

DETERMINANTS OF FINANCIAL LITERACY AND INVESTMENT FRAUD: A SYSTEMATIC LITERATURE REVIEW

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Abstract	<p><i>Financial literacy refers to the capacity to comprehend, manage, and control one's financial conditions. The ability to make sound financial decisions will be greatly assisted by financial literacy, which revolves around financial, credit, and debt management. Every financial decision made by investors will have an impact on their saving and budgeting, readiness for unexpected life events, planning for retirement, and awareness of risk and return. Thus, the aims of this study are to conduct a systematic literature review in order to investigate and compile awareness of financial literacy and preventing investment fraud that could influence investor decisions. This study adopted Preferred Reporting Items for Systematic review and Meta-Analyses (PRISMA) to collect the relevant literature that is scoped only to the Scopus and Emerald Insight. Systematic Literature Review approach was employed and throughout the process of identification, screening, eligibility and inclusion. The study found out that individuals with strong financial literacy are likely to have a greater intention to invest and are more capable of avoiding fraud. The results are important to the financial world because society and institutions are putting more emphasis on financial literacy to make people more responsible for their own investing.</i></p> <p>Keywords: <i>Financial literacy, investment fraud, awareness</i></p>
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INTRODUCTION

Financial literacy plays a crucial role in preventing investment fraud, as it equips individuals with the knowledge and skills necessary to make informed financial decisions. A comprehensive understanding of financial products, their associated risks, and the regulatory environment can significantly reduce the likelihood of falling victim to fraudulent schemes. Sudarwanto & Kharisma (2023) emphasize that enhancing financial literacy fosters individual self-control, enabling investors to critically evaluate investment opportunities before committing their resources. This assertion is supported by Lokanan & Liu (2021) who highlight that a lack of financial literacy is a significant indicator of fraud victimization, although they also note that some financially literate individuals still fall prey to scams, suggesting that financial knowledge alone may not be sufficient to prevent fraud.

Investment fraud typically involves deceptive practices that promise high returns with little or no risk, often targeting vulnerable populations, including older adults and those with limited financial knowledge (Yudhianto & Atmaji, 2023). New study results show that the demographic profile of victims reveal that older adults in particular those aged 60 years and over are overrepresented in relation to this type of fraud because they may be less resilient to high pressure sales techniques and the promise of easy money (M. E. Lokanan & Liu, 2020)

CONCEPTUAL FRAMEWORK

Financial literacy is defined as the ability to understand and utilize financial skills in a set including management of personal finance, budgeting, and investing. This includes a variety of specific attributes or characteristics, including financial knowledge, skills, attitudes and behaviors related to the use of financial resources that contribute to effective day-to-day with how these processes lead to positive financial well-being outcomes for an individual (Elvira et al., 2022; Herispon, 2019). Financial literacy is important to individuals because it not only helps to manage personal finance issues but also shapes the economic outcomes of saving, investing and spending (Munisamy et al., 2022)

Furthermore, neither is financial literacy just an individual characteristic and dependent on the demographic information such as education, age or socioeconomic status. Specifically, previous research has revealed that higher levels of education positively influence financial literacy, which also contributes to better personal finance behavior and based on the decision-making process (Susanti et al., 2023). Moreover, improved financial literacy is also critical for encouraging financial inclusion as it provides individuals with the knowledge and skills to effectively use financial systems and access appropriate financial services (Compen et al., 2019).

Additionally, the psychological aspects of financial literacy indicate that confidence in one's financial knowledge can lower fraud immunity paradoxically. (Drew & Cross, 2013) suggest that in overrating their skillset on investing, individuals are more susceptible to the fraudsters social engineering techniques. The importance of financial literacy is most apparent when relating it to the behavioral biases we have in our investing decisions. The findings show that those investors with higher levels of financial literacy tend to engage in less behavioral biases including overconfidence and mental accounting, which lead to making irrational investments (Triana & Ibrohim, 2022).

METHODOLOGY

The systematic literature review (SLR) examined the gathered articles by employing the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, which is an established guideline for performing a systematic review of the literature. This study is structured as a systematic review of the relevant literature. The systematic approach is distinct from the conventional one in that it is objectively focused. Then, several inclusion and exclusion criteria were established to meet the aims of the study. The articles collected will have a quantitative method to analyse the determinants of awareness for financial literacy and investment fraud.

Then, to ensure that the articles are up-to-date with the current issues, the research began on February 2024 and collected data between February 2024 and November 2024. The following search query was entered into the Scopus and Emerald Insight database to initiate the study: "financial literacy", "investor financial knowledge", "financial education", and "fraud investment", "investment scam" yielding 82 initial results. To minimise possible consequences, duplicate articles were eliminated. The search was then narrowed to include just English-language content. After reviewing the abstracts, 12 full-length papers were selected for further analysis. Table 1 shows the inclusion and exclusion criteria of this study.

Chandra et al., (2023) research notes that more financially literate young adults are less susceptible to risk and able to make wise investment choices, minimizing the chances of economic losses. Moreover, it is reported that financial well-being and financial literacy

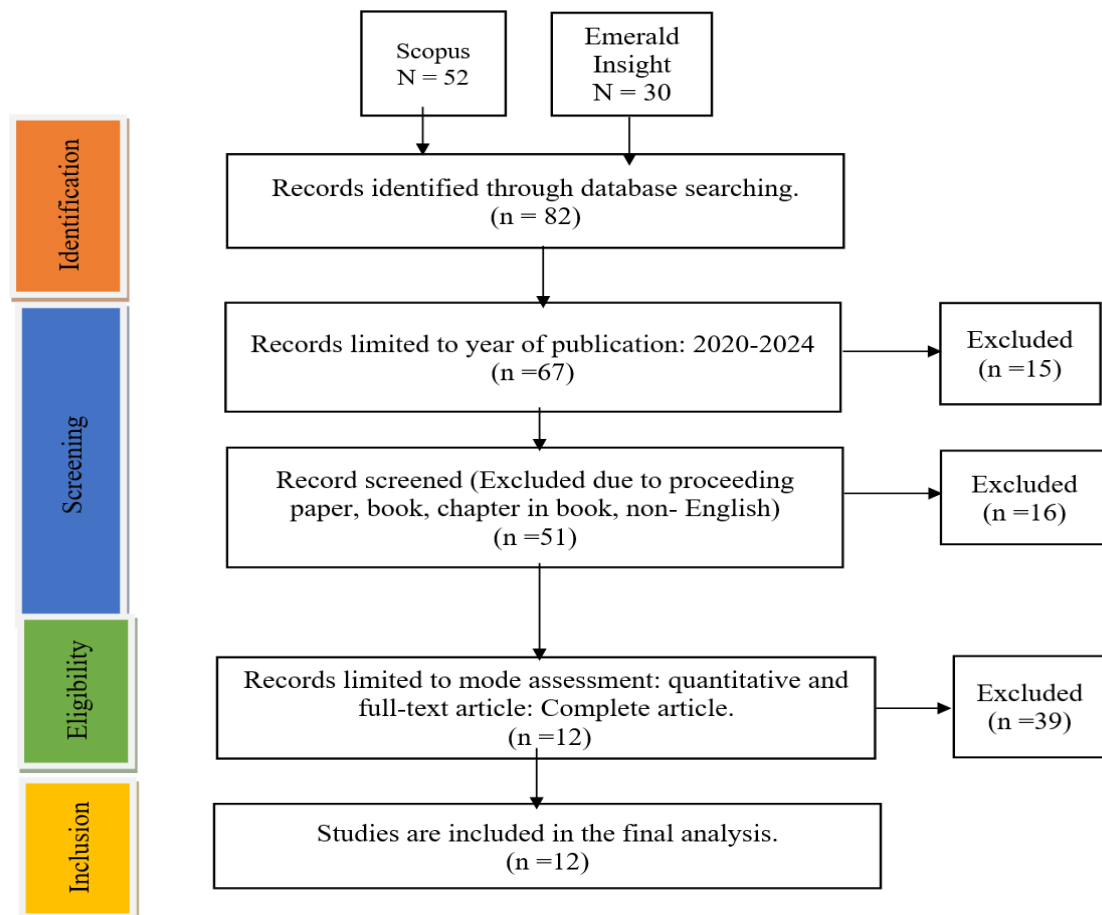
are positively associated having finance knowledge means people usually make better financial decisions, such as saving and spending wisely (Munisamy et al., 2022).

Table 1: Inclusion and Exclusion Criteria

No	Criterion	Inclusion	Exclusion
1	Year	2020 until 2024	Less than 2020 and more than 2024
2	Mode of assessment	Quantitative	Qualitative
3	Keyword	"financial literacy", "investor financial knowledge", "financial education", and "fraud investment", "investment scam"	Other than "financial literacy", "investor financial knowledge", "financial education", and "fraud investment", "investment scam"
4	Document types	Article	Proceedings papers, book chapters, working papers and Conferences.
5	Duplicate	No	Yes

Source: Author (2025)

Figure 1: Screening process



Source: Moher et al., (2009);

In general, there are four main primary phases in the screening process; publication identification, screening, eligibility, and inclusion phase (see Figure 1). Each phase has a particular procedure.

Identification phase

The identification phase refers to publication identification as planned by the researcher. It will refer to the criteria identified and explained in the previous section (see Figure 1). To begin the process, a particular search string is formulated that suits the objective of this research. As mentioned earlier, this research will only focus on SCOPUS and Emerald Insight databases. Therefore, the search string was explicitly formulated based on the nature of both databases (see Table 2). The search used the "advance search option" to anticipate a better return.

Table 2: Search string

Database	Search String
SCOPUS	TITLE-ABS-KEY ("financial literacy" OR "investor financial knowledge" OR "financial education") AND ("fraud investment" OR "investment scam")
Emerald Insight	("financial literacy" OR "investor financial knowledge" OR "financial education") AND ("fraud investment" OR "investment scam")

By executing the search, both the SCOPUS and Emerald Insight databases return results that meet the defined criteria. The SCOPUS database yields fifty-two publications (n=52), while Emerald Insight returns thirty publications (n=30). In total, the combined records from both databases amount to eighty-two publications (n=82) (see Figure 1).

Screening phase

The screening phase filters the records according to the established criteria. This process is crucial in ensuring that the listed publications align with the objectives of this research. During the screening, fifteen records (n=15) are excluded (see Figure 1). The exclusions occur because these publications are from proceeding papers, books, book chapters, or are in a non-English language. Consequently, the final number of records that qualify for the next steps is reduced to twelve (n=12).

Eligibility and Inclusion Phase

The eligibility phase involves a preliminary analysis of each publication's topic to verify that the research works presented are appropriate for this systematic literature review (SLR). Each publication must be extracted for review. A brief reading of the abstract is conducted to identify the main objective of each publication. Although this process is time-consuming, it is essential for eliminating irrelevant publications. Based on this analysis, thirty-nine publications (n=39) are excluded due to their focus on different objectives (see Figure 1). As a result, only twelve publications (n=12) are included in this research for further analysis.

RESULTS

The discussion below outlines the outcomes from the analysis of the selected publications. The results are categorized into two sections: general findings and main findings. The general findings summarize the publications identified in the earlier stage. Conversely, the second section delves into the themes derived from the content analysis of the publications.

Table 3: List of Journal

	Name of Journals	2020	2021	2022	2023	2024	Total
1	Journal Of Financial Crime		3	1	1	1	6
2	Entropy		1				1
3	International Journal of Accounting & Information Management					1	1
4	International Journal of Bank Marketing				1		1
5	International Journal of Social Economics			1			1
6	Journal of Modelling in Management					1	1
7	Journal Sustainability				1		1
	Total						12

Table 4: List of Author, Data source/type of study, Financial literacy and Determinant

No	Author (s)	Data source/type of study	Financial Literacy	Determinants of investment fraud							
				DF	SF	CB	FP	RA	PF	FB	FS
1	Lokanan & Liu (2021)	Regression Model	√	√	√				√	√	
2	ÖZÇELİK & Kurt (2024)	Questionnaire/survey	√	√		√	√	√	√	√	
3	Rey et al., (2024)	Questionnaire/survey	√	√		√				√	
4	Kakinuma (2022)	Questionnaire/survey	√	√	√				√	√	
5	Padil et al., (2021)	Questionnaire/survey	√	√		√	√			√	
6	Kasim et al., (2023)	Questionnaire/survey	√	√	√		√			√	√
7	Hidajat et al., (2020)	Questionnaire/survey	√	√		√	√		√	√	
8	Singh & Misra, (2022)	Questionnaire/survey	√	√	√	√	√		√	√	
9	Lokanan & Liu (2020)	Descriptive analysis	√	√	√		√		√	√	
10	Dempere & Malik (2021)	Questionnaire/survey	√	√	√		√		√	√	√
11	Ashfaq et al., (2024)	Questionnaire/survey	√	√	√	√		√	√	√	
12	Khan & Kadoya (2023)	Questionnaire/survey	√	√	√	√	√		√	√	√
	TOTAL		12	12	8	7	8	2	9	12	3

DF: Demographic Factors, SF:Socioeconomic Factors, CB:Cognitive Biases, FP:Fraud Perception, RA:Risk Aversion, PF:Psychological Factors, FB:Financial Behavior, FS:Financial Stress

DISCUSSION

Demographic Factors on Financial Literacy and Investment Fraud

Demographic factors play a crucial role in shaping financial literacy and susceptibility to investment fraud. The theoretical framework presented in the literature review of this paper indicates a strong connection between demographic factors and financial literacy. According to Özçelik & Kurt (2024) studies indicate that individuals with higher financial literacy are better equipped to recognize and avoid fraudulent schemes, thereby reducing their susceptibility to fraud. This is particularly relevant in the context of demographic factors such as age, education, and personality traits, which can influence financial literacy.

Furthermore, Lokanan & Liu (2021) identify several demographic factors that influence fraud victimization based on gender: female investors are more likely to be victims, older adults (ages) are at greater risk, and retired individuals are more vulnerable to fraud. Moreover, Hidajat et al., (2021) identified education level and profession, showing that highly educated individuals and those with lower education levels can fall victim to these schemes.

Socioeconomic Factors on Financial Literacy and Investment Fraud

Kakinuma (2022) highlights the importance of financial literacy in managing financial resources effectively, which can prevent undesirable consequences such as excessive borrowing or falling victim to investment scams. It also mentions that financial literacy is crucial for financial security in later life, especially in countries with limited state pension systems like Thailand. Besides, Singh & Misra (2023) highlights that individuals from middle-income groups are more likely to invest in fraudulent scheme.

Cognitive Biases

Cognitive biases play a significant role in financial fraud victimization, influencing individuals' decision-making processes and increasing their susceptibility to fraudulent investment. Cognitive biases such as confirmation bias, overconfidence bias, optimism bias, representativeness bias, the framing effect, and herding behavior significantly contribute to financial fraud victimization. Confirmation bias refers to the tendency of individuals to seek out information that confirms their pre-existing beliefs while ignoring contradictory evidence. This bias can lead investors to overlook warning signs of fraud and focus on information that supports their decision to invest. Lokanan & Liu (2021) found that investors often ignore warnings about the dangers of investment schemes due to confirmation bias, which reinforces their belief in the legitimacy of the scheme. Besides, Dempere & Malik (2021) noted that overconfident investors are more likely to rely on their judgment rather than seeking professional advice, increasing their risk of victimization.

Fraud Perception

Fraud perception refers to how individuals recognize, interpret, and respond to fraudulent schemes. Understanding fraud perception is crucial for developing strategies to protect investors and enhance financial literacy. Dempere & Malik (2021) found that the most common sources of information related to consumer financial fraud (CFF) in the UAE were direct contact from the defrauder, the internet, and friends or relatives. This highlights the importance of disseminating accurate information about fraud through reliable channels to improve awareness and recognition. The study by Khan & Kadoya (2023) noted that fraudsters used new strategies for phone fraud and email phishing by pretending to be hospital staff or national health authorities. This exploitation of trust highlights the need for increased vigilance and skepticism towards unsolicited communications.

Risk Aversion

Risk aversion significantly impacts investment decisions, with risk-averse individuals generally preferring safer and more predictable financial products. However, this cautiousness can sometimes be exploited by fraudsters who offer seemingly low-risk, high-return investment opportunities. Özçelik & Kurt (2024) explored the mediating effect of risk aversion on the relationship between fraud perception and the intention to invest in crypto assets. Their study found that higher fraud perception leads to increased risk aversion, which in turn reduces the intention to invest in crypto assets. This highlights the importance of understanding how fraud perception can influence investment behavior through risk aversion.

Psychological Factors

Psychological factors play a crucial role in financial fraud victimization, influencing individuals' decision-making processes, susceptibility to fraud, and overall financial behavior. Since fraud depends heavily on human psychology, one of the key areas where fraud becomes apparent within individuals is that they place a lot of preference for trust and familiarity. Scammers find it easy to play with the trust and comfort level of people and steal money from them. For example, ownership of long-standing relationships with financial advisors may mitigate fraud risk while unfamiliar ones may heighten vulnerability. It implies that trust could be considered as a safeguard against overconfidence; however, it can also act as a risk factor if misplaced (M. E. Lokanan & Liu, 2020).

Financial Behavior

Financial behavior encompasses the actions and decisions individuals make regarding their finances, including spending, saving, and investing. Spending and saving patterns can influence susceptibility to fraud. Individuals who exhibit careless spending habits or impulsive buying behavior are more likely to fall victim to fraudulent schemes. Khan & Kadoya (2023) found that individuals with careless buying habits were more likely to be victims of financial fraud during the COVID-19 pandemic.

Financial Stress

Financial stress refers to the anxiety and pressure individuals feel regarding their financial situation. Besides, financial stress can impair decision-making abilities, leading individuals to make poor financial choices. Economic downturns and financial crises can exacerbate financial stress, increasing susceptibility to fraud. During the COVID-19 pandemic, many individuals experienced heightened financial stress due to job losses and economic uncertainty. This increased their vulnerability to fraudulent schemes that promised financial relief or high returns. Khan & Kadoya (2023) noted that the pandemic created an opportunistic environment for fraudsters to exploit individuals' financial stress. (M. Lokanan & Liu, 2021) discussed how financial stress can lead individuals to make impulsive financial decisions, increasing their risk of victimization.

CONCLUSION

In conclusion, through a systematic review of the existing literature, it can be found that empowering financial literacy awareness is key to fighting investment fraud. Being financially literate surely improves people's knowledge of financial concepts and products, the associated risks, relevant legislation in their jurisdiction, as well as how to carefully assess whether a specific investment opportunity is safe or not. There are vast literatures on how financial inclinations correlate to investment decisions, with evidence suggesting that individuals who possess greater levels of financial literacy engage in better investment behavior and have lower likelihood of falling for fraud. The studies reviewed provide a comprehensive understanding of the various factors contributing to financial fraud victimization. The key findings from these studies highlight the significant roles of

psychological factors, financial behavior, financial stress, cognitive biases, and demographic characteristics in influencing individuals' susceptibility to fraud

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