

Exploring Women's Retirement Literature through Bibliometric Analysis Using VOSviewer

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Abstract: *This paper aims to analyse the issue of women's retirement (WR) literature through bibliometric analysis using VOSviewer, a programme for the visualisation of similarities (VOS). Publications focusing on women's retirement were compiled from the Scopus database, with a total of 393 items spanning the years 1965 to 2021. The most prolific nations for retirement literature are the United States, United Kingdom, and Sweden, which reflects the affiliation analysis that correlates highly with published papers within specific institutions in those three countries. The issues were discussed within the context of social sciences, economics, econometrics, and finance, as well as psychology. This suggests an interlinking of women's retirement with social and financial issues that might contribute towards psychological challenges for women. The most cited keywords, among others, are 'retirement', 'women' and 'pension', with thematic clusters being linked to 'ageing' and 'health'. These could be linked to health problems that emerge because of ageing, and thus might be linked to the retirement wellbeing of women. The findings of this paper shed light on several implications that can be used as a guideline for researchers and act as a foundation before embarking on the emerging knowledge areas of women's retirement.*

Keywords: Retirement; Women; Bibliometric; Scopus; VOSviewer.

JEL Classification: J26, I30, H55

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1. Introduction

‘Women live longer than men’ is a ‘fact’ for women to seriously consider apart from the allure of outliving males. According to the latest figures provided by the Department of Statistics Malaysia (DOSM, 2021), based on the estimated data for 2021, life expectancy has increased, and females are living longer than males. The report specified that males and females over 60 years of age are expected to reach a maximum age of 81.8 years, while males are predicted to attain a maximum age of 78.9 years. The DOSM (2021) also reported that the elderly population is growing annually, especially for those 60 and older. The statistics for 60-year-old individuals and older have risen from 3.4 million in 2019 to 3.6 million in 2021, roughly 11.2% of the total population, based on 2021’s population projections. This is of increasing concern for women because they face distinct retirement difficulties. The DOSM also shared some interesting facts about women in their 2019 statistical publication series. They estimated that women accounted for 15.7 million of Malaysia’s population of 32.5 million in 2019 (DOSM, 2019). In practice, this implies that women, regardless of age, must save for more years of retirement than men, indeed married women will outlive their spouses and be responsible for their own healthcare and home bills. When combined with increased life expectancy, this financial burden on women may jeopardise their financial well-being and increase the likelihood that they may outlive their economic resources. Thus, despite the clear benefits of a longer life and relationships, the ramifications of ageing and longevity, particularly in terms of sustaining life after work, must be addressed for all women in terms of financial need in old age.

Motivated by the prevailing retirement issues from the perspective of women, the present study analyses the volume of research on women’s retirement by using bibliometric analysis. This approach examines how bibliographic data is used in conjunction with the two primary methodologies of performance analysis and scientific mapping (Cobo et al., 2011). Bibliometric analysis is a significant method in evaluating the growth of a specified research terrain based on its ability to provide specific analysis. The citations and co-citations, geographical distribution, and keyword occurrence in the area of interest (Gallego-Losada et al., 2021) can be analysed in a way that may greatly benefit academic scholars.

To date, there are four types of bibliometric research focusing on retirement available in the Scopus database using the search key 'bibliometric' or 'scientometric' and 'retirement' as depicted in Table 1. The initial search result generated 19 articles; however, after detailed screening, only four articles solely focused on the retirement field.

Table 1: Existing Bibliometric Studies of Research on Retirement

Title (author, year)	Database	Sources	Citation	Total articles (duration in years)
'Financial planning for retirement: Bibliometric analysis and future research directions' (Tomar et al., 2021)	NA	<i>Journal of Financial Counselling and Planning</i>		1,116 (five decades)
'Retirement planning and financial literacy, at the crossroads. A bibliometric analysis' (Gallego-Losada et al., 2021)	WoS	<i>Finance Research Letters</i>	1	242 (1990–2019)
'Research trend on retirement village development for the elderly: A scientometric analysis' (Osei-Kyei et al., 2021)	Scopus	<i>Journal of Aging and Environment</i>	1	236 (1968–2013)
'Trends in the scientific publication on retirement: A brief report' (Barbosa et al., 2019)	Scopus	<i>Interamerican Journal of Psychology</i>		18,362 (1991–2015)

Source: Authors' own.

As shown in Table 1, the early development of bibliometric studies of retirement made available in the Scopus database was contributed by Barbosa et al. (2020) for the years between 1991 and 2015 using the Iramuteq software. Based on the Scopus database, their study analysed 18,362 publications that included the word 'retirement'. According to their analysis, researchers in countries from North America and Europe are the most prolific in terms of retirement research, and health and economics are the most investigated disciplines due to their shared interest in public policy. Meanwhile, Osei-Kyei et al. (2020) looked at retirement village development. This aspect saw a progressively increasing appearance in publications from 1968 to 2013. Additionally, they discovered that Australia, the United Kingdom (UK) and the United States (US) are the top contributors to the retirement community literature. Additionally, Gallego-

Losada et al. (2021) focused on the issues of retirement planning and financial literacy based on 242 articles retrieved from the Web of Science (WoS) database from the years 1990 to 2019. Meanwhile, Tomar et al. (2021) analysed financial planning issues using 1,116 articles retrieved over a five-decade period of research and discovered numerous studies on the influence of social biases, behavioural biases, personality traits and psychological constructs on financial literacy and the influence of this interaction on retirement financial planning. In terms of citations, Gallego-Losada et al. (2021) and Osei-Kyei et al. (2020) each received one, whereas the study by Tomar et al. (2021) is currently uncited, which may be because it has been published recently and is not from an open-access source.

Thus, the emergence of bibliometric analysis on the retirement frontier demonstrates the significance of retirement research, particularly on retirement planning, as well as its future direction. Yet, the focus on women's perspectives is limited within current research streams. Eventually, the importance of 'women' and 'gender' issues can also be evidenced by the bibliometric analytic of retirement literature by Gallego-Losada et al. (2021). Their study found that 'women' and 'gender' issues were one of the clusters related to retirement preparedness that was linked to saving and planning and thus, laterally linked with the accumulation of wealth. Hence, their study suggested this area as the most promising research stream in the study of financial planning. As such, the current study aims to identify more specific research streams supporting retirement issues from the perspective of women.

This study aims to accomplish the following objectives: (1) to trace the pattern of annual publication trends in women's retirement literature by examining publication output and geographic distribution; (2) to identify the most dominant and productive research in the current stream by examining the most frequently cited articles and authors; and (3) to ascertain the most frequently used author keywords in the literature. The paper begins with the methodological analysis of the description of the data sources for articles in the literature pertaining to women's retirement (WR) by extracting the current trends of publications in the field. Then follows the key findings and finally future development lines are concluded.

2. Research Methodology

2.1 Procedure

To eliminate possible researcher bias, this systematic review began with a keyword search of the literature. The final outcome is restricted to scientific studies from the Scopus database. Following the same route taken by preceding bibliometric studies (e.g., Gallego-Losada et al., 2021; Tomar et al., 2021; Osei-Kyei et al., 2020; Barbosa et al., 2020), prior publications on women's retirement were sourced from the Scopus collection on November 10, 2021. Scopus was preferred due to its status as one of the world's top comprehensive peer-reviewed databases, which provides quality research.

The study represents a comprehensive and interdisciplinary bibliographic database covering articles referenced from various publications, including journals, books, and conference proceedings. It used the terms 'retirement' or 'pension' and 'women' in conjunction with the subfields, 'article title', 'abstract' and 'keywords,' to identify publications that are related to the research issue. This initial search of extraction included a total of 5,984 articles; however, that resulted in a highly unreliable sample that included content related to medicine, nursing, biochemistry, genetics, molecular biology, environmental science, and other topics not related to the field of study. Hence, to ensure the collected data reflects research on retirement and to minimise contaminated data (Zhu & Hua, 2016; Zemigala, 2019), the search keywords were limited to 'article title' only without any consecutive filter to comprise all papers linked to search phrases. Finally, after painstakingly examining only English-written scientific papers, the final sample consisted of 393 documents.

The output was used to conduct the bibliometric analysis. Other frequencies illustrated in the table and graph were calculated and designed using Excel. In exploring the research into WR, the analyses were conducted using relevant data, covering the year of publication, authors' publications, subject area, type of documents, source title, type of source, keywords used by the authors, affiliation of the authors, publications according to country, and language used in the publications extracted from the Scopus database. The selected data was analysed using bibliometric analysis based on the bibliometric mapping approach by means of the VOSViewer application. This application was employed to determine diverse networks and generate collaboration and word co-occurrence analyses.

3. Bibliometric Findings

3.1 Document profiles

Table 2 presents the profiles of the documents and source types; a total of 393 documents, of which 328 are dominated by articles with the highest publication (83.46%), followed by 24 book chapters (6.11%), 17 reviews (4.33%), books, conferences, and notes with four each (1.02%), and others, for example, errata, editorials, and short surveys, all of which are less than 1%. The source type indicates that the common source documents are 361 journals (91.86%), followed by 27 books (6.87%), four book series (1.02%) and one undefined (0.25%).

Table 2: Document Profiles

Document type	Number of articles	Percentage (N = 393)	Source type	Number of articles	Percentage (N = 393)
Article	328	83.46	Journal	361	91.86
Book chapter	24	6.11	Book	27	6.87
Review	17	4.33	Book series	4	1.02
Letter	7	1.78	Undefined	1	0.25
Book	4	1.02			
Conference paper	4	1.02			
Note	4	1.02			
Erratum	3	0.76			
Editorial	1	0.25			
Short survey	1	0.25			

Source: Authors' own.

Additionally, focusing on the subject area, prior research into WR appeared in 18 subject areas that evidenced the description and dimensions of this topic being discussed in the wider literature. Table 3 shows that it is being studied extensively in three areas dominated by the Social Sciences with 229 (58.27%), followed by Economics, Econometrics and Finance with 52 (13.23%) and Psychology with 47 (11.96%).

Table 3: Subject Areas

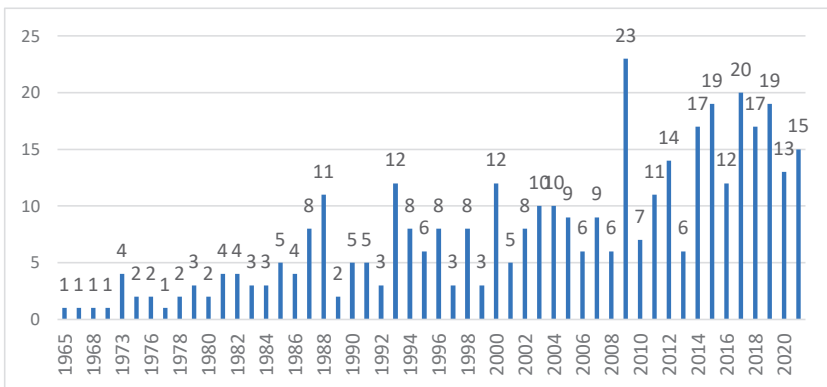
Subject areas	Total publications	Percentage (N = 393)
Social Sciences	229	58.27
Economics, Econometrics, and Finance	52	13.23
Psychology	47	11.96

Source: Authors' own.

3.2 Bibliometric analysis of publication output

As seen in Figure 1, an increasing trend was observed based on the annual frequency of publications. For the reference period from 1965 to 2021, this bibliometric study revealed a rise in the frequency of annual academic publications focusing on retirement literature. Palmore (1965) published the first paper in the Scopus database, in which he examined the disparities between men's and women's retirement habits. Since then, 393 document findings have been logged up to the year 2021. Until 2021, inconsistent tendencies may have been detected, with a total final observation of 393 publications within 56 years. Nonetheless, these research streams received little comment in the subsequent 20 years until 1985, with fewer than five papers each year, totalling 43 publications.

Figure 1: Number of Publications Per Year in the WR Dataset



Source: Authors' own.

Publications observed within the first 20 years revealed that the literature revolved around women's pensions, which were considered inadequate and could lead to poverty (e.g., Bernstein, 1974; Heidbreder, 1972; Haberman, 1985; Masson, 1985; Bauknecht, 1983; Paltiel, 1982; Richards, 1978), and issues about women's preparedness for retirement as a life transition and adjustment (e.g., Gigy, 1985; Cherry et al., 1984; Connidis, 1982; Kasworm & Wetzel, 1981; Levy, 1980). Beyond a doubt, retirement is one of the later life status transition issues that needs to be dealt with when one leaves the workforce, especially for working women. Unfortunately, due to various issues over the years, older women have had to endure a difficult journey throughout their lives up to retirement. Consequently, women tend to age in poverty (Hamermesh, 1984).

The next stream of research was on retirement planning among women, which was a frequent topic from 1986 to 1996 (e.g., Perkins, 1995; Slevin & Wingrove, 1995; Holtmann et al., 1994; Van Arsdale & Newman, 1993; Hayes & Parker, 1993; Richardson, 1990; McKenna & Nickols, 1988). People have become more conscious over the years of the critical nature of future savings for the elderly, particularly women. Nevertheless, because the conventional roles of women in society emphasise subordination, dependency, and nonparticipation (Perkins, 1995), interest in examining financial planning among retired women may have increased during that era.

The retirement transition amongst women from 1997 to 2007 (e.g., Price, 2002; Zhan & Pandey, 2002) and retirement planning (e.g., Lee, 2003; Orel et al., 2004; Onyx, 1998) have been continuously addressed in subsequent decades. Past studies have identified that older people are very poor in terms of financial savings and lack the retirement preparedness that male workers typically have. The combination of aged demographics and a lack of savings contribute to higher pension liabilities, which may explain why many retirees have limited financial resources to support their retirement in old age (Gough & Sozou, 2005). In addition, issues relating to women's short-term employment durations, lower incomes and lower pensions or bereavement reimbursements, all contribute to retired women's financial inadequacy (Weir & Willis, 2000).

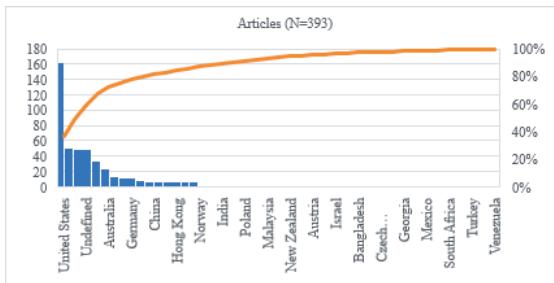
In addition to views from the past decades, more current interpretations of the WR issue focus on low levels of financial literacy. A few studies document that females' lower financial knowledge is crucially different compared to those of males (e.g., Lusardi & Mitchell, 2008; Fonseca et

al., 2012; Mahdavi & Horton, 2014; Lei, 2019). Conversely, the present stream of research examines the differing behavioural characteristics of retired men and women's financial success by correlating them to retirement planning behaviour. Above all, the lack of economic understanding, risk tolerance, time preferences, confidence and saving behaviour all play a role in the inadequate individual retirement preparation (e.g., Hanna et al., 2011; Tanaka et al., 2010; Van Rooij et al., 2011). The issues of wellbeing and health are also addressed within the current trends (e.g., Giusta & Longhi, 2021; Prattley & Chandola, 2021; Tambellini, 2021; Cahill et al., 2021; Gruszczyńska et al., 2020; Zang, 2020). This might be observable due to the improvements in living standards in the current era. The dilemma in balancing family responsibilities and work requirements might be another contributing factor to the lack of women's preparation for retirement life and their well-being.

3.3 Bibliometric analysis of the geographical distribution of publications

In terms of geographical distribution, 39 countries were found to have contributed to the WR literature, as depicted in Figure 2, with the country with the highest number of WR publication being the US (163 articles), followed by the UK (51 articles) and Sweden (34). (There were 49 articles that could not be identified as coming from any specific country, which may cause biases in the findings of the country analysis). This was followed by Australia (23), Canada (14) and Germany (11), all of which contributed 87.79% of the total. Meanwhile, the remaining countries contributed less than 10 articles from the dataset per country.

Figure 2: Publications' Geographical Distribution



Source: Authors' own.

To illustrate the pattern of collaboration between countries, Figure 3 shows a network visualisation map of the citations by country. The lowest number of documents and citations for a single author were both fixed at one. The largest collection of connected items contained 32 items, organised into 12 clusters by VOSViewer. The most prominent node relates to the US, followed by the UK and Sweden, all of which correlate with the nations with the biggest contribution reported in Figure 2. Hence, the highest cluster for the US is linked to Malaysia, Mexico, and the Philippines. The link signifies the strength of relationships between the countries. The relatedness of the country based on the citation link analysis is observable based on the distance between two countries in the visualisation networks. Subsequently, the strength of the relatedness is technically represented by the closer nodes located between the two countries.

Figure 3: Network Visualisation of Publications’ Geographical Distribution



Source: Authors’ own.

3.4 Bibliometric analysis of citations and publications

While analysing the main active sources of titles, Table 4 illustrates the distribution of publications by presenting the top 10 journals with most papers having been published in the area of WR. According to Figure 4, the current study discovered that 393 publications on the subject have been published in 227 journals. Considering a minimum of one document per source with five minimum citations, 113 sources meet the thresholds,

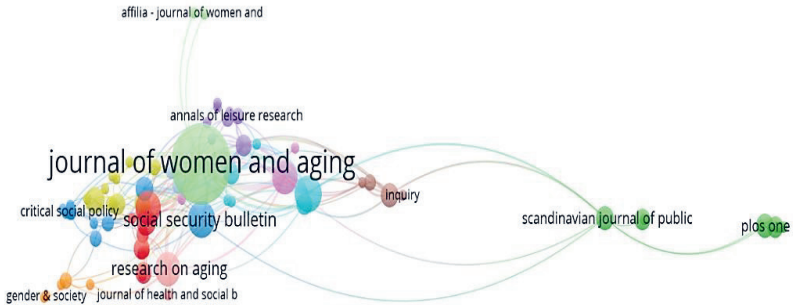
consisting of 78 of the largest set of connected items. The 78 items were grouped into 12 main clusters. The results thus indicate the *Journal of Women and Aging* as the most productive journal. In comparison to other journals with fewer than 10 articles, this journal published the most (43) articles, accounting for 10.94% of total publication on the WR issues. This might also be due to the frequency of the journal's publications being six issues per year, which are abstracted and/or indexed in Medline, PubMed, Thomson Reuters (ISI), and PsycINFO. Hence, this made it the most cited journal, with 481 citations. This journal featured research on the social, psychological and health difficulties that older women face. It was also classified as a Q2 journal with an impact factor of 1.969 (2020). Therefore, it is the most appropriate method for disseminating the results of WR among researchers. *Gerontologist* and *Social Security Bulletin* followed, with an equal distribution of nine articles each representing 2.29%, and four journals, *Research on Aging*, *International Journal of Aging and Human Development*, *Ageing and Society* and *International Journal of Ageing and Human Development* all contributed an equal distribution of eight articles each representing 2.04%. These were regarded as the premier journals and, as a result, the premier publishers in the WR discipline.

Table 4: Top 10 Journals with Most Articles in the Dataset of WR Papers

Name of journal	Number of articles	Percentage (N=393)	Numbers of citations	Impact factor
<i>Journal of Women and Aging</i>	43	10.94	481	1.969
<i>Gerontologist</i>	9	2.29	155	5.271
<i>Social Security Bulletin</i>	9	2.29	103	0.83
<i>Ageing and Society</i>	8	2.04	169	2.786
<i>International Journal of Aging and Human Development</i>	8	2.04	200	2.224
<i>Research on Aging</i>	8	2.04	311	2.585
<i>BMC Public Health</i>	6	2.04	180	3.295
<i>Journal of Women, Politics, and Policy</i>	5	1.27	61	2.000
<i>Social Policy and Administration</i>	5	1.27	61	2.748
<i>Gender, Work, and Organization</i>	4	1.02	95	3.465

Source: Authors' own.

Figure 4: Network Visualisation for Citations and Sources



Note: Prepared using VOSviewer software.

Source: Authors’ own.

Regarding the affiliation analysis, Table 5 presents the top eight organisations out of 160 that contributed at least five articles among the distribution of the 393 WR articles derived from this bibliometric analysis. The Karolinska Institute from Sweden supplied the most articles (43.33%), followed by the University of Sheffield, UK, and the Ohio State University, US, both of which contributed 12 (3.05%) papers. Alongside Table 4, it is also dominated by the three countries that provided the most publications, among others, representing 76 articles contributed 19.34% of the total publications. The remainder of the organisations made up of another 152 institutions, each of which has contributed between one and four articles.

Table 5: Top Eight Affiliations with Largest Number of Publications

Affiliation	Country	Number of articles	Percentage (N=393)
The Karolinska Institute	Sweden	17	4.33
The University of Sheffield	United Kingdom	12	3.05
The Ohio State University	United States	12	3.05
The University of Stockholm	Sweden	11	2.80
The University of Lund	Sweden	9	2.29
The University of Texas at Austin	United States	5	1.27
The University of Florida	United States	5	1.27
The University of Gothenburg	Sweden	5	1.27

Source: Authors’ own.

In terms of geographical distributions, 39 countries were found to have contributed to WR literature, as depicted in Figure 2, with the highest number of WR publications coming from the US (163 articles), the UK (51 articles), and Sweden (34). 49 articles could not be identified as coming from any specific country which may cause biases in the findings of the country analysis. This was followed by Australia (23), Canada (14) and Germany (11), all of which contributed to 87.79% of the total. Meanwhile, the remaining countries contributed less than 10 articles from the dataset per country.

Additionally, the data demonstrates the biggest contribution from European nations, highlighting Europe's academic field's leading position on this subject. It is observable that the top affiliation comes from three countries which are amongst the top contributor countries. They are highly developed countries and have a great concern for women's issues. Without a doubt, the US' dedication to achieving gender parity and female empowerment via its foreign policy has the greatest contribution rate of 42% among other nations. The UK and Sweden are also amongst the countries that champion gender equality. Further investigation into those with fewer than five articles revealed that the articles belong to developed countries as well as developing countries. From one of the developing countries in the list, despite still having a low publication rate, the inclusion of Malaysia could provide an attractive research frontier to be explored from an Asian perspective, specifically within the Malaysian context.

Next, the most influential papers in WR are depicted in Table 6 which looks at the 10 most cited articles with more than 75 citations. The findings in Figure 5 are based on the VOSviewer network visualisation for citations with documents, with a minimum of five citations per occurrence; 206 of the 393 documents match the criterion, with the biggest collections of linked items totalling 140 items with 14 clusters. As shown in Table 6, 'Gender, employment, and retirement quality: A life course approach to the differential experiences of men and women' by Quick and Moen (1998), which was published with limited access by the American Psychological Association (APA) in the *Journal of Occupational Health Psychology (JOHP)*, is the most cited document (181 citations) to the date of extracting the data. The highest number of citations can be attributed to *JOHP*, a Q1 journal with a 7.25 impact factor and a 10.796 five-year impact factor, and APA, one of the principal scientific and professional organisations representatives of

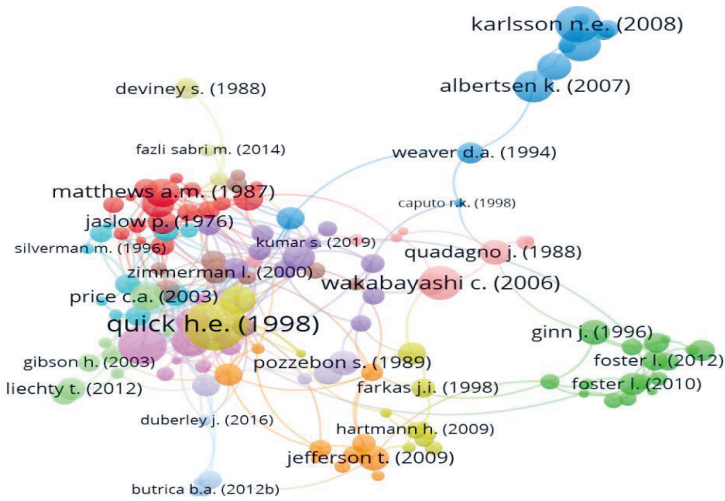
psychological research in the US; thus, demonstrating the US as the country with the most WR publications. Quick and Moen (1998) investigated the characteristics contributing to the quality of males' and females' retirement experiences. Their study is one of the first to integrate two notions of satisfaction in retirement (i.e., the theories of role and continuity) and discovered that, from a woman's perspective, the quality of retirement is connected to health, a consistent profession, early retirement, and adequate post-retirement financials.

Table 6: Top 10 most Cited Articles and Authors in the Dataset of WR Papers

Title	Authors	Source title	Citations
'Gender, employment, and retirement quality: A life course approach to the differential experiences of men and women'	Quick and Moen (1998)	<i>Journal of Occupational Health Psychology</i>	181
'Informal care giving and retirement timing among men and women: Gender and care giving relationships in late midlife'	Dentinger and Clarkberg (2002)	<i>Journal of Family Issues</i>	144
'Women's associations and the enactment of mothers' pensions in the United States'	Skocpol et al. (1993)	<i>American Political Science Review</i>	115
'In pursuit of an identity: A qualitative exploration of retirement from women's artistic gymnastics'	Lavallee and Robinson (2007)	<i>Psychology of Sport and Exercise</i>	109
'Renegotiating identity and relationships: Men and women's adjustments to retirement'	Barnes and Parry (2004)	<i>Ageing and Society</i>	108
'Economic consequences of sick-leave and early retirement in obese Swedish women'	Narbro et al. (1996)	<i>International Journal of Obesity</i>	104
'Risk factors for disability pensions in a population-based cohort of men and women on long-term sick leave in Sweden'	Karlsson et al. (2008)	<i>European Journal of Public Health</i>	93
'Does care giving increase poverty among women in later life? Evidence from the Health and Retirement Survey'	Wakabayashi and Donato (2006)	<i>Journal of Health and Social Behavior</i>	86
'Number of children associated with obesity in middle-aged women and men: Results from the Health and Retirement Study'	Weng et al. (2004)	<i>Journal of Women's Health</i>	83
'Life course determinants for early disability pension: A follow-up of Norwegian men and women born 1967–1976'	Gravseth et al. (2007)	<i>European Journal of Epidemiology</i>	78

Source: Authors' own.

Figure 5: Network Visualisation for Citations of Documents



Note: Prepared using VOSviewer software.
 Source: Authors' own.

3.5 Bibliometric analysis of the keywords

The analysis of keywords was used to explore the prevailing or imminent relationships among topics in the WR field, concentrating on the written content of the publication in the dataset of WR articles. The present analysis used author-supplied terms that appeared more than five times in the principal database of Scopus. Of 557 keywords, 16 meet the threshold. The most commonly occurring terms were ‘retirement’ and ‘women’, which appeared 54 times (total link strength 47) and 40 times (total link strength 53) respectively and were strongly associated with ‘ageing’ and ‘health’. Apart from ‘retirement’ and ‘women’, the other two most often occurring keywords were ‘pensions’ and ‘gender’, each of which had a link strength above 20 (Table 7). The network visualisation of keywords as depicted in Figure 6 is constructed with four main clusters (red, green, yellow and blue). Cluster 1 (gender, life course, marriage, older women, and pension); Cluster 2 (aging, health, retirement, and women); Cluster 3 (pensions, poverty, retirement planning, and social security) and Cluster 4 (disability pension, employment, and sick leave). It indicates the relationship between one

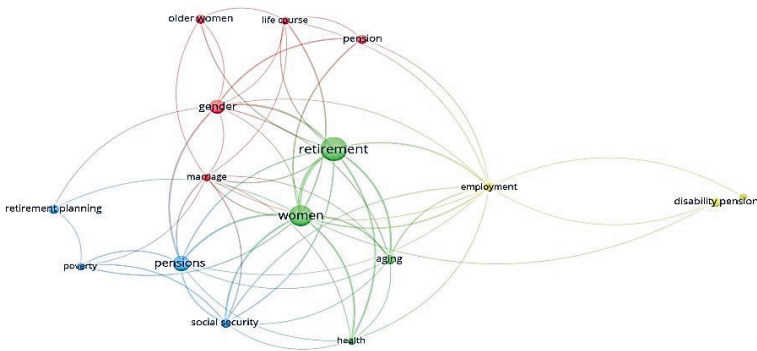
keyword and another. The frequency of keywords’ appearance in the abstract and title will determine the size of the circle and letters; greater frequency is reflected by the size of letters and nodes.

Table 7: Relevant Thematic Clusters for Keywords in the Dataset of WR Papers

Cluster	Keyword	Occurrences	Total link strength
Cluster 1	gender	19	21
	older women	8	5
	pension	8	8
	life course	6	10
	marriage	6	15
Cluster 2	retirement	54	47
	women	40	53
	ageing	8	17
	health	6	13
Cluster 3	pensions	22	20
	social security	9	17
	retirement planning	8	3
	poverty	6	8
Cluster 4	disability pension	9	6
	employment	7	18
	sick leave	5	5

Source: Authors’ own.

Figure 6: Network Visualisation for Co-occurrence with Authors’ Keywords



Note: Prepared using VOSviewer software.

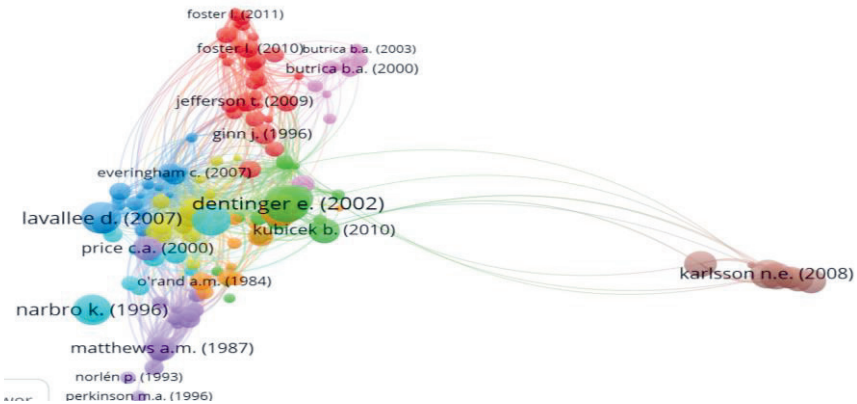
Source: Authors’ own.

3.6 Bibliometric analysis of the bibliographic coupling

Next, an analysis of the bibliographic coupling was run to investigate the connectivity between articles as measured based on the shared references in the published papers. The connectivity strength between documents was measured based on the extent of overlaps between reference lists. The greater the overlaps, the more likely the documents are related to the same topic if the two documents share many references.

The results depicted in Figure 7 are derived from the VOSviewer network visualisation for bibliographic coupling with documents. The maximum number of authors per document was set at five and then set with a minimum of five citations per document. Derived results indicate that of 393 documents, 206 meet the threshold, with 162 being the largest set of connected items. There are nine clusters, with five of them having more than 15 items. Cluster 1 has the largest with 33 items that are mostly related to the pension systems and policies related to women. Cluster 2 has 22 items and includes articles related to women's retirement intentions, behaviour, and retirement planning. Articles in Cluster 3 discuss, among other things, women's retirement experiences and perceptions. Cluster 4 mostly discusses retirement planning, and finally Cluster 5, among other things, discusses the

Figure 7: Network Visualisation for Bibliographic Coupling with Documents



Note: Prepared using VOSviewer software.

Source: Authors' own.

issues of retirement well-being and healthcare among retired women. The gap between the nodes characterises the relatedness between the articles, while the nodes' size designates the frequency and network strength with other articles. Additionally, non-allocated articles within any cluster reflect the non-availability of reference lists, or references not shared with other articles.

4. Conclusions and Future Work

This current study provides a comprehensive description of a bibliometric investigation of women's retirement horizons. In all, 393 articles were obtained from the Scopus database, spanning a 56-year time frame from 1965 to 2021. The trend in publication frequency over various time periods indicates increasing interest, even though the number of articles each year remains below 25. Thus, this offers a distinctive research area to be explored in the WR frontier, given the evolving pathways towards women's retirement. Eventually, it creates a diverse retirement experience among women within the ageing workforce worldwide. Three research areas have discussed the current issues within the context of social sciences, economics, econometrics, finance and psychology, proving the interlinking of women's retirement to social and financial issues that might contribute to psychological challenges for women. Clearly, based on keyword analysis, the most often referenced terms are 'retirement', 'women' and 'pension' which is understandable given that those keywords were used as the first key search in the Scopus database for this research. Yet, based on the themes of Cluster 2, linking 'ageing' and 'health', the direction of these areas is shown to be possibly related to issues arising from ageing conditions, thus becoming the main concern. This can potentially be linked to the retirement wellbeing of women which needs more investigation by researchers. Additionally, the themes of Cluster 3 for the keyword analysis, linking pensions, social security, financial planning, and poverty, might be aligned with the possibility of poverty among retired women due to inadequate pensions, the lack of social security insurance or the lack of proper financial retirement planning. All of these provide an interesting research stream.

In conclusion, the current paper sees its contributions as follows:

- It is the first in Scopus literature to do a comprehensive bibliometric examination of the present body of knowledge in the field of women's retirement.
- The bibliometric study's conclusion can provide valuable information to prospective researchers in this field prior to them undertaking more research on women's retirement.

The current study sheds light on several areas of research for future analysis. It would be beneficial to embark upon more specific research into the technical aspects of these research frontiers. Furthermore, replicating the same bibliometric study, but on different literature databases such as the WoS, might be an insightful way to compare the differences and similarities in the outcomes.

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