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A Bibliometric Analysis of Financial Literacy and Financial Planning Research

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ABSTRACT

This study presents a comprehensive bibliometric analysis of global research on financial literacy and financial planning published between 2000 and 2024. Using 452 Scopus-indexed documents, the study examines publication trends, journal distribution, and the conceptual structure of the field through keyword co-occurrence analysis using VOSviewer. The findings show a significant growth in research output, particularly after 2017, illustrating the increasing academic relevance of financial capability, financial behavior, and long-term financial well-being. The journal analysis identifies several influential sources, with the Journal of Financial Counseling and Planning emerging as the most productive outlet. Keyword mapping reveals six major thematic clusters that highlight core topics such as financial literacy, financial education, financial behavior, demographic and gender differences, decision-making, investment behavior, retirement planning, insurance, and behavioral biases. These clusters demonstrate the interdisciplinary development of the field, integrating psychological, demographic, and socio-economic dimensions. Overall, this study provides an updated conceptual landscape of financial literacy and financial planning research and offers valuable insights for researchers, educators, and policymakers. The results also underline the need for more holistic and context-specific financial education and policy initiatives, particularly in developing economies where financial literacy levels remain comparatively low.

***Keywords**: Financial literacy; Financial planning; Bibliometric analysis; Financial behavior.*

INTRODUCTION

In an era of increasingly complex economic globalization, an individual's understanding of financial literacy and their ability to plan effectively have become crucial factors for long-term financial well-being. Financial literacy is defined as possessing the knowledge, skills and confidence necessary to make responsible financial decisions (Goyal & Kumar, 2021; Ansari et al., 2022) while financial planning refers to the process of achieving financial security through the systematic setting of financial goals, management of resources and mitigation of risks. Low levels of financial literacy remain a major challenge, particularly in developing countries. According to the 2022 National Survey on Financial Literacy and Inclusion conducted by the Indonesian Financial Services Authority (OJK), only 38.03% of Indonesian adults have sufficient financial literacy. This significantly limits their ability to plan their finances effectively and contributes to rising household debt and increased economic vulnerability.

Major economic disruptions, such as the 2008 global financial crisis and the COVID-19 pandemic, have underscored the serious repercussions of insufficient financial knowledge and ineffective planning practices, thereby intensifying scholarly attention toward these interconnected domains (Ansari et al., 2022). These events exposed how limited financial understanding can exacerbate personal and societal vulnerabilities, prompting a surge in research that explores the various factors shaping financial literacy and planning outcomes. Over recent years, numerous empirical investigations have delved into the socio-demographic, psychological, and institutional elements that affect financial literacy levels and the success of financial planning strategies. These studies have illuminated how characteristics such as age, education, income, gender, and cultural context interact with individual decision-making processes, as well as how institutional frameworks such as access to financial services and educational initiatives influence overall financial competence.

Nevertheless, amid this expanding body of primary research, a notable deficiency persists: the absence of a thorough quantitative synthesis that systematically charts the intellectual structure and historical evolution of scholarship integrating financial literacy and financial planning (Goyal & Kumar, 2021; Kesuma et al., 2025). While individual empirical works have provided valuable insights into specific aspects of these topics, they often remain fragmented, focusing on isolated variables or contexts without offering a broader view of how the field has developed over time. This fragmentation hinders a clear understanding of dominant themes, emerging trends, and potential interconnections across studies, making it challenging for researchers and practitioners to identify overarching patterns or prioritize future investigations.

Bibliometric analysis has established itself as an effective methodological approach for examining large volumes of academic literature, enabling the identification of underlying patterns, influential contributions, and thematic trajectories within a discipline (Usada et al., 2025; Rafasya et al., 2025). By employing quantitative techniques to analyze publication metadata, citation networks, and keyword co-occurrences, this method reveals the structural dynamics of knowledge production that qualitative reviews alone may overlook. Recent applications of bibliometric techniques have successfully mapped research on financial literacy in general (Goyal & Kumar, 2021; Ansari et al., 2022; Surya et al., 2025) and in narrower settings, such as financial literacy among small and medium-sized enterprises (IS et al., 2025). These efforts have highlighted key authors, journals, and conceptual clusters within those specific scopes. However, no

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prior bibliometric study has comprehensively combined financial literacy and financial planning within a unified analytical framework to examine the global literature as a whole.

This gap is especially critical in developing countries, where the interplay between financial literacy and planning directly informs the development of practical financial education programs and evidence-based policy interventions. In such contexts, where economic resources are often constrained and exposure to financial risks is heightened, understanding how these two constructs reinforce each other is vital for designing initiatives that promote both immediate financial competence and long-term resilience (Widaryo et al., 2025). Without an integrated overview, policymakers and educators risk implementing fragmented measures that address only one dimension, potentially overlooking synergies that could yield more sustainable outcomes.

The present study seeks to address this identified shortfall by conducting an extensive bibliometric review of international publications on financial literacy and financial planning spanning the years 2000 to 2024. Drawing on records retrieved from the Scopus database and employing visualization tools such as VOSviewer software, the analysis is guided by two primary objectives. First, it aims to trace annual trends in publication volume and map the distribution of contributions across academic journals, thereby illustrating the growth trajectory and primary outlets shaping the field. Second, it seeks to examine keyword clusters through co-occurrence networks generated in VOSviewer, providing a visual and structural representation of predominant research themes and their interrelations.

By constructing a detailed conceptual map of the domain, this investigation contributes a holistic perspective that extends beyond isolated findings to reveal the broader intellectual architecture of the literature. Such a synthesis holds particular relevance for scholars, policymakers, and educators operating in Indonesia and similar emerging economies, where financial literacy rates remain suboptimal and the need for targeted interventions is acute (Adelia et al., 2025). The insights derived from this analysis can help delineate priorities for forthcoming research, including underexplored linkages or emerging issues that warrant deeper exploration. Moreover, the resulting overview supports the formulation of educational curricula and policy frameworks that concurrently strengthen financial literacy and planning capabilities, fostering greater financial inclusion and stability among populations facing persistent economic challenges (Kesuma et al., 2025).

Ultimately, this bibliometric endeavor not only documents the maturation of an increasingly vital interdisciplinary field but also underscores the practical implications of bridging theoretical knowledge with applied strategies. In doing so, it responds to the pressing demand for comprehensive evidence that can guide efforts to enhance financial well-being in an era marked by persistent uncertainty and rapid economic transformation.

METHODS OF RESEARCH

This study uses a quantitative bibliometric approach to map the development of research related to financial literacy and financial planning. This approach follows the bibliometric analysis guidelines described by (Donthu et al., 2021) which emphasize the importance of data retrieval, metadata cleaning, descriptive analysis of publications, and keyword network mapping. The research data was taken from the Scopus database. The search was conducted using the keywords "financial literacy" and "financial

planning" in the title, abstract, and keywords sections. The inclusion criteria were limited to journal articles. All relevant documents were then exported in CSV format. This process yielded 452 documents. After that, data cleaning was carried out by removing duplicates, aligning author names, and normalizing keywords to be consistent with the techniques recommended in bibliometric procedures.

Data for the analysis were sourced exclusively from the Scopus database, chosen for its comprehensive coverage of peer-reviewed journals across relevant disciplines. The search strategy involved querying the terms "financial literacy" and "financial planning" within the title, abstract, and keyword fields to ensure capture of directly relevant contributions. To maintain focus and quality, inclusion was restricted to journal articles only, excluding other document types such as conference papers or book chapters. Following the search, all matching records were exported in CSV format for further processing. This initial retrieval resulted in 452 documents. Subsequent data refinement involved standard bibliometric practices, including the elimination of duplicate entries, standardization of author names, and normalization of keywords to achieve consistency and accuracy in the dataset.

For the descriptive components of the analysis, the Bibliometrix package in R software was employed. This tool facilitated a structured overview of the collected records through its Main Information About Data function, providing essential summary statistics on the corpus. To address the objective concerning temporal trends, the Annual Scientific Production function was applied, enabling a clear depiction of publication volume over time. Similarly, the Most Relevant Sources function was utilized to evaluate the concentration of publications across journals, identifying those outlets that have contributed most substantially to the field. The selection of Bibliometrix reflects its alignment with rigorous principles of scientific mapping outlined in prior methodological guidance (Donthu et al., 2021).

Thematic exploration was conducted by transferring the processed data to VOSviewer software, which excels at visualizing relationships within bibliographic datasets. Specifically, a keyword co-occurrence analysis was performed to detect prominent research clusters. VOSviewer employs the VOS (Visualization of Similarities) algorithm to position keywords in a network based on the strength and frequency of their joint appearances, generating a map where proximity reflects conceptual affinity and line thickness indicates association intensity (Saputra et al., 2025). This technique produces an intuitive representation of dominant topics and their interconnections. The application of VOSviewer for such exploratory purposes is consistent with established practices in bibliometric visualization (Kirby, 2023).

Integrating these two analytical tools yields complementary perspectives that directly support the study's aims. The Bibliometrix component delivers quantitative insights into the growth trajectory of the literature and the primary journals shaping its dissemination. In contrast, VOSviewer uncovers the underlying conceptual framework through clustered keyword networks, highlighting thematic concentrations and linkages. Together, these methods provide a robust foundation for interpreting both the quantitative expansion and qualitative organization of research on financial literacy and financial planning, allowing for a nuanced understanding of how the field has developed and where key intellectual connections lie.

RESULT AND DISCUSSION
This section reports the findings derived from the two main analytical procedures of the study,

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namely the examination of annual publication trends and journal distribution, followed by the cluster analysis of keywords conducted using VOSviewer.

General information about the set of selected articles obtained through the bibliometrix application is presented in Table 1.

Table 1. Main information regarding selected articles.

Description	Results
Main Information About Data	
Timespan	2000:2024
Sources (Journals, Books, etc)	267
Documents	452
Annual Growth Rate %	16.3
Document Average Age	5.9
Average citations per doc	29.71
References	3059
Document Contents	
Keywords Plus (ID)	695
Author's Keywords (DE)	978
Authors	
Authors	1163
Authors of single-authored docs	63
Authors Collaboration	
Single-authored docs	66
Co-Authors per Doc	2.96
International co-authorships %	19.25
Document Types	
article	359
book	5
book chapter	34
conference paper	31
editorial	1
note	3
retracted	1
review	18

(Source: Bibliometrix, 2025)

Annual Publication Trends

Table 2. Annual Publication Trends

| Year	Articles	Year	Articles
2000	2	2013	8
2001	0	2014	12
2002	2	2015	15
2003	1	2016	11
2004	3	2017	29
2005	4	2018	24
2006	2	2019	34
2007	5	2020	45
2008	3	2021	44
2009	0	2022	47
2010	11	2023	57
2011	14	2024	75

(Source: Bibliometrix, 2025)
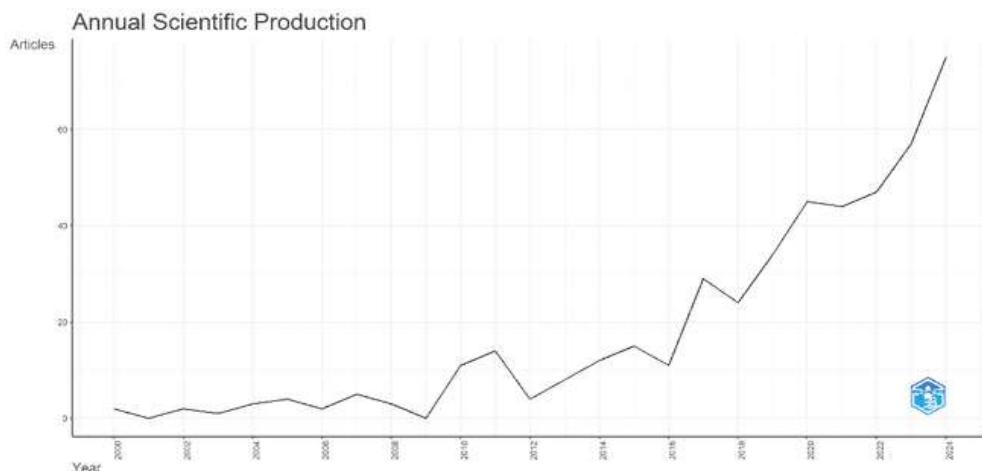
Figure 1. Annual Scientific Production
(Source: Bibliometrix, 2025)

The analysis of annual publication trends indicates that research on financial literacy and financial planning has experienced significant growth over the past two decades. In the early period, from 2000 to 2009, the number of articles was relatively low, with several years showing no publications at all, suggesting limited research interest in the field at that time. Starting in 2010, the number of publications began to increase consistently, from 11 articles in 2010 to 14 articles in 2011, and continued to grow in subsequent years. A sharper rise can be observed from 2017 onwards, when publications reached 29 articles, and growth accelerated further to 75 articles by 2024. This pattern reflects a clear acceleration in research activity and growing academic attention toward financial literacy and financial planning, indicating that the topic has become increasingly relevant and prominent in the scholarly literature. Overall,

the trend demonstrates an exponential growth in research output, highlighting the dynamic development of this field over time

Journal Distribution
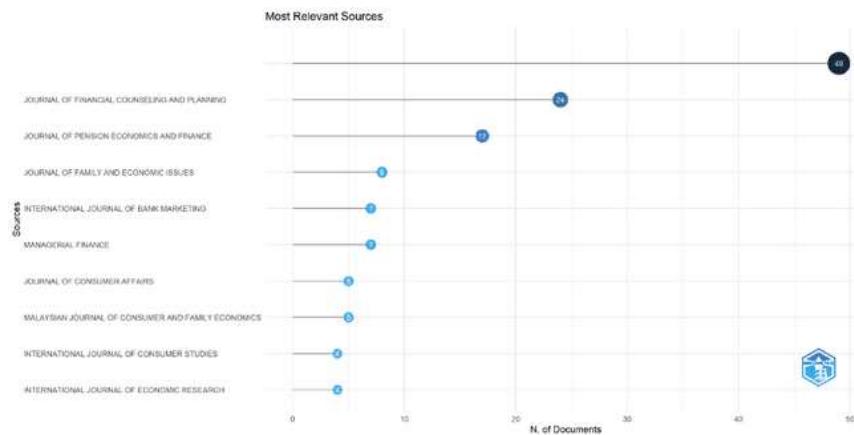
Figure 2. Most Relevant Sources
(Source: bibliometrix, 2025)

A bibliometric analysis of 452 articles revealed that these articles were published across 49 different journals. The journal publishing the most articles on this topic is the Journal of Financial Counseling and Planning with 24 articles, followed by the Journal of Pension Economics and Finance (17 articles), Journal of Family and Economic Issues (8 articles), International Journal of Bank Marketing (7 articles), Managerial Finance (7 articles). These findings indicate that these journals serve as the primary and most relevant sources in research on financial literacy and financial planning.

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**Keyword Cluster Analysis**
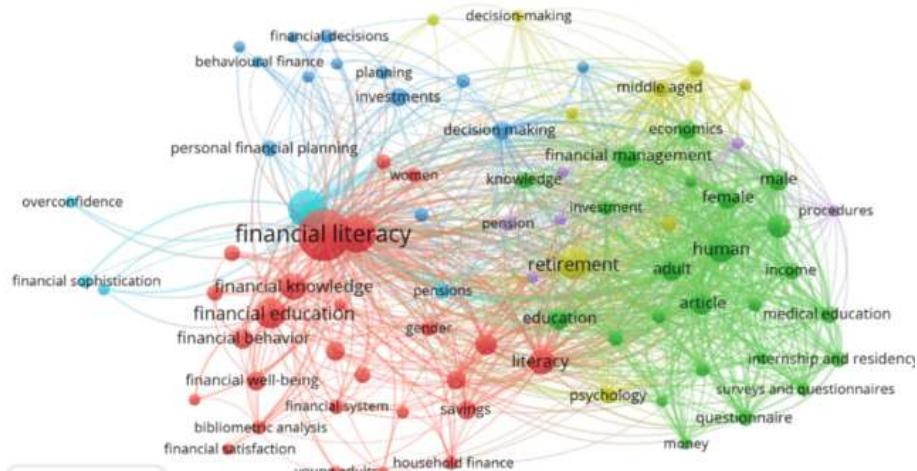
Figure 3. Co-Occurence Network Visualization
(Source: Vosviewers, 2025)

Based on the co-occurrence analysis, only keywords that appeared at least five times were included. After applying this threshold, 83 keywords were identified and grouped into six thematic clusters, each representing a distinct area of focus within the literature. The arrangement of these clusters illustrates the conceptual linkages among keywords, as visualized in Figure 3.

Table 3. Co-Occurence Analysis

No	Cluster Color	Size & Density	Top Keywords	Main Focus	Key Characteristics
1	Red	Largest and most dense cluster (largest node is financial literacy)	financial literacy, financial knowledge, financial education, financial behavior, financial planning, financial well-being, savings, women, young adults	Core research on financial literacy: knowledge, behavior, education, and financial well-being	Represents the foundational and most frequently studied themes; many empirical studies on financial behavior, gender, and age groups
2	Green	Very dense with many medium-sized nodes	humans, female, male, financial management, education, questionnaire, investment, debt, medical education	Empirical studies on populations (human, adult, male, female), surveys, and educational/professional contexts	Heavy use of survey methods; focuses on financial management and demographic factors
3	Dark Blue	Medium size with strong connectivity around decision themes	behavioral finance, financial decision-making, investments, planning, risk tolerance, students	Financial decision-making and behavioral finance	Examines psychological factors influencing investment decisions, often

4	Yellow	Small to medium, moderately dense	decision-making, middle aged, psychology, aging, retirement	among student populations Psychological aspects of financial decision-making, especially among older adults	Focuses on age-related differences, psychological processes, and retirement decisions
5	Purple	Small cluster with tightly linked themes	covid-19, insurance, pension, health insurance, spain	Impact of the pandemic and social security systems (insurance and pensions)	Includes policy-focused studies and country-specific contexts and financial changes due to COVID-19
6	Light Blue	Smallest and most specialized cluster	overconfidence, financial sophistication, pensions, retirement planning	Specific themes related to financial biases and retirement preparation	Highlights cognitive biases and the role of financial sophistication in retirement planning

Source: Data Processed, 2025

Cluster 1 (Red) - Financial Literacy and Its Influence on Individuals' Financial Behavior and Well-being

Figure 4. Cluster 1 - Network Visualization
(Source: Vosviewers, 2025)

In the VOSviewer network, node size corresponds to keyword frequency, while the connecting lines represent co-occurrence relationships, with thicker lines indicating stronger associations (Kirby, 2023) Within Cluster 1, financial literacy appears as the largest node, occurring 212 times in the dataset, according to bibliometrix analysis. This prominence is consistent with prior studies, such as (Rasool & Ullah, 2020), (Zaimovic et al., 2023) and (Kamarudin et al., 2024) which highlight the central role of financial literacy in shaping individuals' financial knowledge and behaviors. It indicates that financial literacy is the dominant

thematic focus of the cluster and serves as the conceptual foundation for related topics such as financial planning, financial education, financial capability, and financial behavior. This suggests that research in this cluster primarily examines financial literacy as a key determinant of individuals' financial outcomes.
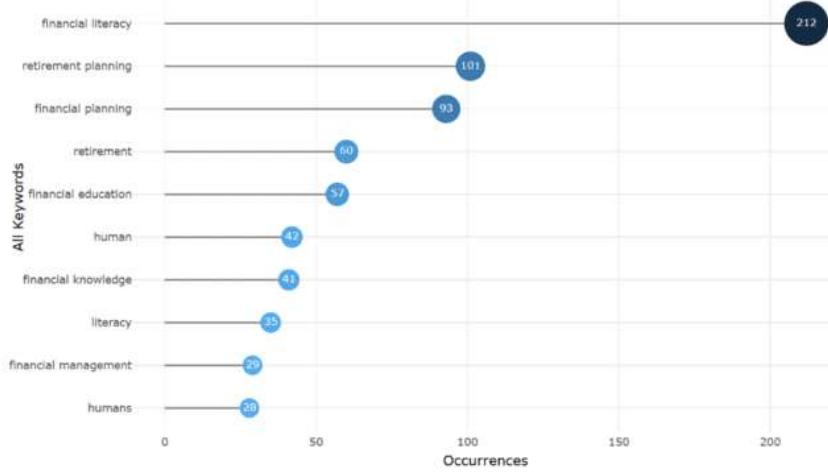

Figure 5. Most Relevant Words.
(Source: Bibliometrix, 2025)

Additionally, in the first cluster, the largest node directly connected to financial literacy is financial planning. Financial planning appears 93 times across the entire dataset, making its node larger compared to others in the network. The thick line between them indicates that these two keywords frequently appear together in the same articles, as seen in studies by (Kengatharan et al., 2020) and (Yeo et al., 2024) indicate that higher financial literacy enables individuals to have the perceived ability and intention to engage effectively in financial planning, supporting sound financial decision-making.

The node financial education is also strongly connected to financial literacy and financial planning, reflecting its central role in equipping individuals with knowledge and skills for effective financial management. This strong connection aligns with empirical findings from higher education studies, where financial education programs varying in format, duration, and voluntariness aim to bridge gaps in students' financial literacy before entering the workforce (Lotter & Okoro, 2024)

Financial literacy is strongly linked to nodes such as financial knowledge, financial education, financial behaviour, financial attitude, financial well-being and gender. According to OECD (2005) financial literacy is closely linked with three interrelated components: financial knowledge, financial attitude, and financial behaviour. Individuals with higher financial literacy are more likely to possess the appropriate knowledge, attitudes, and behaviours necessary for managing their personal finances effectively.

A thick line also connects financial literacy and financial well-being, indicating that these two concepts frequently co-occur in the literature. The literature has consistently shown that financial literacy is a key determinant of financial well-being, providing a foundation for better financial decision-making and policy design (A. Lusardi & Mitchell, 2014). According to Lone & Bhat (2024) individuals with higher

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financial literacy are capable of making well-informed financial decisions, which play a crucial role in securing their financial well-being.

This pattern is also reflected in recent studies linking financial literacy with sustainability-oriented learning. For instance, a school-based intervention integrating waste management and financial education demonstrated significant improvements in students' financial awareness and economic reasoning by teaching them to calculate the monetary value of recyclable materials through waste banks. The program effectively enhanced both financial knowledge and pro-environmental behavior, reinforcing Cluster 1's theme that financial literacy initiatives can shape practical decision-making and behavioral outcomes (Kesuma et al., 2025; Widaryo et al., 2025)

Gender also appears as a node directly connected to financial literacy, indicating that demographic factors are frequently discussed in the literature. This aligns with empirical evidence from Santini et al. (2019) which identifies as one of the key determinants of financial literacy. They found a significant negative relationship between gender and financial literacy (r = -0.280, p < 0.001), suggesting that female consumers tend to have lower financial literacy and awareness compared to males.

Smaller connections exist with retirement savings, household finance, saving, young adults, bibliometric analysis, financial satisfaction, and financial capability, while the least frequent links: financial system, financial counselling, and financial services highlight underexplored areas. This suggests opportunities for future research, particularly on integrating systemic factors and enhancing financial counseling services to support financial literacy and well-being.

Cluster 1 underscores the centrality of financial literacy as the dominant theme, with strong connections to financial planning, education, knowledge, behavior, attitude, and well-being. Empirical evidence shows that higher financial literacy enables individuals to make informed financial decisions, supporting effective planning and enhancing overall financial well-being. Gender and demographic factors also play a significant role, with women generally exhibiting lower financial literacy. Smaller or less explored nodes, such as financial counseling and systemic factors, highlight opportunities for future research to expand understanding and support interventions aimed at improving financial literacy and outcomes.

**Cluster 2 (Green) - Human Financial Behavior and Gender Differences in Financial Management**
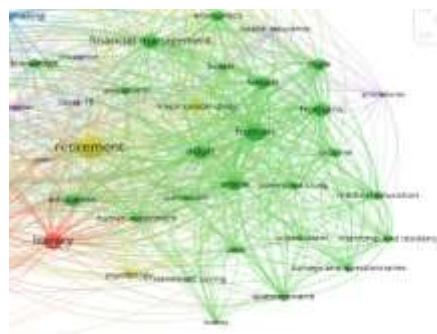
Figure 6. Cluster 2 - Network Visualization
(Source: Vosviewers, 2025)

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In Cluster 2, the largest nodes include human, humans, female, male, and financial management, indicating that this cluster primarily focuses on individual financial behaviors and the role of gender in managing finances. Empirical studies support this emphasis, showing that male and female individuals differ in their financial portfolios: women tend to hold more risk-free assets such as checking accounts, CDs, and retirement accounts (IRAs/401k), while men are more likely to hold risky assets such as stocks and real estate, often resulting in higher net worth (Lee & Kim, 2017)

Building on this general pattern, studies focusing on female millennials provide more specific insights. Jaafar et al., (2024) finds that financial literacy, saving behavior, and financial stress significantly predict retirement preparedness among women, whereas financial management practices alone are not significant. Further depth comes from research on female workers, which shows that financial literacy mediates the effects of demographic factors (age, education, income) and psychological factors (future time perspective, financial risk tolerance) on retirement planning. Income particularly influences optimism about the future, which affects pension planning intentions (Larisa et al., 2021). These findings highlight gender as a significant determinant in financial decision-making and portfolio composition

Moderately sized nodes such as adult, education, and economic provide important context for understanding Cluster 2. Studies on older adults in the Netherlands, for instance, show that financial adviser anxiety varies significantly across age, education, and income levels, affecting whether individuals seek professional financial (Van Dalen et al., 2017), Higher education and income are associated with lower anxiety and more proactive financial management, while lower-income and lower-educated individuals exhibit higher anxiety and are less likely to consult advisors. Fan & Park (2021) also show that financial socialization during childhood and adolescence significantly influences adults' financial knowledge, managerial capabilities, and behavior, underscoring the role of education and early experience. These findings illustrate how demographic and economic contexts shape financial behavior.

Smaller nodes, such as debt, retirement saving, curriculum, medical education, and surveys, represent more specific or underexplored subtopics within the cluster. These nodes highlight potential areas for further investigation, including debt management, retirement planning, financial education among medical students, and survey-based studies on financial behavior.

Overall, Cluster 2 emphasizes the interplay between individual financial behaviors, gender, and demographic and economic contexts. Women and men exhibit distinct financial preferences and portfolio compositions, while financial literacy, early socialization, and education strongly influence retirement preparedness and financial management practices. Age, income, and educational background further shape financial decision-making, including the likelihood of seeking professional advice. Smaller or underexplored nodes, such as debt, retirement saving, and financial education, suggest directions for future research, reinforcing that individual characteristics and context are key determinants of financial behavior.

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Cluster 3 (Dark Blue) - Decision-Making and Investment Behavior in Personal Financial Planning
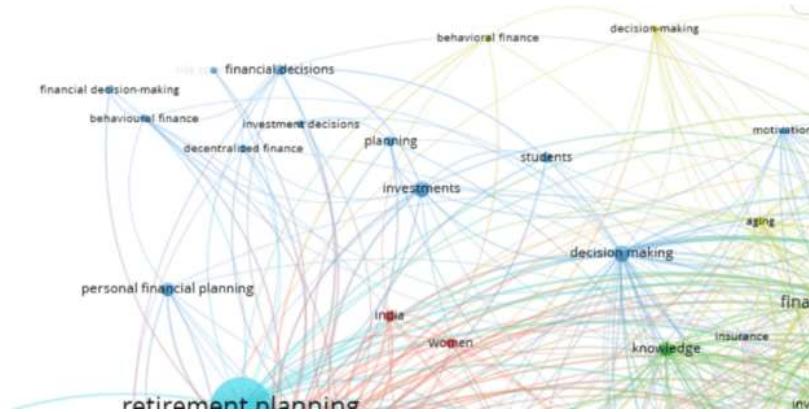
Figure 7. Cluster 3 - Network Visualization
(Source: Vosviewers, 2025)

Cluster 3 has its largest nodes in decision making, investments, and personal financial planning, highlighting the focus on how individuals manage finances for long-term goals. Financial literacy consistently emerges as a key factor: Lusardi & Mitchell (2007) show that greater financial knowledge increases the likelihood of retirement planning and sound investment decisions, while later U.S. survey data confirm that literacy predicts wealth accumulation and informed financial choices (A. . Lusardi & Mitchell, 2022). Financially sophisticated households are more likely to participate in the stock market, and understanding risk diversification enhances personal financial planning and long-term wealth management. These findings underscore the centrality of decision making, investments, and personal financial planning in this cluster

Studies on financial education (FE) in higher education and behavioral finance research provide key context for the medium-sized nodes in Cluster 3, particularly students, planning, behavioral finance, and investment decisions. FE initiatives vary in format, duration, platform, and voluntariness, highlighting the need for adaptable, audience-specific approaches to improve financial literacy and support long-term financial planning, informed investment decisions, and goal-setting (Lotter & Okoro, 2024)

Behavioural biases, such as procrastination, inertia, overconfidence, and status-quo bias, influence decision-making, while choice overload and product complexity affect execution of financial plans, with property often preferred for retirement yet frequently without concrete income-conversion strategies (Grima & Pavia, 2019). These findings underscore that enhancing financial literacy through both formal education and targeted interventions can improve strategic planning, managerial capabilities, and the adoption of complex financial technologies, including decentralized finance platforms, reinforcing the relevance of behavioral, educational, and planning considerations in personal financial decision-making

Recent evidence from SMEs in East Kalimantan further supports Cluster 3's emphasis on financial decision-making. The study shows that financial literacy significantly improves financial performance (Henrika et al., 2025), while product innovation primarily strengthens risk management but does not directly enhance financial outcomes, indicating contextual constraints in resource-dependent regions (Ariswati et al., 2025)

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Smaller nodes, such as risk tolerance, Malaysia, and motivation, represent more specific or underexplored areas within the cluster. Risk tolerance relates to individuals' perception of risk, their appetite for financial risk, and actual risk-taking behaviors. The Malaysia node points to country-specific contexts, highlighting how financial literacy, retirement planning, and financial behaviors may vary across national settings. Motivation encompasses psychological factors influencing financial decision-making, including goal-setting, prioritization, and the drive to engage in financial planning. While these nodes are less central than the larger and medium-sized nodes, they provide valuable avenues for future research to deepen understanding of nuanced, context-specific, and behavioral dimensions of personal finance

Taken together, Cluster 3 highlights that personal financial decision-making is strongly shaped by financial literacy, behavioral tendencies, and contextual factors. Individuals with greater knowledge and understanding of risk are more likely to engage in effective investment, retirement planning, and wealth management. Behavioral biases and motivational factors can either facilitate or hinder these practices, while targeted financial education tailored to specific audiences and contexts can improve planning, decision-making, and adoption of complex financial tools. Even smaller or country-specific nodes, such as risk tolerance, Malaysia, and motivation, point to areas for future exploration, emphasizing that personal financial management is both context-dependent and behaviorally nuanced.

Cluster 4 (Yellow) - Retirement Planning and Financial Behavior in Aging Populations
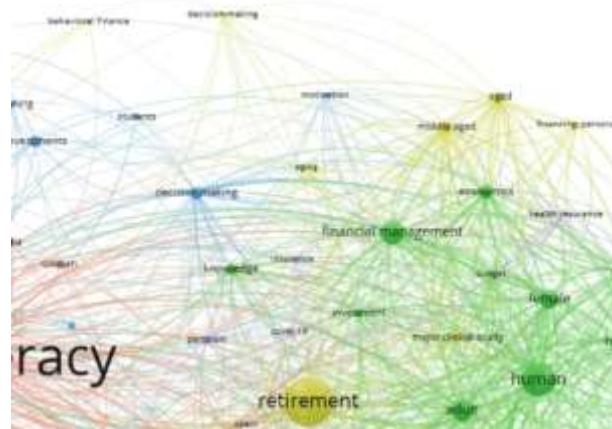
Figure 8. Cluster 4 - Network Visualization
(Source: Vosviewers, 2025)

The largest node in Cluster 4, retirement, captures the key factors influencing individuals' retirement timing and planning. Research highlights that physically demanding occupations accelerate health stock depreciation, creating a trade-off between earning while working and maintaining long-term health, which in turn informs optimal retirement timing (Ribes, 2022) Similarly, demographic and psychological factors, including age, education, income, and financial literacy, significantly shape retirement planning decisions, with income affecting optimism about future pension intentions and gender influencing financial decision-making and portfolio composition (Grima & Pavia, 2019). These findings underscore the importance of considering occupational, health, and socio-psychological contexts when studying retirement behavior and planning strategies.

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Medium-sized nodes in Cluster 4 are middle aged, aged, aging, psychology, and financing personal highlight contextual factors affecting retirement planning. Research shows that socio-environmental influences (family, social networks, recreational and learning opportunities) and financial knowledge shape adults' ability to plan for retirement. Targeting pre-middle and middle-aging populations can encourage earlier engagement, emphasizing that financial education, health awareness, and social support are key for effective retirement planning (Thakur et al., 2020).

Other study highlights that financial education is crucial for middle-aged and aging adults, particularly those without access to employer-sponsored retirement plans. Culturally and linguistically tailored programs help older individuals overcome knowledge gaps and procrastination, supporting better retirement saving and long-term financial planning. Findings suggest that targeting education for aging populations can improve participation in programs like CalSavers and reduce disparities in retirement readiness (Blanco et al., 2020)

Cluster 4 also mentions psychology. For the medium-sized nodes, incorporating psychology into retirement planning models highlights how cognitive and behavioral factors such as motivation, risk perception, and decision-making biases affect individuals' planning and saving behavior. This emphasizes that aging and retirement decisions are not purely economic but also psychologically mediated, connecting nodes like middle-aged, aging, and psychology to observed behaviors in retirement planning (Hershey et al., 2007)

Overall, Cluster 4 emphasizes that retirement planning is shaped by a combination of occupational, health, financial, and socio-psychological factors. Individuals' decisions are influenced not only by income, education, and financial literacy, but also by age, health status, social networks, and cognitive biases. Targeted interventions, such as tailored financial education and programs addressing behavioral and psychological barriers, can enhance retirement preparedness, particularly for middle-aged and aging adults. This cluster highlights the need to integrate economic, social, and psychological dimensions when promoting effective retirement planning strategies

Cluster 5 (Purple) - Health and Pension Insurance
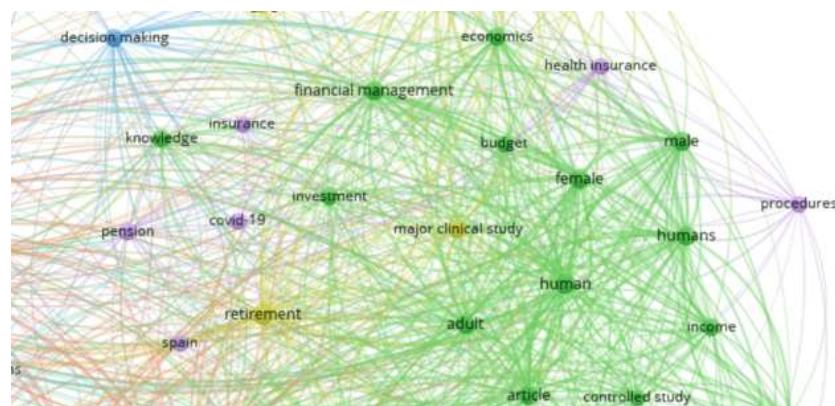
Figure 9. Cluster 5 - Network Visualization
(Source: Vosviewers, 2025)

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Cluster 5 is a small cluster with only six items: COVID-19, health insurance, insurance, pension, procedures, and Spain indicating a narrow but focused area of research. The cluster primarily addresses the intersection of health crises, insurance mechanisms, and retirement-related financial planning.

Many adults struggle to report their pension benefits or account balances, even as primary financial decision-makers. This limits effective retirement planning, often leaving decisions influenced by social norms or coworkers. The findings emphasize the need for better disclosure, education, and personalized counseling to improve financial literacy (Ekerdt & Hackney, 2002)

The COVID-19 pandemic further highlighted this link between crises and financial behavior. In Malaysia, restricted face-to-face interactions and market volatility drove a rise in financial robo-advisor adoption. Key factors included performance expectancy, social influence, trust, financial knowledge, and reliance on automated tools. Financial literacy, trust, and social norms reinforced adoption, showing how crises accelerate digital financial solutions. (Gan et al., 2021; Henrika et al., 2025)

Similarly, NYC taxi and FHV drivers face gaps in insurance coverage and understanding. Despite higher enrollment after the Affordable Care Act, many remain uninsured or lack knowledge of their benefits. Financial strain, low literacy, and cultural factors limit effective use, with mental health coverage particularly undervalued. Tailored education and advising programs are needed to improve insurance literacy and outcomes.(Gany et al., 2020). Together, these studies show that Cluster 5 centers on vulnerable populations, financial literacy, insurance, and retirement planning, especially under crises or structural disadvantages.

A similar pattern is reflected in recent research examining public responses to health insurance policies. A qualitative analysis of social media discourse on OJK's 10% co-payment regulation shows that insurance-related financial policies can trigger significant shifts in public sentiment, ranging from initial neutrality to increasing criticism and concern about financial burdens and trust in insurers (Kesuma et al., 2025) A similar crisis-oriented perspective is seen in recent analyses of financial resilience during the COVID-19 pandemic. Evidence from Indonesia's retail and tourism sectors shows that liquidity ratios had limited influence on resilience, while firm size and sub-sectoral adaptability played a more decisive role in navigating pandemic-induced shock (Irianto et al., 2025). These findings strengthen Cluster 5's emphasis on how health-related financial interventions, particularly during periods of uncertainty, shape public reactions, perceived risk, and financial decision-making, highlighting the need for more adaptive and digitally driven financial strategies.

In conclusion, Cluster 5 highlights the critical role of financial literacy and insurance knowledge in supporting retirement planning, particularly among vulnerable populations. Whether facing health crises like COVID-19 or structural disadvantages such as limited benefits access, individuals' preparedness depends on their understanding and use of financial tools. The findings underscore the need for targeted education, improved disclosure, and personalized counseling to enhance both financial and health-related decision-making, ultimately promoting resilience and retirement readiness.

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□ 3389

Cluster 6 (Light Blue) - Behavioral and Cognitive Determinants of Retirement Planning
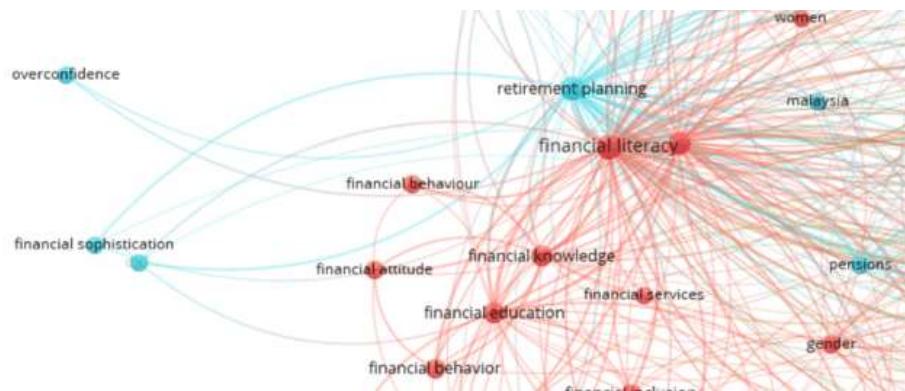

Figure 9. Cluster 6 - Network Visualization
(Source: Vosviewers, 2025)

Cluster 6 is a small cluster with five items: financial sophistication, overconfidence, pensions, and retirement planning. Although the cluster is narrow, it focuses on key aspects of retirement planning, which is the second most frequently mentioned keyword in the dataset (101 occurrences). The other nodes, while smaller, relate to behavioral and cognitive aspects affecting retirement decisions. This cluster highlights how individual traits, such as financial sophistication and overconfidence, influence planning for retirement. Pensions also appear as a node, showing that understanding of retirement income sources interacts with personal financial behaviors.

Research in urban China shows that many adults possess only basic financial literacy, with a much smaller proportion able to grasp sophisticated financial concepts like stock market functions. Vulnerable groups include women, the less-educated, and older individuals, who are at risk of being unprepared for retirement. Studies using instrumental variable analysis confirm that financial sophistication causally improves retirement and financial planning, as well as participation in private pension schemes. Older respondents and the self-employed tend to plan more, likely due to proximity to retirement or lack of employer-provided benefits. These findings mirror results from developed countries, emphasizing that sophisticated financial knowledge is crucial for retirement readiness, especially in contexts with weak social safety nets. (Niu et al., 2020)

Cluster 6 also highlights the role of overconfidence, alongside financial sophistication and literacy, in shaping retirement planning behaviors. One study found that self-employed individuals, despite having financial knowledge and awareness of their retirement needs, often exhibit overconfidence and optimism. This leads them to overestimate their preparedness and reduces the likelihood of taking concrete steps, such as saving or investing, for retirement. Consequently, overconfidence can hinder effective retirement planning and increase barriers to retirement readiness compared to employed individuals, emphasizing the need for targeted education and support programs (Rostamkalaei et al., 2022)

In conclusion, Cluster 6 demonstrates that retirement planning is shaped by both financial sophistication and behavioral factors such as overconfidence. While higher financial literacy and understanding of pensions enhance readiness, overconfidence particularly among self-employed individuals can lead to overestimation of preparedness and insufficient action. These findings highlight the

need for targeted educational and support programs that improve financial knowledge, address cognitive biases, and ultimately strengthen retirement preparedness across different populations.

CONCLUSION

This study provides a comprehensive bibliometric analysis of research on financial literacy and financial planning published between 2000 and 2024. Using 452 Scopus-indexed documents, the analysis reveals a clear and accelerating growth trajectory in this field, particularly after 2017, reflecting increasing scholarly attention to financial capability, financial behavior, and long-term financial well-being. The journal distribution further indicates that publications are concentrated in specialized outlets such as the Journal of Financial Counseling and Planning and the Journal of Pension Economics and Finance, highlighting the multidisciplinary yet focused nature of the field.

The keyword co-occurrence analysis generated six thematic clusters that map the conceptual landscape of financial literacy and financial planning research. Cluster 1 represents the core scholarship focused on financial literacy, financial knowledge, financial education, and financial behavior, emphasizing their influence on financial well-being. Cluster 2 centers on demographic and behavioral perspectives, particularly gender differences and financial management practices. Cluster 3 highlights decision-making and investment behavior in personal financial planning, while Cluster 4 addresses retirement planning among aging populations. Cluster 5 captures the intersection between financial behavior and health or insurance-related issues, especially in the context of COVID-19. Lastly, Cluster 6 highlights cognitive and behavioral determinants such as financial sophistication and overconfidence in shaping retirement planning outcomes.

Overall, the findings show that financial literacy and financial planning research has evolved into a dynamic and interdisciplinary field, expanding from foundational behavioral concepts toward more complex themes involving psychological, demographic, and socio-economic factors. The results offer valuable insights for researchers, policymakers, and educators, particularly in developing countries such as Indonesia, where financial literacy levels remain uneven. Future research can build on this study by exploring underrepresented themes such as financial counseling, financial services, and systemic influences that are less prominent in current literature. Strengthening these areas may contribute to more holistic financial education frameworks and more inclusive financial policy design.

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