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Trends and Patterns in Financial and Retirement Planning Research: A Scientometric Perspective

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ABSTRACT

Financial planning has emerged as a global concern encompassing not only the management of funds but also encompassing the projection of future income, asset values, and expenditure schedules. This study utilized bibliometric analysis to uncover underlying publication patterns related to financial and retirement plans. It aimed to provide a foundation for a deeper understanding of historical, current, and future trends in these fields. Research articles spanning from 1954 to 2023 and 1976 to 2023 were sourced from the Scopus and Web of Sciences (WOS) databases respectively, totaling 1985 and 1333 articles. The analysis revealed the United States as a leading contributor in publishing research articles on financial and retirement plan, along with the most productive institutions and authors. The USA also emerged as the most active collaborator internationally, engaging with 74 countries. Research hotspots were identified via keyword co-occurrence analysis, highlighting "retirement planning" and "retirement" as prominent areas. This analysis emphasized the critical role of financial and retirement plans and identified several research gaps in their practical application, suggesting potential areas for future research. It also underscores the active involvement of Malaysian universities in the development of this field and reveals critical research gap in its practical application. Future research endeavors should prioritize promoting the utilization of financial and retirement plans. Nonetheless, this bibliometric study holds the potential to serve as a foundational step in supporting future meta-analyses and structured literature reviews.

Keywords: financial planning and retirement, bibliometric analysis, VOSViewer, PoP

1   INTRODUCTION

Financial decisions concerning investing and saving for retirement are becoming complex, requiring financial expertise and confidence in that understanding. Few studies have examined whether direct assessments of individuals' confidence are related to the outcomes of their financial decisions [1]. As retirement becomes a prolonged component of the normal life cycle, understanding the factors influencing retirement planning activities of midlife person is critical [2, 3]. Retirement is a phase of life

that has grown ever longer in the developed nations and the number of pensioners has extended proportionately, calling into question the strength of pension systems and the social safety net in general [4, 5]. Faced with a rapidly ageing global population, financial planning for retirement has arisen as a significant area of study, comprising critical measures to assure financial stability and quality of life in the post-retirement period. Although saving and investing have long been the main goals of traditional financial planning, recent changes in the economy, longer life expectancies and changing retirement requirements emphasis the significance of more complex flexible strategy [6, 7]. As governments policymaker and financial institutions work to address the issues brought to their effects on by population ageing, effect on national economies and social welfare systems. Retirement financial planning is becoming more and increasingly essential on a societal level.

Governments in many countries are facing the challenge of providing sufficient retirement incomes for an ageing population [8, 9]. Through bibliometric analysis, this paper disentangles the intellectual and conceptual structure of the research on financial literacy in the various phases of retirement financial planning, identifying the most recent trends. The results are especially relevant for the financial community, considering the increasing emphasis of institutions and society in the use of financial literacy as a way of increasing the responsibility between individual citizens in the design of their own retirement strategies [8].

Due to the significant implications of financial planning and retirement plans [10, 11], this study undertakes a meticulous bibliometric analysis of published documents centered around the subject matter. The primary objective of this paper is to address three key research questions that delve into various aspects of financial planning and retirement plans:

i)   "How has the research on financial planning and retirement plan evolved?"
ii)   "What are the key areas in financial planning and retirement plan?",
iii)   "Who are the major players in financial planning and retirement plan?" and
iv)   "How will financial planning and retirement research evolve over time?".

To address the research questions, this study incorporates a comprehensive bibliometric analysis that encompasses several key aspects. Firstly, with regards to the evolution and distribution of financial planning research, the analysis includes an investigation of sources and document types, as well as an examination of the number of published studies per year and the languages in which these documents are published. Secondly, to gain insights into the primary areas focus within financial planning research, the study conducts an examination of subject areas, title analysis, and an assessment of keyword frequency. Lastly, to shed light on the contributions made by different countries, citation analysis and authorship analysis are employed to answer the third research question.

A systematic literature review, also known as SLR, is a method that is conducted in a methodical and rigorous manner to synthesize research on a particular issue. This method adheres to set requirements for transparency and repeatability. A versatile, descriptive technique that offers a narrative summary of the body of existing literature without rigid guidelines, the general review approach is frequently used to investigate themes or point out gaps. In contrast, bibliometric analysis is also a review approach but focuses on quantitatively assessing research patterns including publication trends, citation patterns, authorship, keywords and collaborations to thoroughly assess the development and influence of research topics [12, 13]. To find trends, connections and gaps in the corpus of current literature, this

method entails gathering and examining bibliographic data [14, 15, 16]. Though bibliometric analyses are less widespread, they are useful for mapping quantitative trends and patterns in research.

The following section of this paper outlines the research methods utilized, while subsequent sections present the findings obtained from bibliometric analysis along with their interpretations and discussions. Finally, the concluding section summarizes the main findings, acknowledges any limitations of the study, and suggests avenues for future research in the field of financial planning and retirement plans.

2   DATA AND METHODS

This study used a bibliometric analysis approach to find topics in the "financial and retirement plan" that received limited scholar attention. The data for the analysis was collected from the Scopus scientific and Web of Science, WOS databases, which was chosen due to its extensive coverage and recognition as the largest searchable databases [17] . Publish or Perish software created by [18] also used as a valuable tool to conduct statistical studies of bibliographic data specifically from well-known academic databases (Scopus and Web of Science). Nevertheless, this software restricted to 1,000 limitation documents per query session. In contrast, Scopus and WOS databases provide large amount of data retrieval capacity that goes above these limitations.

The method of this study adds a step to enhance the analysis while also building upon and modifying method from earlier studies [14], [19], [20]. This extra step specifically involves comparing citation metrics across the WOS and Scopus databases, following the refinement of research results for retirement financial planning using Publish or Perish (POP) software [21] . More comprehensive and reliable evaluation of the impact of the research can be obtained encompassing a greater variety of publications and citation trends through comparing two sources instead of just one. This improvement provides a more grasp of the impact of the filtered papers, enabling a comprehensive understanding of research influence and citation trends in this field.

This study conducted the following query: (TITLE-ABS-KEY ("financ* plan*" AND "retire* Plan*"). 1642 and 2984 documents were retrieved from the WOS and Scopus databases respectively. This data was extracted on 14th September 2024 with setting limit to time frame from article, journal for source type, only English language will consider as suggested by [20]. There are no identical documents detected after the data cleaning process, thus, a total of 1333 and 1985 documents from WOS and Scopus were included for the Bibliometric Analysis.

The data obtained from WOS and Scopus as show in Figure 1 was utilized to create a graph illustrating the growth in publications and the total number of citations for scientific articles related to financial planning and retirement plans from initial research until 2023. The WOS and Scopus website's analyzing search results' function was employed to directly retrieve various analyses for the study. VOSviewer software will be used to identify a keyword co-occurrence analysis and create a network visualization that shows the relationship between each document, authors, and keyword in the dataset. The evolution of research themes over design chronological phases combination of Scopus and WOS databases was investigated to identify research gaps using bibliometric analysis (Initial Phase: 1976-1993, Formative Phase: 1994-2003, Expansion Phase: 2004-2013 and Exploration Phase: 2014-2023).

Figure 1 depicts the overall research flowchart. Full counting and fractional counting are the two counting techniques mentioned by [22]. The full counting technique assigns a full weight of one to each of the three co-authors of a publication. On the other hand, each researcher receives a proportionate weight of 1/3 for the publication according to the fractional counting approach. Full counting is used in this research since it gives the connection strength between node which is determined by the quantity of co-authored document [23]. This approach offers a simple and unambiguous depiction of the network's capacity for collaboration.

3   RESULT AND DISCUSSION

This section is organized into four sections detailing in the progression of citation research dynamic and impact analysis scholarly trends, the chronological evolution of keyword occurrences and gaps and emerging focus.

3.1   Citation Research Dynamic and Impact Analysis

The citation dynamics and impact analysis of financial planning for retirement research will be examined in the context of scholarly patterns.

3.1.1   *Scholarly pattern*

This part shows the main results of the Publish or Perish software-based citation metrics analysis that compared articles in Scopus and WOS. The analysis provides information about the output of research and the scholarly influence on "financial planning for retirement". Important trends in citation and publishing patterns across both databases are shown in Table 1.
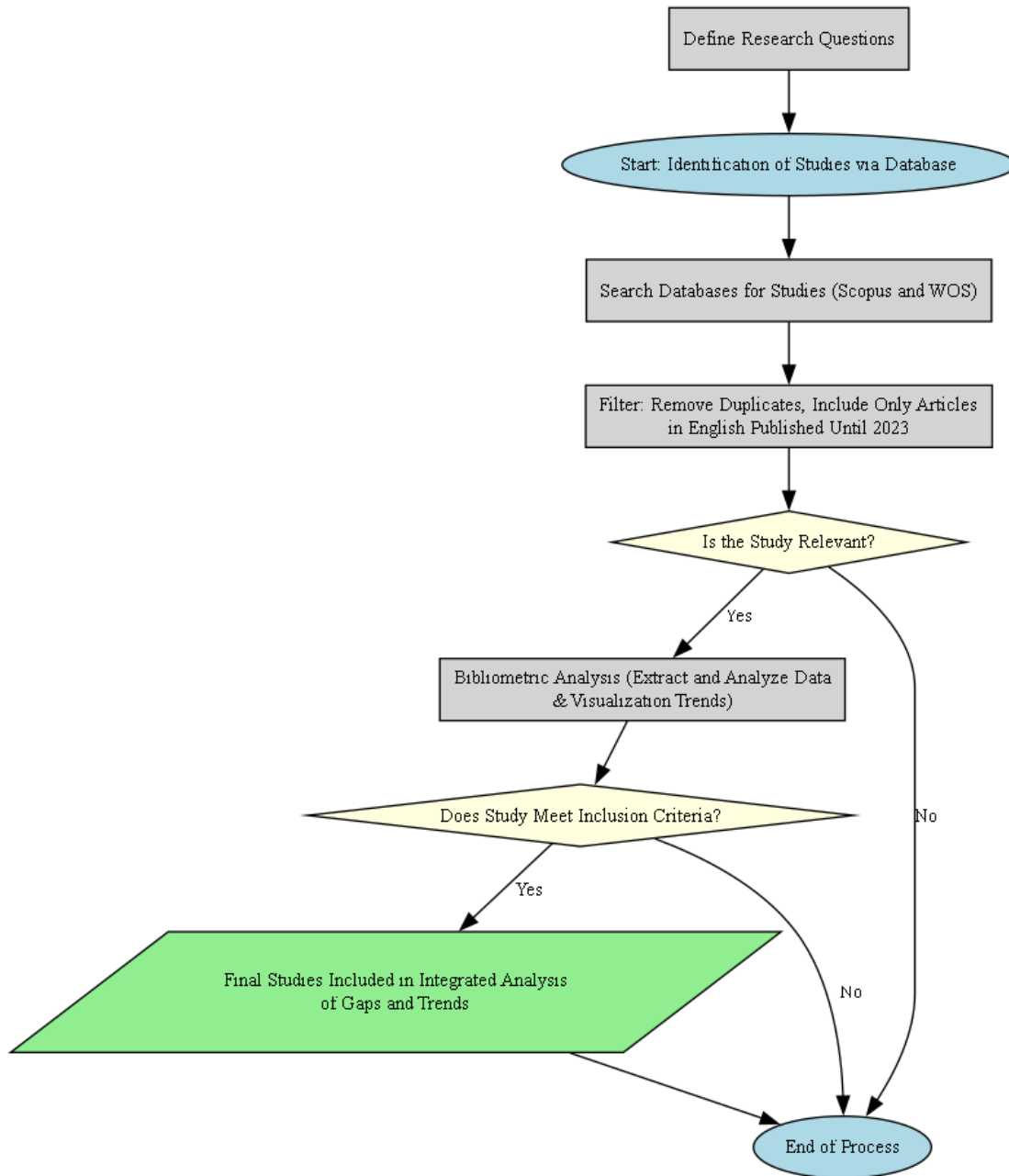
Figure 1: Flowchart for data collection and processing

Table 1: Main statistics about bibliographic collection.

Description	Results	
	WOS	Scopus
Period	1976-2023	1954-2023
No. of documents	1333	1985
No. of Sources	499	156
Average citation per year	519.46	447.76
No. of authors per document	2.72	2.43
Total citation	24934	3133
h-index[a]	69	76
g-index[b]	117	130
hI-norm	46	50
hI,annual	0.96	0.71
hA-index	17	17

[a] the highest of publications of a scientist (Meštrović, 2023)
[b] the highest rank such that the cumulative sum of the number of citations receive [24]

The analysis in Table 1 covers paper from various time periods that are indexed in both Web of Sciences and Scopus with WOS covering 1976-2023 and Scopus extending back to 1954. Compared to WOS (1333), Scopus has more documents (1985) but less sources (156 and 499 respectively). Both databases have an extensive academic influence, as evidenced by their average annual citation counts with 519.46 for WOS and 447.76 for Scopus. In contrast with Scopus (2.43), WOS (2.72) has a little higher number of authors per document. There is an enormous gap in the total number of citations WOS has 24,934 citations while Scopus has 3,133. Interestingly Scopus has higher h-index and g-index values (76 and 130 respectively) than WOS (69 and 117) indicating more recent notable articles. Nonetheless, both databases hi-norm and hA-index are closed, suggesting similar levels of overall influence and output per author.

Table 2: Number of publications based on chronological groups

Duration	No of Publications		Cumulative Publications		Percentage %	
	Scopus	WOS	Scopus	WOS	Scopus (N=1985)	WOS (N=1333)
Initial Phase	229	18	229	18	11.54	1.35
Formative Phase	353	87	582	105	17.78	6.53
Expansion Phase	519	358	1101	463	26.15	26.86
Exploration Phase	937	870	2038	1333	47.20	65.27

There are significant differences in the bibliometric indices of Scopus and WOS but examination of the research trajectory throughout four different phase which is Initial Phase, Formative Phase, Expansion Phase, Exploration Phase shows a predictable evolution in scholarly production in Table 2. At the early Initial Phase only contributed minor to the field, making up 11.54% of all Scopus publications and only 1.35% of all WOS publications. The Formative Phase saw a further increase in research intensity, accounting for 17.78% and 6.53% of all articles in Scopus and WOS, respectively.

High academic productivity was demonstrated during Expansion Phase for databases displaying roughly 26% of their contribution. The Exploration Phase, which accounted for 47.20% of Scopus and 65.27% of WOS articles, was the most prevalent phase of the research trajectory. This significant discrepancy in the Exploration Phase, which is especially noticeable in WOS coverage, points to an unparallel increase in academic activity and research complexity over this time frame.

3.2   Scholarly Trends

Research on retirement financial planning has spread throughout the world, which demonstrates both the wide interest in this area and the cooperative efforts advancing it. The contributions from various nations are analyzed in this subsection, with an emphasis on those that produce the most publications according to the Scopus and WOS databases.

3.2.1   *Trends in Scholarly Output and Influence*

Publication counts will be displayed using Microsoft Excel to visually highlight the top-contributing nations as shown in Figure 2 and Figure 3. The patterns of publications on retirement financial planning from 1954 to 2023 and from 1976 to 2023 in Scopus and WOS publication respectively. As reported by WOS and Scopus, it shows a distinct and steady rise in research effort over the years. There were very few yearly publications initially and before the 1990s, contributions were only sometimes. Research production started to increase gradually in the late 1990s, but it accelerated more noticeably in the 2000s and saw a significant uptick from 2015 to 2023.

The United States continuously dominates in both WOS databases and Scopus databases, contributing 1,562 articles across both databases between 1954 and 2023, out 75 countries in Scopus and 73 countries in WOS. Retirement planning publications in the Unites States started in 1971 and peaked in 2022 with 50 papers, approximately 45.34% of the overall research output in this field. In overall for both databases, Australia comes in second with 261 articles, followed by the UK with 212 and Canada with 99. Additionally, Canada which came in at number four, started contributing later in 1984 but has consistently produced two to three article a year for the last ten years. Malaysia which came into the sector relatively and published its first article in 2009 [25], is placed sixth in Scopus and eighth in WOS.

This study explores the degree of international cooperation in financial planning for retirement research outputs in this sector are further enhanced by the numerous studies that are the result of international cooperation and are funded by international organizations. The steady upward trend in both datasets highlights how important retirement financial planning has grown and how widely acknowledged it is a crucial field of study. Effective financial measures for ageing populations are common problems as evidence by the range of contributing nations.
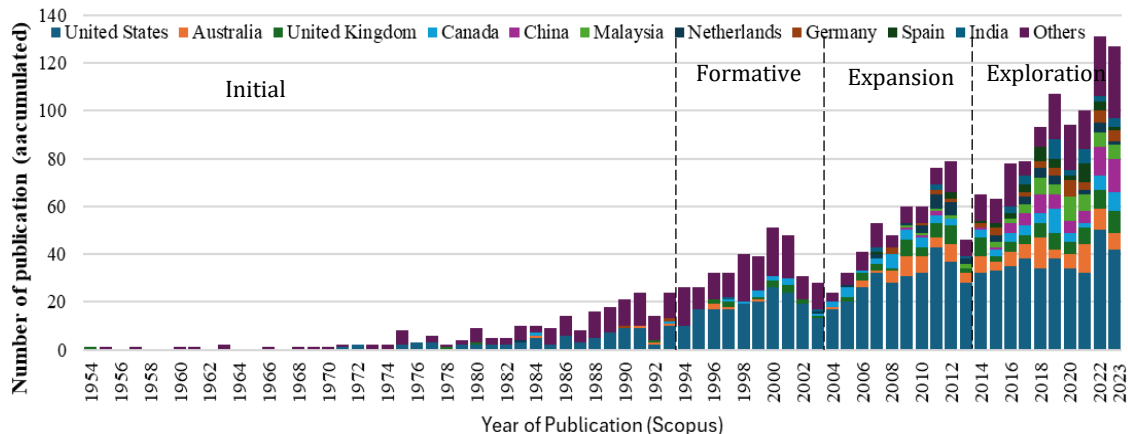
Figure 2: Financial planning for retirement publications trends among the leading countries from 1954-2023 (Source: Scopus)
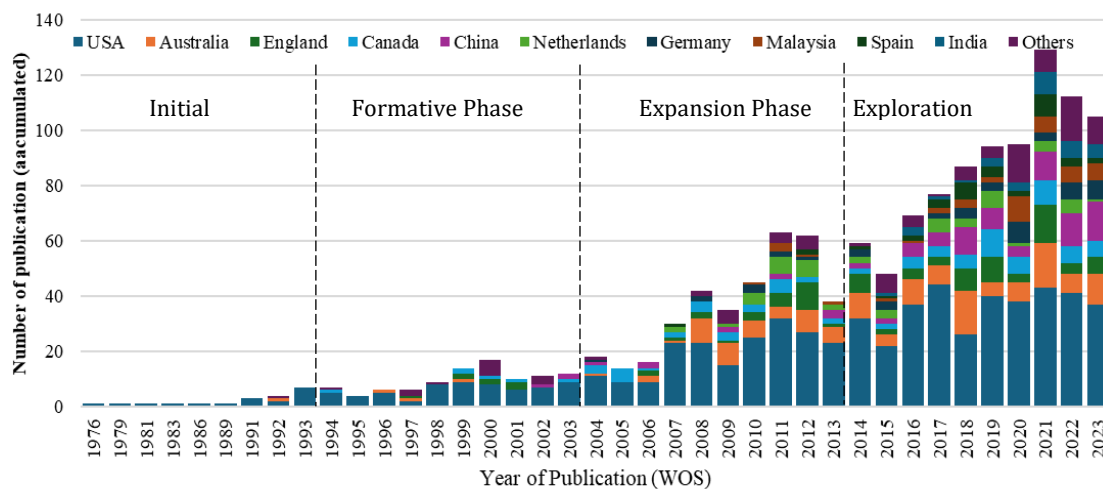

Figure 3: Financial planning for retirement publications trends among the leading countries from 1976-2023 (Source: Web of Sciences)

3.2.2 Leading Journals in the Field

This section identifies the most influential journals, and papers contributing to financial planning for retirement research within Scopus and WOS. Tables 3 highlight most impactful paper in Scopus and WOS, while Tables 4 and 5 list the most impactful paper in Malaysia from each database. Additionally, Tables 6 and 7 focus on the most relevant sources. Together, these insights reveal the leading contributions shaping advancements and guiding future studies in this field.

Scopus and WOS indexes of the most influential works on retirement financial planning are analyses in Table 3 to give a useful assessment of the academic influence in the topic. Both datasets highlight the importance of retirement planning research and financial literacy, with overlapping influential works making a substantial contribution to scholarly and policy discourse. Research on financial literacy and retirement readiness is crucial, as seen by the comparison of influential publications on

financial planning for retirement from Scopus and WOS with Lusardi and Mitchell's innovative research predominant in both databases. Their research on the relationship between financial literacy and retirement security published in 2007 and 2011 has received the most citations indicating their substantial impact on scholarly discourse. While Scopus records a wider range, including studies on societal costs and health related economic implications, WOS data shows a larger concentration of citation among top ranked papers suggesting a more focused impact in economic and policy research. This demonstrates the transdisciplinary scope of the topic and emphasizes how crucial financial literacy research is to international academic and policy frameworks. These comparisons show that planning although retirement planning and financial literacy are still important components of both platforms, WOS focuses more on highly cited economic and policy-oriented research, while Scopus has a more interdisciplinary focus. This illustrates how these two top bibliometric databases differ in their citation styles and patterns of scholarly influence.

Table 3: The most impactful paper in Scopus and WOS

No.	Title of article	Year	Journal		Total Citations		Contribution (%)	
					WOS	Scopus	WOS	Scopus
1.	Baby Boomer retirement security: The roles of planning, financial literacy, and housing wealth [26]	2007	Journal of Monetary Economics		899	1037	67.44	52.24
2.	Financial literacy around the world: An overview [27]	2011	Journal of Pension Economics & Finance		758	865	56.86	43.58
3.	Financial literacy and retirement preparedness: Evidence and implications for financial education [28]	2007	Business Economics		x	774	x	38.99
4.	Financial literacy, retirement planning and household wealth [29]	2012	Economic Journal		453	504	33.98	25.39
5.	Do peer firms affect corporate financial policy? [30]	2014	Journal of Finance		476	x	35.71	x

Table 4: The most impactful paper in Malaysia in WOS

No.	Title of article	Year	Total Citations	Publisher	Current Affiliation
1.	Using the theory of planned behavior to explore predictors of financial behavior among working adults [31]	2024	128	FIIB Business Review	Sunway University
2.	Financial planning for retirement: The moderating role of government policy [32]	2023	110	Sage Open	Universiti Malaya
3.	Financial planning for retirement: The mediating role of culture [33]	2022	93	Risks	Universiti Malaya
4.	An exploratory model on retirement savings behavior: A Malaysian study [34]	2018	88	International Journal of Business and Society	Sunway University
5.	Leading generation Z's financial literacy through financial education: Contemporary bibliometric and content analysis in China [35]	2023	84	Sage open	Universiti Malaya
6.	Transnational behavioral among Malaysia my second home (MM2H) participants in Malaysia: An exploratory [36]	2020	76	Kajian Malaysia	Monash University
7.	Influential behavioral factors on retirement planning behavior: The case of Malaysia [37]	2019	74	Journal of Financial Counseling and Planning	SEGi University
8.	The effect of financial attitudes, financial literacy and health literacy on sustainable financial retirement planning: The moderating role of the financial advisor [38]	2023	72	Sustainability	Universiti Malaysia Perlis
9.	The dynamic of financial retirement planning: financial attitude, health literacy, and the role of financial advisor with financial literacy as moderator [39]	2025	70	Journal of Financial Services Marketing	Universiti Malaysia Perlis
10.	Determinants of improving the financial security of retired women in Malaysia [40]	2022	70	Journal of Asian Finance Economics and Business	Universiti Malaysia Pahang Al Sultan Abdullah (UMPSA)

Table 5: The most impactful paper in Malaysia in Scopus

No.	Title of article	Year	Total Citations	Publisher	Current Affiliation
1.	The influence of personality trait and demographic on financial decision making among generation Y [41]	2013	62	Young Consumers	Sunway University
2.	The influence of money attitude, financial practices, self-efficacy and emotion coping on employees' financial well-being [42]	2020	50	Management Science Letters	Universiti Putra Malaysia
3.	A study of financial awareness among youths [43]	2010	41	Young Consumers	Sunway University
4.	Influential behavioral factors on retirement planning behavior: The case of Malaysia [37]	2019	31	Journal of Financial Counseling and Planning	SEGi University
5.	Framing the retirement planning behavior model towards sustainable wellbeing among youth: The moderating effect of public profiles [44]	2020	27	Sustainability	Universiti Sultan Zainal Abidin
6.	Demographic factors associated with retirement planning: A study employee in Malaysian health sectors [45]	2015	26	Asian Social Science	Universiti Malaysia Perlis
7.	Financial literacy and retirement planning among government officers in Malaysia [46]	2020	23	International Journal of Public Administration	Universiti Malaya
8.	The influence of financial literacy, risk aversion and expectations on retirement planning and portfolio allocation in Malaysia [47]	2017	20	Gadjah Mada International Journal of Business	Universiti Malaya
9.	Financial literacy education and retirement planning in Malaysia [48]	2018	19	Malaysian Online Journal of Educational Management	Universiti Malaya
10.	Parents' influence on retirement planning in Malaysia [49]	2017	18	Family and Consumer Sciences Research Journal	SEGi University

The most frequently cited papers in Malaysia (WOS and Scopus) as illustrated in Table 4 and 5 are concerned with financial literacy, retirement behavior and financial planning which are critical in the current economic environment. In this field, Universiti Malaya, Sunway University and SEGi

University are among the most prominent contributors to high-impact research. Malaysian authors primarily publish in reputable journals including Journal of Financial Counselling and Planning, and Young Consumers as the analysis demonstrates. The complementary nature of Scopus and WOS in evaluating scholarly impact is further demonstrated by the presence of multiple papers from Universiti Malaya across both databases, which underscores its prominent role in financial planning research. The demand for research that offers actionable insight is fueled by the changing financial habits of younger generations and the financial insecurity that ageing populations experience. These studies are essential reference for academics and policymakers due to their robust theoretical frameworks, including planned behavior theory and financial decision-making models. Practical implementations in policy formulation, investment strategies, and financial education programs are guaranteed by empirical data, statistical analysis and predictive modelling. The likelihood of citations in a variety of research areas is increased by the integration of finance, psychology, economics and social sciences, which broadens the impact across multiple disciplines. The continued relevance and influence of academic and professional discussions are guaranteed by timely insight that are in alignment with the global demand for sustainable economic policies and improved financial planning strategies.

The academic influence and coverage of the most relevant publication sources in Scopus and WOS for financial planning for retirement research are revealed through a comparison shown in Table 6 and Table 7. The Journal of Pension Economics and Finance is a prominent source in both databases, which indicate its critical function in distributing influential research, including the frequently referenced work on retirement security and financial literacy by Lusardi and Mitchell. The Journal of Financial Counselling and Planning which focusses on useful research on financial well-being has the most publications and significant citations in Scopus. On the other hand, WOS emphasizes theoretical and policy-driven research by highlighting Insurance Mathematics. The academic landscape of retirement financial planning is large yet diverse, with WOS emphasizing economic theory and sustainability while Scopus highlights more counselling-focused research. This analysis highlights the critical role of specialized journals in advancing knowledge about retirement financial planning, underscoring the field's complexity and significance in understanding economic preparedness and well-being in retirement.

3.2.3 Top Contributors and High-Impact Studies

Researchers who have made important contributions to the area of financial planning for retirement are highlighted in this section. The five most productive authors from Scopus and WOS are listed in Tables 8 and 9, highlighting the people whose contributions have had the biggest impact on the development and course of this field of study.

Table 6: Five most relevant sources (Scopus)

No.	Source Title	No of documents	Total Publications (%)	Total Citations	Cite Score 2023	Highly Cited Article (Title)	Times Cited	Publisher
1.	Journal of Financial Counseling and Planning	92	4.63%	1514	3.6	Incharge financial distress/financial well-being scale: Development, administration, and score interpretation [50]	186	Springer Publishing Company
2.	Benefits Quarterly	43	2.17%	36	0.1	Adopting hybrid pension plans: Financial and communication issues [51]	9	International Society of Certified Employee Benefit Specialists, Inc.
3.	Journal of Pension Economics and Finance	44	2.22%	2892	4.2	Financial literacy around the world: An overview [27]	865	Cambridge University Press
4.	EBRI Issue Brief Employee Benefit Research Institute	42	2.11%	191	0.7	The 2010 retirement confidence survey: confidence stabilizing, but preparations continue to erode [52]	21	Employee Benefit Research Institute
5.	Insurance Mathematics and Economics	21	1.06%	615	3.4	Optimal asset allocation for DC pension plans under inflation [53]	101	Elsevier

Table 7: Five most relevant sources (WOS)

No.	Source Title	No of documents	Total Publications (%)	Total Citations	Cite Score 2023	Highly Cited Article (Title)	Times Cited	Publisher
1.	Journal of Pension Economics Finance	51	3.83%	2420	173.43	Baby Boomer retirement security: The roles of planning, financial literacy, and housing wealth [26]	232	Cambridge Univ Press
2.	Insurance Mathematics Economics	22	1.65%	264	37.12	Optimal asset allocation for DC pension plans under inflation [53]	22	Elsevier Science
3.	Journal of Financial Counselling and Planning	20	1.50%	515	22.5	Portfolio choice and health status [54]	11	Springer Publishing Co
4.	Educational Gerontology	19	1.43%	269	9.61	Planning and expectations of the retirement experience [55]	58	Hemisphere Publ Corp
5.	Journal of Family and Economic Issues	18	1.35%	216	12.7	The value of seeking financial advice [56]	46	Springer International Publishing Ag

Table 8: Ten productive authors (Scopus)

No	Author Name	H-index	Total Publication	Total Citation	Contribution Rate (%)	Current Affiliation
1	Lusardi, Annamaria	44	21	5120	1.06%	Stanford Graduate School of Business, United States
2	VanDerhei, Jack L.	10	19	133	0.96%	Morningstar Investment Management LLC, United States
3	Mitchell, Olivia S.	39	25	4096	1.26%	University of Pennsylvania, United States
4	Hershey, Douglas A.	23	18	974	0.91%	Oklahoma State University, United States
5	Copeland, Craig	10	16	96	0.81%	Employee Benefit Research Institute, United States
6	Topa, Gabriela	25	12	184	0.60%	Universidad Nacional de Educacion a Distancia, Spain
7	Clark, Robert L.	19	13	278	0.65%	Poole College of Management, United States
8	Clark, Gordon L.	35	9	152	0.45%	University of Oxford, United Kingdom
9	Hanna, Sherman D.	22	2	54	0.10%	The Ohio State University, United States
10	Helman, Ruth	9	5	65	0.25%	Mathew Greenwald & Associates, United States

Table 9: Ten productive authors (WOS)

No	Author Name	H-index	Total Publication	Total Citation	Contribution Rate (%)	Current Affiliation
1	Mitchell, Olivia S.	38	21	2484	0.016	University of Pennsylvania, United States
2	Hershey, Douglas A.	21	19	758	0.014	Oklahoma State University, United States
3	Lusardi, Annamaria	2	18	3725	0.014	Stanford Graduate School of Business, United States
4	Clark, Robert L.	13	12	141	0.009	Poole College of Management. United States
5	Topa, Gabriela	23	11	149	0.008	Universidad Nacional de Educacion a Distancia, Spain
6	Thorp S	18	10	105	0.008	University of Sydney, Australia
7	Bateman H	15	8	54	0.006	University of New South Wales Sydney, Australia
8	Clark GL	27	8	170	0.006	University of Oxford, ENGLAND
9	Gerrans P	18	8	120	0.006	University of Western Australia, Australia
10	Kendig H	32	8	235	0.006	Australian National University, Australia

Table 8 and Table 9 shows the comparisons of the most productive authors in the field of retirement financial planning as listed in the WOS and Scopus highlights important contributors and differences in the important contributors and differences in the impact of the research. Mitchell, Olivia S.

distinguishes out in both databases, highlighting her crucial contribution to the area from the University of Pennsylvania with 25 articles and 4096 citations in Scopus and 21 publications and 2484 citations in WOS. Despite having a comparatively low H-index and fewer publications in WOS, Lusardi, Annamaria also makes a notable appearance with a larger citation impact in Scopus (5120 citations). Another notable individual is Douglas A. Hersley who routinely ranks highly in both categories due to his substantial citation count and strong publication history. Notably, Australian researchers like Thorp S., Bateman H., and Gerrans P. receive recognition in WOS, reflecting regional research efforts, whereas authors like Carig Copeland and Jack L. VanDerhei are more productive in Scopus. This comparison highlights international contributions, especially from Australia in the larger academic debate while also stressing the importance of U.S based scholars in forming the discipline.

3.3   Chronology Evolution of Keyword Occurrences

The evolution of key phrases in financial planning for retirement research is monitored in Scopus and WOS. A thorough summary of keyword co-occurrence is shown in Figure 4, which includes data from the beginning of study development until 2023. On the other hand, Figure 5 shows keyword frequency in four different phases, showing how the study focus changed over time and highlighting new trends at each point.

The network visualization approach where maps colors according to user-defined qualities or scores is used to identify the clusters represented by the color themes in the co-occurrence network visualization [23]. In this case, the green cluster draw attention to the key themes like "retirement" and "pension" which are visually noticeable and probably given higher relevance scores due to their fundamental significance in financial planning. Purple cluster reflect with moderate scores represent the key themes on "financial literacy" and "financial well-being", which is consistent with the continued significance of raising public financial policy. Lower scores are shown in the blue cluster which is link to "sustainability" and "long term care" but it covers new issues that is important to life expectancy and future resource allocation. The network visualization color bar displays these scores with blue denoting low, red denoting moderate, and green or yellow denoting high.
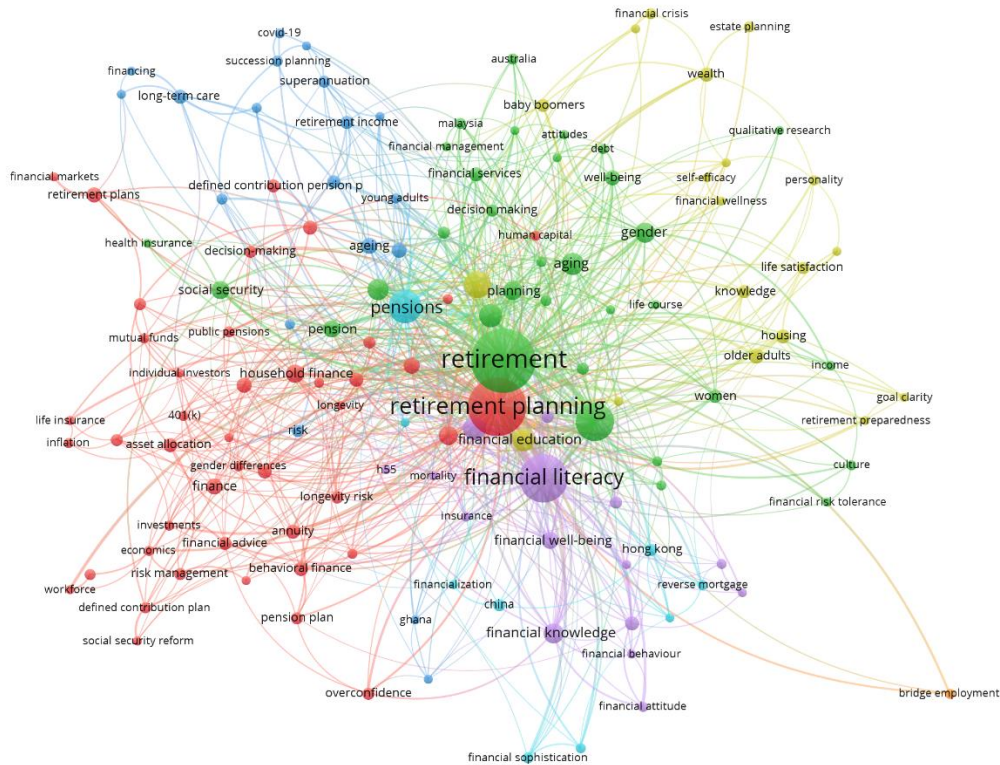
Figure 4: Keyword Co-Occurrence Popularity
https://tinyurl.com/2yu9zp8y

VOSviewer is a software application for creating, viewing, and exploring network-based maps, which is especially useful for bibliometric analyses. Making use of links such co-authorship, co-occurrence, citation, bibliographic coupling or co-citation researcher can build networks from scientific articles, journals. Organizations, or concepts. VOSviewer is perfect for examining large datasets because it has three display modes, network, overlay and density. These modes enable extensive exploration through zooming and scrolling. VOSviewer is mostly used for bibliometric networks, but it may be used to visualize any kind of network data. This investigation looks at keyword co-occurrences in the Scopus and WOS databases, including all the terms that authors have found and the databases itself. Only terms with at least four occurrences were included to guarantee relevance as a result 67 out of 7,112 keywords and were shown in Figure 4. "Retirement" as the most used keyword (207 occurrences, 314 total link strength), followed by "retirement planning" (172 occurrences, 240 link strength), according to the analysis, which classified 141 keywords into four retirement research, this point to retirement, retirement planning, financial literacy and health as the main area of study.
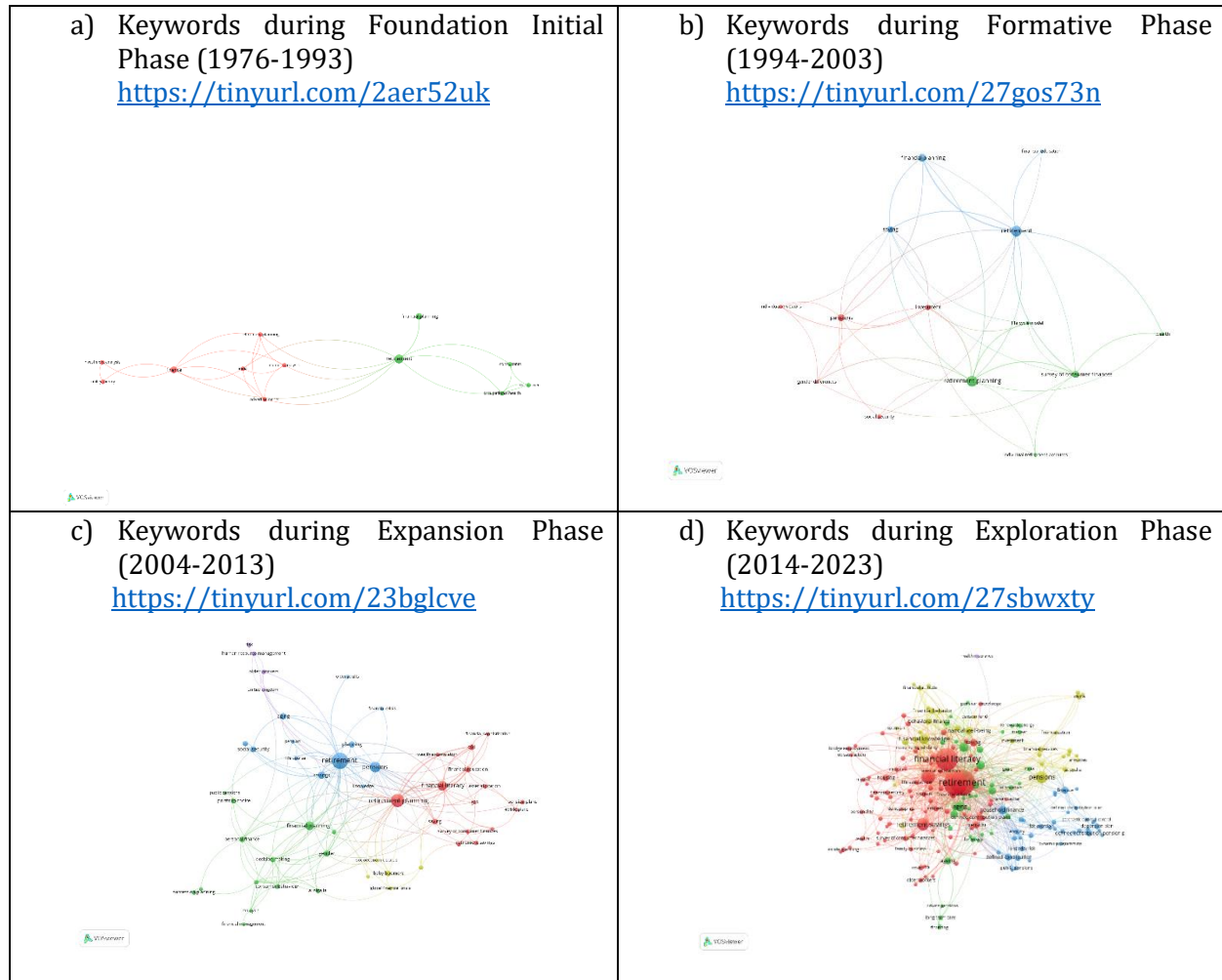
a) Keywords during Foundation Initial Phase (1976-1993) https://tinyurl.com/2aer52uk	b) Keywords during Formative Phase (1994-2003) https://tinyurl.com/27gos73n
c) Keywords during Expansion Phase (2004-2013) https://tinyurl.com/23bglcve	d) Keywords during Exploration Phase (2014-2023) https://tinyurl.com/27sbwxty

Figure 5: Keywords Frequency Evaluation

There are four stages of development evolved in retirement financial planning from 1976-2023. The study examined how research subjects evolved across the Initial Phase (1976-1993), Formative Phase (1994-2003), Expansion Phase (2004-2013), Exploration Phase (2014-2023) periods using VOSviewer software was established to track the decades-long evolution of the subject of study (about ten years per phase) to examined keyword patterns. The subsequent ten-year intervals are reflective of the natural progression and growth of the field and function as a structured framework for comprehending the evolution of the field over a span of time. The Foundation Initial Phase covers a wider timeframe more than ten years because there were fewer publications in this early stage requiring a longer duration to identify significant trends. An extensive keyword analysis will be carried out for every phase adopting a threshold of at least three occurrences to create network visualization in VOSviewer. Due to the limited number of available topics from that phase, this constraint was dropped in the Initial Phase to allow the terms with at least one occurrence. Just 35 keywords were found during these 15 years and one of them formed a connected cluster with 28 links as shown in Figure 5a. Some of the words that appear once in this cluster are "tariffs", "battery

storage plant", "consumer reliability", "system security", and "voltage control", all of which together reflect the fundamental topics and early research focus.

The connections between important retirement research themes are shown in the network visualization from the Expansion Phase (1994-2003), which is organized into three key thematic categories. The keyword "retirement" which dominates the core cluster, demonstrates its close association with phrases like "planning" and "social welfare reform", indicating a focus on retirement strategy and policy consequences. The second cluster places a strong emphasis on "plans" and associated terms like "investment", "pension benefits", and financial security", suggesting that the financial mechanism and results of retirement strategies are given crucial attention. In the third cluster, "social policies" and their impact on retirement outcomes are highlighted, linking concepts such as "public policy" and "government programs". Once taken as a whole, the illustration depicts the complex web of retirement research, highlighting the interdependence of social policy, financial security, and planning as key components influencing the conversation in this area. Through this modification, 34 keywords could be connected yielding 82 links with a total link strength of 93.

An expanded and interconnected research on retirement is revealed by the network visualization, which shows the keyword occurrences during the Expansion Phase (2004-2013) as seen in Figure 5c. Key themes including "retirement planning", "gender", "health", and "financial literacy", "retirement" emerges as the focus, indicating a thorough approach to comprehending retirement outcomes. A total of 153 keywords were found throughout this decade. Three separate clusters with 1413 links and total link strength of 1849 were formed from these 153 keywords. The fact that there are more clusters and compared to earlier stages that field has matured and diversified as new subjects and approaches have surfaced and established ones have become more integrated. The figures show how the field has developed towards a more comprehensive and integrated view of retirement that considers aspects related to education, health and the economy.

Additionally, Figures 5d shows how the network maps grew denser over time with the highest population density during Exploration Phase (2014-2023). 349 of 7,019 distinct keywords that were found within this time frame showed up at least four times. Four separate clusters were formed from these terms, resulting in 7,019 connections with an overall link strength of 11, 345. Direct keyword matches from the Initial Phase (1978-1993) do not overlap. The Exploratory Phase focused on financial planning and themes like financial literacy, retirement savings, portfolio choice and wellness. The initial phase keywords were related to energy or operational management. It was linked to 7,019 other keywords. The figure's network visualization highlights the importance of financial literacy in retirement planning research by showing it as the most prominent node linked to a wide variety of related ideas. All things considered, the figure depicts a sophisticated interrelated framework in which financial literacy acts as the foundation for a variety of research topics exhibiting a comprehensive strategy that combines knowledge, health, decision making and investment tactics to guarantee thorough retirement readiness.

3.4   Gaps and Emerging Focus

The evolution of keywords and publication trends highlights the critical need for models that more effectively aid retirement planning. Critical subjects like mathematical modelling for retirement financial planning are still not well understood. Therefore, the creation of mathematical models that assist people in strategically managing their funds far in advance of retirement age should be the focus of future study.

4   CONCLUSION

Studies show that over the past 69 years (1954-2023), the academic community has given this important topic a lot of attention. Despite the typical variations seen in new research disciplines, the evolution of publication volume over this time shows a continually growing interest. The fundamental restriction of this study is most likely due to the documents analyzed. Some pertinent studies might not include, even though WOS and Scopus, the database choose contains the majority well-known articles in this field of study. The research goals were met by this bibliometric study which gives a thorough look at how financial planning and retirement research has changed over time, what its main areas focus and who the prominent author is. First, the study shows how research in this field has changed over time, moving beyond early financial literacy efforts to encompass more comprehensive considerations of retirement planning by examining publication trends and citation patterns. Second, an examination of important phrases such as retirement planning and health reveals that these are the main themes guiding research. Finally, the study highlights key players in the field with Lusardi and Mitchell standing out as leading voices. These results verify that every research question has been thoroughly examined.

Future scholars can use the findings here as a resource, which makes it easier to collaborate globally and encourage sharing of knowledge. Furthermore, looking at keyword co-occurrence patterns creates opportunities to find new retirement planning study needs. Innovation should be given priority in future research as this topic develops, especially in creating mathematical models that provide practical methods for pension plan development. Future research can provide significant and lasting retirement planning solutions by exploiting cutting-edge technology and incorporating adaptive strategies. Thus, this bibliometric study provides a thorough summary of current trends and identifies important areas for further research in retirement financial planning. In other hand, the study limitations include the necessity of ongoing updates to adequately reflect the swiftly changing field of financial and retirement planning research.

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