

Does Financial Literacy Effect Retirement Plans? A Systematic Literature Review

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Abstract

Objective: The aim of this study is to synthesize and draw a systematic plan of financial literacy and retirement planning research.

Methodology: The authors conducted a search on the databases and shortlisted and extracted 453 articles for further analysis. PRISMA approach was used to clear out the articles that were not relevant for this study.

Findings: This study has shown a huge scope of research in the area of financial literacy where new tools like AI and hybrid approach can be used. Though this theme is well established and explored in some countries but still there are places where it still can be used for future research. Theories and models were used in the articles but mostly researchers focused on one or two main models.

Keywords: Financial Literacy, Retirement Planning, Systematic Analysis, Risk Tolerance, Financial Knowledge

INTRODUCTION

In the current scenario the understanding and needs of financial world is very complex as compared to earlier. Forty years ago, a simple understanding of how to maintain a current and savings account at local banks and savings institutions may have been sufficient. Today, we all have to be able to differentiate between and have knowledge of a wide range of financial product and services, and also the providers of those. Financial literacy is not only having knowledge but also application of knowledge. Financial Literacy can also be defined as the capacity of having familiarity and understanding of products of financial market, most importantly awareness about rewards and risks in order to make informed decisions.

Almost in every country, governments stress on financial sufficiency for the older citizen of the country because of lack of financial preparedness amongst retirees which puts huge financial pressure on government budget and the individual retiring from work. As has been said by (Fox et al., 2005) several personal and social problems can be solved by financial knowledge and the similar results have been demonstrated by many authors like (Lusardi & Mitchell, 2017; Van Rooij et al., 2011) that financial literacy positively affects retirement planning. This implies that people are more likely to contribute to their retirement savings if they are financially literate and have an eye toward the future. The current study

is based on systematic literature review of the existing work done on financial literacy and retirement planning. The extensive work based on 453 research articles is discussed under various heads below.

2. RESEARCH METHODOLOGY

In the research of commerce and management, systematic literature review is considered as a major hand in understanding the diversity of knowledge to tackle a specific academic problem (Tranfield et al., 2003). The authors have also strictly followed the guidelines to perform this study based on the directions proposed by (Kitchenham, 2004). There are protocols that every researcher has to follow for performing this analysis which is as follows:

2.1. Research Questions

RQ1. What is the level of growth in research in the field of financial literacy?

RQ2. Who are the leaders in the journals and authorship characteristics in the financial literacy area?

RQ3. What are the prevalent research areas and topics being considered?

RQ4. What are the types of theories and models used in this research?

Elaborating more about the research questions, RQ1 is concerned with understanding of the trend of research in the field of financial literacy with respect to the provided time frame of 25 years (2000-2024). Marginal change in the growth will enable the researchers to understand whether this area has still the potential to be explored or not. With respect to RQ2, it is concerned with the leaderboards and characteristics of journals and authors which will follow the types of collaborations, contributors, and popular areas for publication. RQ3 is related to the core of the study from which the readers will get the idea about the specific types and areas of financial literacy already covered and what can be the diverse areas still to be searched. RQ4 is concerned with the models and theories used in the research articles to provide a theoretical framework for every research performed.

2.2 Study Selection criteria

After following the PRISMA Guidelines, PICO (Population, Intervention, Comparison and Outcome) approach is followed for selecting the relevant research papers as a part of the study. Only those studies were included which are specifically based on financial literacy and inclusion. Those studies were considered where participants or respondents (**Population**) have either a bank account or indulged in saving through intermediaries such as agents of self-help groups. The programmes or initiatives that helped the respondents in enhancing their financial knowledge and skills are used as **Interventions** and **Comparison** was made either on the basis of people saving intentionally (keeping some money aside every month at the receipt of any type of amount) or on the basis of people saving unintentionally (saving some money after going through every expenditure regardless of the amount left). The **Outcome** is the various measures of financial knowledge and behaviour based on the credit scores, debt levels and financial well-being.

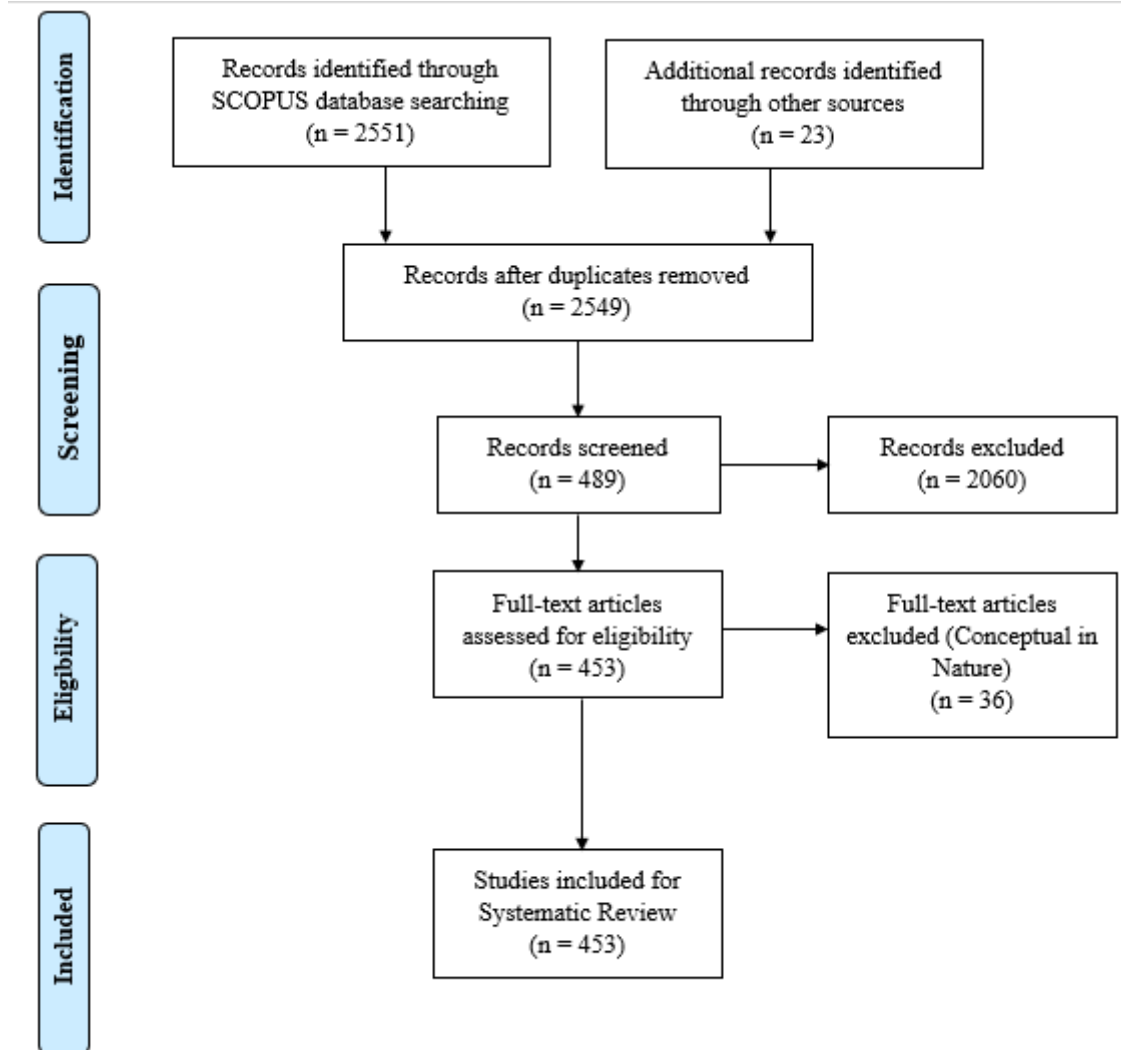
2.3. Search Strategy

Various combinations of keywords were used for searching and retrieving the data using the SCOPUS database. It is the biggest database that usually provides maximum coverage for selecting the articles (Ballew, 2009) and other databases like WoS has less data available even after using the same set of keywords (Valtakoski, 2020).

The following set of keywords were used in the search string to get the research articles from the database, TITLE-ABS-KEY ("investment decision" OR "financial planning" OR "financial literacy" OR "retirement planning") AND (LIMIT-TO (SUBJAREA , "ECON") OR LIMIT-TO (SUBJAREA

, "BUSI") OR LIMIT-TO (SUBJAREA , "SOCI") OR LIMIT-TO (SUBJAREA , "ARTS") OR LIMIT-TO (SUBJAREA , "MULT")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (SRCTYPE , "j"))

Table 1: PRISMA Framework for synthesizing the research articles



2.4. Data Collection and Filtration

After exporting the data file from the database, the first set of article information extracted was reviewed on the basis on three aspects namely title, abstract and keywords. Those articles that were not relevant for the study were filtered out. After this procedure, the authors downloaded the full papers from the remaining article information and read each article completely, dividing the task between every author. The protocol has been followed, as given by (Borenstein et al., 2009), and the sets of full papers were interchanged between the authors to eliminate the bias and get better results.

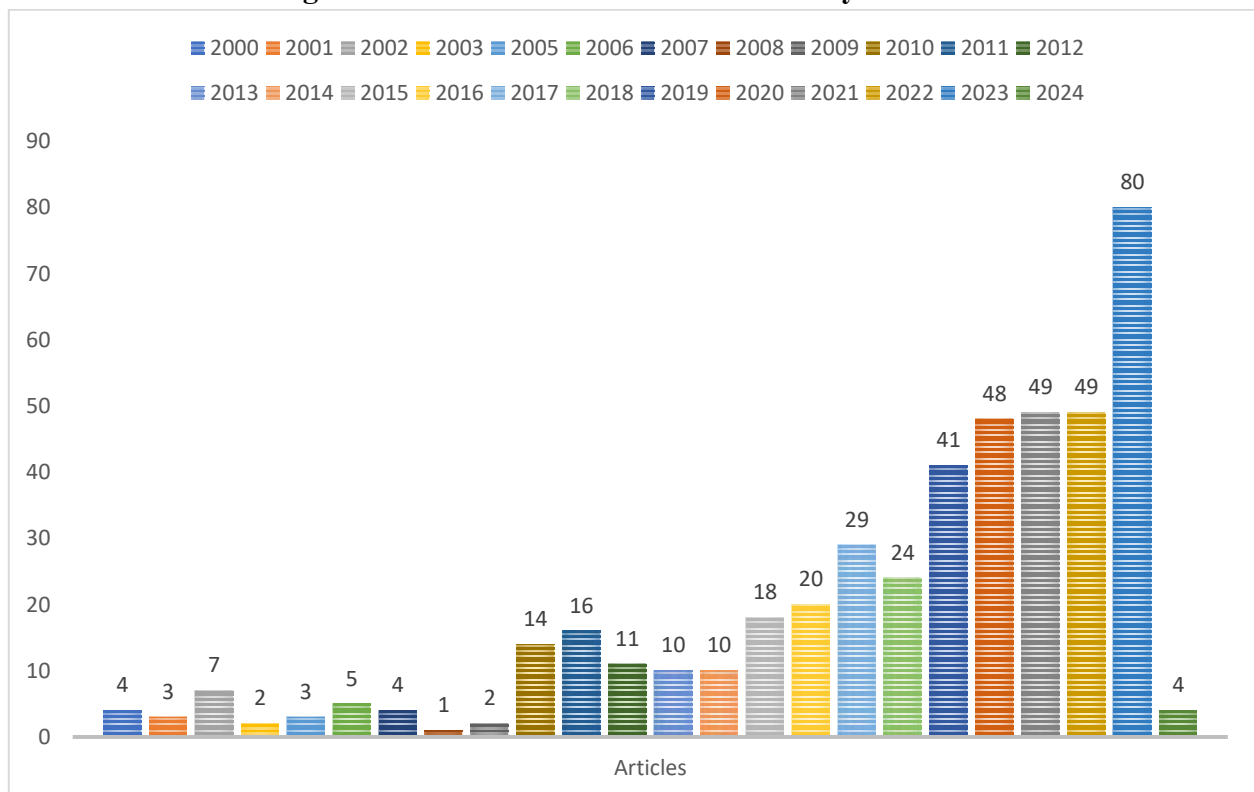
3. RESULTS

The time period considered for this study ranges from (2000-2024) i.e. the period of 25 years. The authors have presented the results dividing the total information into six sub-heads, namely growth pattern of research articles, contributors' characteristics, geographical centres and institutions, base of models and theories and research areas.

3.1. Growth Pattern of Research Articles

The authors have gathered and selected a set of 453 articles till 2024 and after the tabulation of those articles, an uneven growth in the number of articles based on financial literacy can be seen. The whole period of the study is divided into five sub-groups of five years. The period of 2000-04 shows minimum and uneven growth where only 16 (3.5%) articles were published. In 2005-09 period, 15 (3.3%) articles were published which shows a decline with respect to the previous period. The major change can be seen in the period 2010-14 where 61 (13.4%) articles were published. In the period 2015-19, the published articles were 132 (29%). The year-on-year growth rate was also highest in this period. In the last period 2020-24, 230 (50.8%) articles were published. Till the year 2009, the number of articles were ranging from zero to seven but there was a big leap in the number from the year 2010. Most researchers in the financial world had shifted their focus towards financial and retirement planning (Bateman et al., 2010; Klapper & Panos, 2011; Van Rooij et al., 2011), financial behaviour (Agnew et al., 2012; Landerretche & Martinez, 2013), education and counselling of individuals (Alsemgeest, 2015; Bhonde-Saraf, 2016; Corbusier, 1987; Ji et al., 2010) because the financial crisis (Tarraf, 2011) had disturbed the incomes and investments.

Figure 1: Growth in the Financial Literacy Research



in the whole world. A similar of kind of surge can be seen after the year 2018, the most important factor for this change was the pandemic. It was like a different problem with the same consequences. Most people shifted towards liquid assets rather than making investments with a longer lock-in period (Cunha & Pollet, 2020). The articles published in 2024 are not representing the downfall of the research area, because data of the articles was only retrieved in January 2024.

3.2. Contributors' Characteristics

Table 2 provides the data regarding the contributors and the publications they have made. Single authored articles were 63. Most publications were made in a group of two or three. 156 articles were published by the 2-authors group and 145 were published by 3-authors group. 59 articles were published by the group of 4-authors, 18 articles were published by 5-authors group and 10 articles were published by 6-authors group. There were only two articles with higher number, one was published by 8-authors group and the other was published by 10-authors group. The readers can grasp onto the good numbers of contributions with two and three-authors group. It is because the financial literacy research provides a holistic approach where it can be collaborated to other research areas and collaborations are the way of enhancing knowledge and expertise. All the contributions included for this study are empirical in nature. It is difficult for a single researcher to make these kinds of contributions.

Table 2: Researchers' Characteristics

Number of Authors	Number of Papers	Percentage
1	63	13.91
2	156	34.44
3	145	32.01
4	59	13.02
5	18	3.97
6	10	2.21
8	1	0.22
10	1	0.22
	453	

3.3. Geographical Perspective

Truong, 2014 has provided a method for selecting the location of articles and contributors. The location of the affiliated institution of the first author was considered and the secondary affiliations were not considered. Table 3 demonstrates the locations of publications that have been used in this study. USA represents the highest number of publications i.e. 75 articles whereas the countries in Asia-Pacific have 131 (28%) contributions which is highest in the continental group. Most number of contributions in the Europe region has been accumulated by Germany with a count of 19. The reason for USA being the highest contributor is its participation in active projects on financial

Table 3: Geographical location of Contributors

Location	Articles	Percentage
Asia-Pacific		
Australia	31	9.28
India	24	7.19
China	22	6.59
Malaysia	14	4.19
Korea	8	2.40

Indonesia	7	2.10
Japan	7	2.10
New Zealand	6	1.80
Pakistan	5	1.50
Others	7	2.10
Europe		
Germany	19	5.69
United Kingdom	13	3.89
Italy	11	3.29
Sweden	8	2.40
France	6	1.80
Spain	5	1.50
Others	30	8.98
North America		
USA	75	22.46
Others	4	1.20
South America		
Brazil	7	2.10
Others	25	7.49

literacy and consumer protection introduced by International Monetary Fund (IMF). Special alliance groups were also created to promote financial literacy and inclusion named as Alliance for Financial Inclusion (AFI). There were certain countries in South America, Africa and Europe that have the least number of publications which less than or equal to two.

3.4. Institutional Contributions

This section elaborates the contributions made by researchers with respect to their institutional affiliations. Table 3 provides the list of universities with their commendable publications in the area of financial literacy. Three universities have the highest number namely Linköping University, Universiti Putra Malaysia and University of Georgia. Four universities from Australia have contributed most in the area of financial literacy whereas five universities have contributed from United Kingdom. Highest contributor from Africa are two universities from Ghana. Both table 3 and table 4 explain that USA and Australian universities and researchers are making major contributions towards the field while these were followed by the contributors from United Kingdom and Malaysia. Least contributions have been made by universities from other European, South American, and African countries.

Table 4: Institutions with their publications

Affiliations	Articles
LINKÖPING UNIVERSITY	11
UNIVERSITI PUTRA MALAYSIA	11
UNIVERSITY OF GEORGIA	11
MONASH UNIVERSITY	10

BOND UNIVERSITY	9
TEXAS TECH UNIVERSITY	9
KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY	8
UNIVERSITY OF TECHNOLOGY SYDNEY	8
FEDERAL UNIVERSITY OF SANTA MARIA	7
HIROSHIMA UNIVERSITY	7
TILBURG UNIVERSITY	7
AKDENIZ UNIVERSITY	6
EDITH COWAN UNIVERSITY	6
MASSEY UNIVERSITY	6
UNIVERSITY OF NEW ENGLAND	6
UNIVERSITY OF NEW SOUTH WALES	6
UNIVERSITY OF OTAGO	6
UNIVERSITY OF OXFORD	6
UNIVERSITY OF PECS	6
AMERICAN UNIVERSITY	5
UNIVERSIDADE DE SANTIAGO DE COMPOSTELA	5
UNIVERSITI SAINS MALAYSIA	5
UNIVERSITY OF GHANA BUSINESS SCHOOL	5
UNIVERSITY OF INNSBRUCK	5
UNIVERSITY OF LEEDS	5
UNIVERSITY OF READING	5

3.5. Use of Models and Theories

The base of every research is supported by a theory or a model that gives the direction to the variables dealt. Getting to know the theories used will help the readers to understand the theories and models which supports the research of financial literacy and financial knowledge. Table 5 provides the list of theories and how many times the theory has been used in the articles retrieved. The most utilized theory in the list is Theory of Planned Behaviour (Ajzen, 1991) which elaborates how the behaviour is affected by intention and intention is affected by attitude, subjective norms and perceived behavioural control. This theory is followed by Cumulative Prospect Theory (Kahneman & Twersky, 1979) which means that risk is avoided by individuals in positive situations and it is sought in negative situations.

Table 5: Models and Theories

Names of Models & Theories used	Instances
Theory of Planned Behaviour	12
Cumulative Prospect Theory	7
Big Five Model	3
Modern Portfolio Theory	3
Expected Utility Theory	2
Social Cognitive Theory	2
Item Response Theory	2

Psycho-Motivation Model	1
Theory of Reasoned Action	1
Attention Grabbing Theory	1
Family Resource Management Theory	1
Theory of Financial Literacy	1
Financial Behaviour Theory	1
Financial Socialization Theory	1
Attribution Theory	1
Human Capital Theory	1
Construal Level Theory	1
Theory of Self-Determination	1
Social Construction Theory	1
Optimal Expectations Theory	1
Life Cycle Accumulation Theory	1
Fuzzy Set Theory	1
Competence Model	1

Both these theories have been used mostly in the area of behavioural finance. Other than these, the Big Five Model of Personality (Goldberg, 1990) and Modern Portfolio Theory (Markowitz, 1952) were utilized in the articles. There have been other theories also which have been used twice or singularly in the research articles. Most of the theories and models used are either behavioural or related to decision-making. This confirms that research in financial literacy is driven by behavioural or decision-making factors.

3.6. Research Areas and Topics

Today, financial literacy is the most utilized area for the research in context to financial inclusion (Akpene Akakpo et al., 2022; Lyons & Kass-Hanna, 2021), knowledge (Belcher & Belcher, 2023; Singh & Malik, 2022) and retirement planning (Qi et al., 2022). The most prominent area which was explored in relation to financial literacy was financial knowledge. Apart from the traditional centres of knowledge, people have now started getting help from the social and mass media (Lal et al., 2023). Various measures were taken to enhance the knowledge of individuals like making them shift towards retail investment (Jung et al., 2023), investing in mutual funds (Jonsson et al., 2017), analyzing the intention and behaviour (Harahap et al., 2022), shifting the focus towards digital finance (Yang & Devaney, 2011) and enhancing the financial satisfaction (Adusei et al., 2023).

Table 6: Areas and Topics covered

Area	Type	Instances
Financial Knowledge	Retail Investment	47
	Mutual Funds	28
	Saving Behaviour	45
	Digital Finance	31
	Financial Satisfaction	26
Stock Market	Stock Market Participation	11

	Retail Trading	3
	Investment Decision Making	11
Risk Tolerance	Risk Appetite	21
	Risk in Assets	12
	Risk-Taking Behaviour	28
Retirement Planning	Investment for Retirement	21
	Retirement Preparation & Well-Being	37

The stock market is the least explored area in relation to financial literacy. Stock market participation (Adrianto & Hamidi, 2020) was positively affected by the surge of financial literacy. Financial planners are putting up individuals to go for retail trading (Lei, 2019). Various determinants of investment decision-making like crowdfunding (Hervé et al., 2019) were used to understand whether the investor have sufficient knowledge to take decisions.

Risk assessment and tolerance can be seen as the major aspect of literacy and knowledge as it is the only barrier that proves to be a hindrance in the investments. Various methods were developed by financial agencies to evaluate the risk appetite (Nguyen et al., 2019) of their clients. Risk taking behaviour is also influenced by the preference for the kind of investment (Blanchett et al., 2018).

Retirement Planning is mainly associated with the financial literacy because the life after job gets hard if a fine set of wealth has not been created. Most of the research in this area was based on two aspects namely investment for retirement (Hanna et al., 2017) and retirement preparation and well-being (Saeed & Sarwar, 2016).

4. SCOPE FOR FUTURE RESEARCH

Various new areas can come out of this research that can prove to have a major impact in the field. Though the quantity of articles per year has increased a lot but it explains the potential of an area to be explored. This field is the core area of research in finance, new researchers can try bring a more hybrid approach by making collaborations. The geographical locations which were not considered for the study might not mean that the problem is not there. The researchers need to extend their geographical coverage which is possible by increasing the number of co-authors.

Financial literacy can be explored more with respect to stock market participation as this area is still under-utilized for research. Risk aversion in risk assessment is also not explored to its full potential. Most of the theories were mainly used once or twice in the articles, can make use of other models and theories than Theory of Planned Behaviour (TPB) or Big Five Model.

More experts or Professors of Practice (PoP) can be involved in the future so that the researchers have much clear definition of goals and problems. This also involves inclusion of those people who work at ground zero level. All the research articles added here were empirical in nature. New type of qualitative studies can also be performed using focus groups and in-depth interviews. The researchers are trying to show a happy face at every place, if there are failed studies, those are also need to be considered. If the new researchers want to expand the area, they need to diversify with the theme of this research.

5. CONCLUSION

This research was about systematically reviewing the articles retrieved from 2000-2024. The authors searched the database, found some articles and filtered out the ones, which were not relevant for the study

and were left with 453 articles. This study has shown a huge scope of research in the area of financial literacy where new tools like AI and hybrid approach can be used. Though this theme is well established and explored in some countries but still there are places where it still can be used for future research. Theories and models were used in the articles but mostly researchers focused on one or two main models. The findings of this research will be helpful for the working professionals in the area of finance, scholars, academicians and non-academicians.

The study had some limitations. The extraction for articles was only done for research papers published in journals. Other papers can also be added from books, reports and working papers. The authors were not able to access every article due to limited subscription. Apart from all these limitations, the authors have tried to give their best and made it ready for the world.

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