on financial behavior report that peers influence individuals' attitudes and views towards financial decisions (Lusardi et al., 2010). Social learning theory states that the best learning is from other people who are considered similar to them (Goetz et al, 2011). So using peers who are considered to have similar characteristics will have the maximum impact on financial literacy (Putri & Wijaya, 2020).

Previous research also states that parents and friend groups have a significant impact on children's financial behavior (Shim et al., 2010; Wagner, 2015). Wagner (2015) found that students who regularly discuss financial affairs with parents and peers are more likely to save and create financial budgets. Peer groups are known to influence a person's financial decisions (Isomidinova et al., 2017; Shim et al., 2010; Shon et al., 2012). The study explains the role of peers and family, explaining that students are influenced by financial support from socialization agents, especially family. They need help from parents and peers to make financial decisions and understand the importance of managing money well.

H1: Preference for family and peers has a positive effect on financial literacy

2.3. Preference for mediators towards financial literacy

Social interactions generally influence financial attitudes (Herdhiono & Dmanik, 2016). Kadoya & Khan (2020) reported that social contact also greatly influences the financial literacy of students in Japan. Social networks can act as platforms for sharing relevant content (Yang & Chen, 2008) and knowledge (Ahmed et al., 2019). Sohn et al., (2012) study proves that young consumers who choose media as an agent of socialization report higher levels of literacy compared to those who choose family. Media is known to be richer in educational content compared to everyday conversations with family and peers (Sabri et al., 2019). Compared to traditional media, social media is certainly superior in providing financial information and knowledge, not only because of the rich content it has but also allows two-way communication (Sabri et al., 2019). Online learning was found to be an effective learning source in increasing financial literacy (Wolla, 2017). Cao & Liu's (2017) study also found that adults' search for financial information via the internet showed good financial satisfaction. Therefore, it can be concluded that social media has the potential to increase financial literacy among students (Yanto et al., 2021). So it can be intuitively connected that media use can increase financial literacy.

H2: Preference for media has a positive effect on financial literacy

2.4. Preference for education towards financial literacy

Types of financial education vary from courses taught by teachers from outside the institution (specialists from financial institutions) to adopting finance-related subjects or content into the learning syllabus as part of the school curriculum (Cordero & Pedraja, 2019). Financial education refers to the process of providing information or instruction to individuals to improve their understanding of financial products, develop skills related to risk and opportunity awareness, make informed choices, and take effective decisions for their financial well-being (OECD, 2005). According to Zhang & Xiong (2020) financial education generally includes financial education in schools and social financial training. Both types of financial education can increase people's financial literacy (Walstad et al., 2010).

Research results show that the financial knowledge of students who take financial education programs significantly increases (Walstad et al., 2010). So more and more researchers are recommending financial education programs to increase the population's financial literacy (Lusardi et al., 2010; Lusardi, 2015). Previous research found that people who are educated about finance tend to be interested in financial issues and thus have high financial literacy (Grohman, 2018; Hsiao & Tsai, 2018). Opletalova (2015) stated that inserting financial education in primary and secondary schools would be a big step to increase financial literacy. Thapa (2015) also conducted a survey of management and non-management students, the results reported that management students who received financial education achieved high scores in financial literacy. A study by Stella et al., (2020) conducted a survey of 918 adults in Italy showing the effectiveness of participation in financial education programs on financial literacy levels.

Lee & Ida (2022) found that students who receive financial learning in college can develop their financial literacy. The financial skills you have will be a provision to be able to face current and future life. In line with the findings of Lee & Ida (2022), Susanti et al., (2019) study reported that learning with material related to budget preparation significantly strengthens financial literacy. The use of varied financial learning techniques with various skills-based sources will determine how students face a more complex life (Syuliswati, 2019).

H3: Preference for education has a positive effect on financial literacy

2.5. The influence of mindfulness on financial literacy

The term mindfulness comes from the concept of Dharma teachings in Buddhism (Dhammananda, 1987). Mindfulness is a method for achieving liberation from suffering that allows a person to be aware of their environment and as knowledge that is important in making progressive decisions (Riaz et al., 2023). Awareness is part of mindfulness which involves the way we think, feel, and respond to stimuli (Siegel, 2007). Mindfulness is a state of mind where a person gives full attention to the practices that

are occurring with full understanding and acceptance (Baer et al., 2008).

Individuals with financial awareness are able to control their emotions so they tend to manage their finances better and invest their money wisely (Lowe et al., 2018). Someone who is in a state of mindfulness can increase leadership abilities, innovation, productivity and satisfaction (Langer, 1989 in Riaz et al., 2023). Increased innovation can lead to making very positive financial decisions through what they learn. Riaz et al., (2023) stated that high mindfulness will trigger better decision making. The correlation between mindfulness and financial literacy implies that adopting a thoughtful attitude towards financial matters has the potential to improve one's financial understanding (Hussain et al., 2023). Previous research has validated the positive effect of mindfulness on financial literacy significantly (Riaz et al., 2023; Hussain et al., 2023; Tuffour et al., 2022.)

H4: Mindfulness has a positive effect on financial literacy.

2.6. The role of mindfulness on financial literacy

Regarding financial behavior, Thaler and Sunstein (2009) explain that individuals can take biased actions without consideration, resulting in detrimental financial decisions. To overcome these biases and adhere to the tenets of good financial behavior, consumers need holistic interventions. This solution is necessary because financial decision making will determine all parts of a person's life. Multidimensional holistic interventions include ways to change deeply ingrained lifestyles. The emotional turmoil when individuals face financial problems makes financial planning and action a burden. One promising alternative is to encourage individuals to take conscious action. Applying awareness to financial behavior will help individuals to think about their essential activities (Smith et al., 2016).

Mindfulness is rooted in Buddhist philosophy and traditions and has been used in a wide variety of settings. Consciousness has been described in various terms, for example, Gonzalez and Byron (2010) use the terms "equilibrium", "concentration", "clarity" or "purification" in describing mindfulness. Gonzalez and Byron (2010) also explain the term "obstacles" in the function of consciousness which consists of: 1) attachment, which refers to the drive to gain or unwillingness to let go 2) aversion, refers to the fear of losing what one has, such as status, material, and financial resources, 3) inability to assess what is currently faced 4) envy and jealousy, referring to signs of incompetence or irrational competitiveness, 5) pride, the tendency to compare oneself with others in financial matters. These obstacles are apparently in line with the characteristics of behavioral economic theory, where psychological factors can hinder financial optimization (Smith et al., 2016). So solutions to these obstacles may be found in mindfulness techniques. Financial maximization can be a paradoxical goal if it encourages materialism and the pursuit of wealth, so to achieve financial balance, a mindful approach to financial literacy will overcome these attitudes (Smith et al., 2016). The close correlation between awareness techniques and financial literacy described above builds the assumption that full awareness is able to strengthen the influence of family and peers, social media, and financial education as financial literacy preferences that are able to support individual financial literacy levels.

H5: Mindfulness mediates the effect of preference for family and peers, social media, and financial education on financial literacy

3. Methodology

3.1. Research design

Research design implies specific research plans and procedures and includes steps from basic assumptions to detailed methods of data collection, analysis and interpretation (Taherdoost, 2022). The research consisted of endogenous variables and exogenous variables and was analyzed using the PLS-SEM (Partial Least Square Structural Equation Method) method approach with mediating variables

using SmartPLS3 Software. The type of research used is explanatory research.

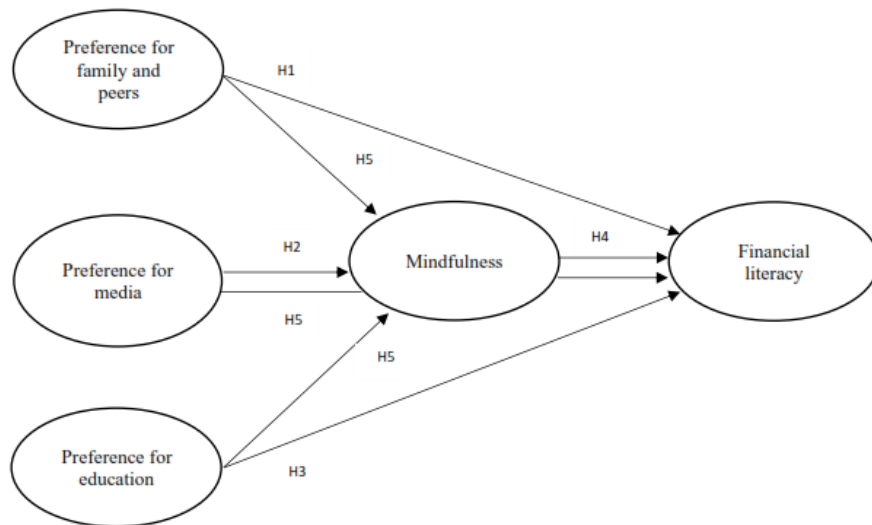


Fig.1:Conceptual model. sources: Modified from (Tuominen, et al., 2022).

This research explains the influence and causal relationship between variables through hypothesis testing (Asenahabi, 2019). Quantitative research is used to test theories or concepts through measuring variables and data analysis procedures with statistical tools for the purpose of testing hypotheses (Rindfleisch et al., 2008). The aim of the research carried out is to identify and explain systematically, factually and accurately the object that is the main problem, namely: the influence of preference for family and peers, preference for social media, preference for education, and mindfulness on the financial literacy of people in Indonesia (Maurer & Lee, 2011; Isomidinova et al., 2017; Kadoya & Khan, 2020; Walstad et al., 2010; Lowe et al., 2018; Smith et al., 2016).

3.2. Target population of the study

The population in this study was Indonesian people aged 17 years and over. This research does not provide limitations on respondents' occupations, nor restrictions based on the gender of respondents who can participate in this research. This research was conducted for 5 months (September 2023-January 2024) in Indonesia because of the broad data target. The study area focuses on Indonesian society located in 33 provinces, namely Aceh, North Sumatra, West Sumatra, Riau, Jambi, South Sumatra, Bengkulu, Lampung, Bangka Belitung Islands, Riau Islands, DKI Jakarta, West Java, Central Java, DI Yogyakarta, East Java East Java, Banten, Bali, West Nusa Tenggara, East Nusa Tenggara, West Kalimantan West Kalimantan, Central Kalimantan, South Kalimantan, East Kalimantan, North Sulawesi, Central Sulawesi, Southeast Sulawesi, South Sulawesi, Gorontalo, West Sulawesi, Maluku, North Maluku, West Papua and Papua.

3.3. Sample size and sampling technique and frame

The sample size is the appropriate proportion of the research target group that will provide information in the research that makes it possible to generalize to the target group (Creswell,

2012). Quota sampling was used in this study, ensuring that all provinces were adequately represented in the study through the establishment of quotas. Quota sampling ensures that all subgroups in the population are adequately represented in the sample (Sekaran and Bougie, 2016).

The first stage of the research will use a nonprobability design of quota sampling. Each province will have a minimum quota of 30 people as respondents, so that the minimum number of respondents collected is 990 respondents. This number is based on fulfilling the minimum assumption that the data can be said to be normally distributed (Krithikadatta, et.al, 2012; Altman and Bland, 1995). Every incoming data from the province will be monitored, if it has met the expected quota then the survey will be closed. We consider the diversity of incoming data based on gender, age and occupation in each province so that the data collected will be similar to the population and minimize research bias.

To conduct research, a sampling frame is a list of all the things that will be used as a representative sample. The sampling frame can recognize each component and decide which ones to include in the sample (Saunders, 2009). Taking quota samples from each province will provide a clearer picture because Indonesia is an archipelago country with many provinces.

3.4. Data collection methods

The instrument for collecting quantitative data in the current research uses the questionnaire method. According to Aryal, (2022) a questionnaire is a quantitative data collection instrument consisting of a list of questions with alternative answer choices which can be delivered to research respondents and can be returned to the researcher directly. Questionnaires are generally designed to collect large amounts of quantitative data. Questionnaires can be administered personally, distributed electronically, or sent by post to respondents. Questionnaires are generally cheaper and less time consuming than interviews and observations, but questionnaires also have a greater chance of providing no answers and incorrect answers (Sekaran and Bogie, 2012).

Secondary data was collected to ascertain preference for family and peers, preference for social media, preference for education, and awareness of the financial literacy of people in Indonesia. Next, design data collection through an online-based questionnaire. The quantitative data collection instrument in this research used online-based questionnaire method. This research questionnaire is online-based and created via Google Forms and distributed randomly via online social media such as email, Instagram, and WhatsApp. This study had ten enumerators assigned to all destination provinces to distribute electronic questionnaires in the hope of having a better response rate when respondents were informed through the enumerators about the survey that would be asked. We provided an incentive in the form of an e-wallet of IDR 50,000 to 250 lucky respondents who were randomly selected as an effective technique to increase the response rate (Sekaran and Bogie, 2012).

3.5. Measurement of variables

This research approach is aimed at measuring qualitative data into quantitative data based on a 4-point gradation with an itemized rating scale from point 1 to point 4, point 1 being strongly disagree and point 4 being strongly agree. The itemized rating scale is designed to test and measure the level of strength of respondents' attitudes, opinions and perceptions about social phenomena (Sekaran and Bogie, 2012).

The selection of a rating scale with an even number of options, such as the 4-point scale used in the study, is intended to compel respondents to make clearer choices and prevent any bias towards neutrality. The utilization of this 4-point rating scale enhances the generation of more discerning data, amplifies internal validity, and offers a more lucid perspective on the preferences or opinions of respondents. In this study, a 4-point rating system was employed to elicit definitive responses from participants. Using an even scale, rather than an odd scale with a neutral midpoint, is better suitable for this research as it tries to gain a clearer understanding of individual attitudes or tendencies about financial literacy

(Garland, 1991; Allen & Seaman, 2007; Preston & Colman, 2000; DeVellis & Thorpe, 2021)

According to Sekaran and Bogie (2012) detailed research scales provide flexibility in using points on a scale deemed necessary (4, 5, 7, 9, or whatever). each item and the respondent states the corresponding number next to each item, or circles the relevant number on each item, according to the following example. Responses to these items are then summed. It uses an interval scale. Research shows that any scale does not improve state assessment (Elmore & Beggs, 1975). Detailed rating scales are often used in business research, as they adapt to the number of points the researcher wishes to use, as well as the anchor nomenclature, which is deemed necessary to accommodate the researcher's need to tap variables.

Question items were prepared based on several previous studies which discussed financial literacy (Chawla, 2022; and Wasiuzzaman, 2023), family and peers (Chawla, 2022, Yanto, et al., 2021), preference for media (Sabri, 2019), and preference for education (Cordero and Pedraja, 2019, Zhang and Xiong 2020, Walstad et al., 2010). Furthermore, the measures/scales used and psychometrics of mindfulness use the Cognitive And Affective Mindfulness Scale-Revised (CAMS-R) from Feldman (2009) which has been modified by Riaz, et al., (2022).

4. Results of the study

4.1. Measurement Model Results

We tried to carry out a measurement model using smart PLS 3.0. The first step to see how the relationship between variables is, we ensure that each variable item is valid. To test validity we can look at the loading factor for each question. The factor loadings of each item will be checked to evaluate convergent validity. According to Lata et al. (2021), Factor loadings must be equal to, or greater than, 0.50. Specifically, all items with outer loadings above 0.50 (exhibit 1).

Next we will check the reliability of each variable. To see that the variables used are reliable, we looked at the results of Composite Reliability (CR), Cronbach's alpha (CA), and Average Variance Extracted (AVE). Composite Reliability (CR) was assessed to check internal consistency in this study. The cut-off value for CR is 0.70 (Hair et al., 2020). In this study, CR for all items ranged from 0.914 to 0.952, exceeding the recommended value of 0.7 (evidence 1). Furthermore, to strengthen the reliability test results of the CR results, you can use Cronbach's alpha (CA). CA results are said to be good if the value is above 0.70 (Hair et al., 2020). The CA in this study ranged from 0.887 to 0.944 and more than 0.7 (evidence 1), so it can be said that the CA value is for evaluating internal consistency. Furthermore, AVE represents the average value of the squared indicator loadings related to the research construct (Hair et al., 2014). According to Hair, et al. (2014) An AVE value of 0.50 will indicate that 50% of the items provide sufficient explanation regarding the construct. In this study, the AVE values for all constructs in this study were in the range of 0.504 to 0.750, which exceeds the recommended value of 0.5.

Table 4.7 Measurement Model

		Outer Loading	CR	C.A	AVE
	Financial Literacy		0.921	0.907	0.504

FL 1	How many savings accounts you will have if you have 100 savings accounts and the interest rate is 2% per year for five years.	0.524			
FL 2	How much money would you have in your account if you had 100 in a savings account with an interest rate of 20% per year and you never withdrew the money or paid interest after five years.	0.506			
FL 3	How much money can you afford with your income in 2025, if your income doubles and the prices of all goods also double.	0.565			
FL 4	Explain the correct nature of mutual funds.	0.58			
FL 5	Explain the risk of losing money, when an investor spreads his money between different assets.	0.562			
FL 6	The impact might a decrease in interest rates have on bond prices.	0.544			
FL 7	I know the documents required to get a loan from a bank to meet our financial needs	0.785			
FL 8	I am familiar with the financial products and services provided by commercial banks	0.856			
FL 9	I know the costs and benefits of accessing credit	0.857			

FL 10	I can calculate interest rates and loan payments correctly	0.859			
FL 11	I can make financial reports correctly	0.850			
	I can analyze financial performance periodically correctly	0.841			
	Media Selection		0.952	0.944	0.646
MS 1	I get financial information from social media	0.784			
MS 2	I get financial information from direct socialization	0.713			
MS 3	I get financial information from print media (newspapers, magazines, etc.)	0.690			
MS 4	I get financial information from electronic media (TV, Radio)	0.744			
MS 5	I get financial information from electronic communication media (WhatsApp)	0.744			
MS 6	Social media is an important means of increasing financial literacy	0.861			
MS 7	Social media from banking and financial institutions can increase my financial literacy	0.862			
MS 8	Social media from institutions, agencies and government can help improve my financial literacy	0.874			
MS 9	Instagram, LinkedIn, Twitter, Facebook, Tik Tok and other social media can increase financial literacy	0.852			
MS 10	Various social media are sources of credible financial literacy information	0.85			

MS 11	Social media supports the dissemination of information and knowledge about financial technology	0.834			
	Family and Peer Influence		0.914	0.894	0.544
FP 1	My parents track their monthly expenses	0.717			
FP 2	My parents spend money according to the budget	0.808			
FP 3	My parents pay the full credit card bill/debt every month	0.699			
FP 4	My parents save every month for the future	0.811			
FP 5	My parents invest for long-term financial goals regularly	0.813			
FP 6	Some of my friends regularly save with savings accounts	0.811			
FP 7	I always discuss money management issues with my friends	0.757			
FP 8	I always compare savings and expenses with my friends	0.625			
FP 9	My financial management is influenced by my friends	0.551			
	Awareness		0.939	0.925	0.662
AW 1	It is easy for me to concentrate on choosing which financial institution I will use	0.870			
AW 2	I don't easily hesitate when choosing the financial institution that I use	0.854			
AW 3	I still use financial institutions even though I have been disappointed with financial institutions	0.685			

AW 4	I received a financial institution error even though I called for help but they were not responded to properly	0.598			
AW 5	I can clearly see why I chose the financial institution I used	0.898			
AW 6	It is easy for me to choose the financial institution that I use	0.894			
AW 7	I choose financial institutions without badmouthing other institutions	0.837			
	I choose a financial institution based on my current needs	0.824			
	Education		0.923	0.887	0.750
	I always attend financial seminars held at schools/campuses	0.758			
	Campuses or schools need to provide references related to financial literacy	0.910			
	Campuses or schools provide teaching methods about financial literacy	0.914			
	Campus or school curricula need to provide courses on financial literacy	0.872			

Abbreviations: CR, composite reliability; CA, Cronbach's alpha; AVE, average variance extracted

Table 4.7 shows statistics for discriminant validity using the Fornell-Larcker criteria (Lata et al, 2021). The discriminant validity measurement uses the criteria presented by Fornell-Larcker and "crossloadings". The Fornell-Larcker postulate states that a latent variable shares more variance with the underlying indicator than with other latent variables. When measuring discriminant validity, the square root of the AVE is compared with the correlations of other constructs. The research results show that the square root of AVE is greater than the correlation value of other constructs. The Fornell-Larcker criteria confirm the discriminant validity of the measurement model because these constructs share more variance with their associated indicators compared to other constructs (Table 4.7).

Table 4.8 Discriminant Validity

Construct	Mean	Financial	Mindfulness	Preference for	Preference for Family	Preferences for Media
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		Literacy		Education	and Peers	
Financial Literacy	3.05	0.710				
Mindfulness	2.99	0.506	0.814			
Preference for Education	3.01	0.457	0.760	0.866		
Preference for Family and Peers	2.84	0.431	0.762	0.709	0.738	
Preferences for Media	2.97	0.429	0.717	0.685	0.688	0.803

Abbreviations: SD, standard deviation; IWB, innovative work behavior; PO fit, person-organization fit.

The Three Box Method can be used to find categorical values for all variables (Ferdinand, 2006: 292). If the highest value is 4 and the lowest is 1, with three classes, the interval value for each class is 1. So the value is 1.00 – 2.00 (low); 2.01 – 3.00 (medium); and 3.01 – 4 (high). The following are details of the results of descriptive statistics for five variables (Rahman., et al, 2022). Based on respondents' assessments of the research variables, two variables were in the high category (Financial Literacy = 3.05 and Preference for Education = 3.01) and three variables were in the medium category (Mindfulness = 2.99; Preference for Family and Peers = 2.84; Preference for Media = 2.97).

4.4. Structural model assessment

We can see the path coefficients, p-values, and t-statistics in the structural model for the Hypothesis significance evaluation process (Hair et al., 2019). Next, we can assess the structural model by looking at significant values to determine the influence between variables through a bootstrapping procedure. Table 4.9 shows the results of testing the hypothesis of direct influence and indirect indirect influence.

Table 4.9 Hypothesis testing of direct and indirect relationships

Relationships	Coefficient	t-statistics	p-value	Decision
Direct Effects				
Preference for Family and Peers → Financial Literacy	0.036	0.742	0.458	Rejected
Preference for Media → Financial Literacy	0.087	1,667	0.096	Rejected
Preference for Education → Financial Literacy	0.132	2,692	0.007	Accepted
Mindfulness → Financial Literacy	0.316	5,643	0,000	Accepted
Indirect Effects				
Preference for Family and Peers → Mindfulness → Financial Literacy	0.112	4,662	0,000	Accepted

Preference for Media → Mindfulness → Financial Literacy	0.075	3,983	0,000	Accepted
Preference for Education → Mindfulness → Financial Literacy	0.110	4,998	0,000	Accepted

Significance level (5%): t-statistics = 1.96; p-value < .05

Abbreviations: Perceived Risk, Customer Experience; Customer Satisfaction, Loyalty Intention

Based on Table 4.9, we can see the direct effect between variables. Hypothesis H1: The influence of Preference for Family and Peers does not have a significant effect on Financial Literacy ($\beta = 0.036$, t-statistics = 0.742, $p > .05$) therefore H1 is rejected. This finding contradicts previous research which states that Preference for Family and Peers influences Financial Literacy (Nebor, 1986; Clark et al., 2005; Allen et al., 2007; Yanto et al., 2021). Furthermore, the results confirm that hypothesis H2 is also rejected. This can be explained that Preference for Media does not have a direct effect on Financial Literacy ($\beta = 0.087$, t-statistics = 1.667, $p > 0.05$). Hypothesis H3 The effect of Preference for Education on Financial Literacy has a significant positive effect ($\beta = 0.132$, t-statistics = 2.692, $p < .05$). These results can be interpreted to mean that the more educational institutions provide knowledge about financial literacy, the more a person's literacy level will increase. Hypothesis H4 shows that the influence of Mindfulness has a significant positive effect on Financial Literacy ($\beta = 0.316$, t-statistics = 5.643, $p < 0.05$). These results can explain the high level of awareness of a person's financial institutions, this has been proven to have an impact on increasing a person's level of financial literacy. (Riaz et al., 2023; Hussain et al., 2023; Tuffour et al., 2022.).

Furthermore, for the results of the statistical analysis of the mediation effect, the research results show that Mindfulness behavior positively mediates the effect of Preference for Family and Peers on Financial Literacy ($\beta = 0.112$, t-statistics = 4.662, $p < .05$), Preference for Media on Financial Literacy ($\beta = 0.075$, t-statistics = 3.983, $p < .05$), and between Preference for Education on Financial Literacy ($\beta = 0.110$, t-statistic = 4.998, $p < .05$) so H5 is accepted. These findings confirm that Mindfulness can be an appropriate mediator to connect all variables (Riaz, et al., 2022).

5. Discussion

Hypothesis H1, namely Preference for Family and Peers, is proven to have no effect on financial literacy. These findings confirm the research Jorgensen & Savla (2010). Although support and advice from family and friends can also play an important role in helping someone improve financial literacy, but this will depend on the individual. This suggests that factors outside the influence of family and peers may play a more important role in shaping a person's financial literacy (Nawi et al., 2020). Based on respondents' answers about how much influence preference for family and peers has on individual financial literacy. Of the five question items asked to respondents regarding the role of the family in financial literacy, the family does not have a maximum role in the process of tracking monthly expenses, optimizing credit card use, and paying debts to be able to understand spending patterns and identify areas where savings can be made. In this case, the family should have a complex role as guardian of increasing financial literacy starting from early education, role models in financial management, open discussions about family finances linked to practical experience related to financial management. Furthermore, the influence of friends may not be very significant. Of the four questions, only knowledge of saving has a high score. Others in friendships rarely discuss financial matters. So in the end it doesn't affect financial arrangements much. Therefore, it is further possible that the relationship between these two variables needs to be mediated by other variables.

The relationship between media preferences and financial literacy has been a topic of interest in hypothesis H2. However, this research did not find a significant influence between media preferences

and financial literacy. In general, media preferences do not directly influence a person's financial literacy (Livingstone, 2004). The results of this research are reflected in the answers from respondents regarding how much influence preference for media has on individual financial literacy. Of the eleven question items asked to respondents regarding the role of media in financial literacy, social media was the only center for information related to financial literacy. The role of print media, electronic media, electronic communication media (WhatsApp), and direct socialization have not provided a maximum role in increasing individual financial literacy. However, the role of media in shaping perceptions and knowledge about finance can have an indirect impact on individual financial literacy. The media can be an important source of information about finance, but it can also be a source of false or misleading information. The way individuals process information from the media about finances can influence their understanding of financial concepts.

From the results of further analysis, we can conclude that education has an important role in the level of financial literacy. People who have good knowledge tend to be interested in financial matters and therefore have high financial literacy (Grohman, 2018; Hsiao & Tsai, 2018). Therefore, many studies provide recommendations for increasing financial literacy through both formal and non-formal educational media (Lusardi et al., 2010; Lusardi, 2015). Inserting several lessons at a certain school level will have a big impact on financial literacy levels (Opletalova, 2015; Lee & Ida, 2022; Susanti et al., 2019).

Furthermore, a high level of awareness can increase a person's financial literacy. This finding is in line with Lowe et al., (2018) who stated that individuals with financial awareness are able to control their emotions so they tend to manage their finances better and invest their money wisely. They may be more rational and not hasty in making investment or other financial decisions. This ability helps them to remain calm and objective, even in unstable market situations or when facing financial stress (Riaz et al., 2023). High financial awareness also tends to have a better understanding of the risks and returns of various types of investments. They will conduct more in-depth research before making an investment decision and are more likely to choose an investment strategy that suits their financial goals. This can lead to better financial results in the long term.

The role of mindfulness on financial literacy levels is very interesting to discuss. Preference for Family becomes significant after being mediated by mindfulness. This suggests that self-awareness can moderate or influence how a person responds to or manages their preferences for family in a financial context. For example, someone who is more self-aware may be more inclined to consider their personal values and goals more deeply when they make financial decisions involving their family (Lowe et al., 2018; Riaz et al., 2023; Hussain et al., 2023; Tuffour et al., 2022). This shows that the relationship between psychological factors and social preferences such as family and financial behavior is not direct or simple, but can be influenced by other factors such as self-awareness.

The same findings also exist for variables Preferences for Media. Media has an indirect role in increasing society's literacy level. The role of media is more than just providing information and entertainment. Media has an indirect role in increasing society's literacy levels by shaping and influencing public discourse, encouraging critical thinking, and exposing individuals to a variety of ideas and perspectives (Livingstone, 2004). There needs to be a psychological variable such as mindfulness to link the two. Individuals who are more self-aware or more mindful may tend to be more critical in evaluating the financial information they receive from various media sources.

The next interesting indirect relationship is that the preference for education variable has greater significance when mediated by mindfulness. Since the beginning, education has played a very important role in shaping a person's level of financial literacy (Grohman, 2018; Hsiao & Tsai, 2018). So, both directly and indirectly, education is the main foundation that can be used as a place to grow society's literacy level. There are several reasons why education is the main foundation for increasing public literacy. Firstly, schools and formal educational institutions provide opportunities for individuals to acquire basic knowledge in various fields, including financial literacy. Both education helps in the

development of critical skills such as reading, writing, critical thinking, and problem solving. These skills are essential in understanding and interpreting financial information, as well as in making wise financial decisions. Third, a supportive educational environment can create a learning culture that encourages personal growth and development. In this environment, awareness of the importance of financial literacy can be instilled and encouraged.

For further research, more scales such as the Likert scale can be used. Researchers can also use random data collection methods. Maybe you can include demographic and socio-economic variables as external factors that influence financial literacy.

6. Conclusions

This research provides insight into the factors that influence financial literacy. It further explores the relationship between Family and Peer Preferences, Media Preferences, and Education Preferences on Financial Literacy. Education Preference has an important role in improving people's literacy. In practice, the role of educational institutions will be the key to improving people's literacy. Meanwhile, Family and Peer Preferences and Media Preferences have not been proven to have a direct influence on financial literacy. There is a need for mindfulness variables to connect the two variables. Theoretically, this study has provided knowledge that psychological factors such as mindfulness can be a good mediator to improve people's financial literacy. This study confirms previous findings that individuals with financial awareness are able to control their emotions and therefore tend to manage their finances better and invest their money wisely. Improving people's financial literacy should go hand in hand with one's awareness when choosing or conducting financial transactions.

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