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ORIGINAL ARTICLE

Trends in research on the concept of active ageing: a bibliometric analysis

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Abstract

Objective: This study aims to provide insights into the scientific activity in the field by conducting a bibliometric analysis of studies examining the concept of active ageing in the Web of Science_ WoS database.

Methods: The research includes studies retrieved from the WoS database during a search conducted on September 2, 2023, containing keywords such as "active ageing," "active and healthy ageing," "healthy and active ageing," and "ageing well." The study examined various characteristics of these studies, including their type, publication frequency, relationship with sustainable development goals, country of origin, subject, journals, co-authors, author citations, and keywords. Bibliometric analyses were conducted using VOSviewer software.

Results: Out of the 1740 studies retrieved, materials such as editorials, book reviews, and conference abstracts (n=423) were excluded, leaving a total of 1317 studies for database inclusion, comprising 1203 articles and 114 reviews. Among the 1160 studies on Sustainable Development Goals, 15 out of 17 goals were covered. It was determined that 71% of the studies addressed the "Healthy and Quality Life" goal. Spain had the highest number of publications (n=201), while the United Kingdom received the most citations (n=3073). According to bibliographic matching analysis, the Gerontologist journal was identified as the most influential journal in the field.

Conclusion: The number and impact of research on active ageing have increased over time. The importance and impact of research in this field hold great potential to enhance the quality of life of the future elderly population and stimulate their societal contributions.

Keywords: Healthy Ageing, Elderly, Well Ageing

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INTRODUCTION

The ageing population is increasingly gaining importance as a phenomenon that reshapes the countries' demographic, social, and economic balance.[1] Globally, for the first time in history, the number of individuals aged 60 and over exceeded the number of children under 5 in 2020, and the rate of ageing in the population is steadily increasing.[2] In Türkiye, the rapidly increasing elderly population is attributed to the decline in fertility and mortality rates, as well as an increase in life expectancy at birth. According to population projections, it is estimated that the elderly population ratio will be 12.9% in 2030, 16.3% in 2040, and 22.6% in 2060.[3]

In order to convey a more inclusive message than healthy ageing, the term "active ageing" was adopted by the World Health Organization (WHO) in the late 1990s. This term is defined as the process of optimizing health, participation, and security opportunities to increase the quality of life as individuals age. This approach is based on the principles of the United Nations, including independence, participation, dignity, care, and self-realization, as well as the recognition of the human rights of older people.[4] The United Nations General Assembly declared the years 2021-2030 as the "Decade of Healthy Ageing" and requested guidance from the WHO to implement it.[2] Active ageing supports older individuals in maintaining their physical, social, and mental health to lead longer and healthier lives. It encourages the social participation of older individuals, promoting their involvement in the workforce, volunteer activities, and being a part of community life. Active ageing also advocates for continuous learning and awareness among older individuals, emphasizing that they can be a part of life independently of factors such as gender, ethnicity, disability, or other considerations. It encourages older individuals to use natural resources sustainably.[4] For all these reasons, active ageing aligns with the complementary goals of sustainable development, focusing on "healthy and successful ageing," "social participation and employment," "education and awareness," "social equality and inclusion," and "environmental sustainability of resources." A society where older individuals are healthy, productive, informed, and socially included can play a significant role in achieving sustainable development goals.[5,6]

On the other hand, age discrimination, particularly the explicit use of gender-biased stereotypes when describing older women and elderly characters outside the family,[7] situations such as informal employment, lack of supportive environments for meeting primary health and social needs,[8] and deficiencies in structures, personnel resources, and expertise for inter-sectoral collaboration are seen as barriers to active ageing.[9] The COVID-19 pandemic has further exacerbated inequalities, insecurity, and the exclusion of certain social groups by revealing the health, social, economic, and living conditions of the elderly.[1] The role of social and mental well-being as determinants of healthy ageing is increasingly acknowledged. This is also an indicator of active ageing.[10] The concept of active ageing is considered a key element in providing individuals with more opportunities throughout their lives and a better quality of life in old age, particularly in the context of social participation, integration, and adaptation.[1]

This study aims to conduct a bibliometric analysis of research on the concept of active ageing in the Web of Science (WoS) database. Considering the breadth of the existing literature on active ageing, it is evident that a significant portion of the studies in this field focus on the conceptual framework[11,12] and policy applications.[1,9,13] However, there is a lack of comprehensive review regarding the international trends in active ageing research, which countries and authors contribute the most to this field, and which topics receive greater attention. At this point, bibliometric analysis becomes critical to understanding the global trends in active ageing research. In particular, policies and social practices related to ageing, which have accelerated in the post-pandemic era, require a more systematic examination of studies in this field. Therefore, bibliometric analysis offers an innovative approach, providing a map of the dynamics of active ageing research, identifying gaps in this area, and offering essential insights into the current state of the scientific literature and future research domains.

In this context, bibliometric analysis not only illustrates how the concept of active ageing has evolved but also identifies which research areas have gained more interest, which topics still need to be explored, and which research subjects should be prioritized in the future. By doing so, it will provide concrete findings to address the gaps in the literature. Moreover, considering the impact of the pandemic and global demographic changes on active ageing, the study will offer critical guidance for policymakers and researchers in determining future roadmaps. In conclusion, this study aims to contribute to efforts that support the lives of elderly individuals by illuminating the evolution of the concept of active ageing in the scientific literature and visualizing significant trends and research gaps in the field.

Research Questions:

Q1. What are the publication and citation trends of studies on active ageing?

Q2. Who are the authors and countries that have contributed the most to the concept of active ageing?

Q3. Which articles and journals receive the most citations in research on the concept of active ageing?

Q4. What are the keywords commonly used in research on the concept of active ageing?

Q5. What are the topics associated with the concept of active ageing?

Q6. What opportunities and recommendations exist for future research on the concept of active ageing?

METHOD

Type and time of the research

The research was conducted as a bibliometric analysis study in the time interval between August and September 2023. *Bibliometric analysis* is a method used to analyze current trends in the literature of a specific field by examining various characteristics of scientific studies, such as their prevalence, impact, and interdisciplinary relationships, using bibliographic data.[14] In the writing of this study, the CARDA (Checklist for Assessment and Reporting of Document Analysis) guide was used to enhance the transparency and reproducibility of document analysis-based research. CARDA provides a checklist that ensures a systematic approach to data collection, analysis, and reporting in document analysis-based studies. This guide

structures the phases of document selection, data analysis, and interpretation of results to enhance the methodological reliability of the study and assists researchers throughout these processes.[15] In this study, CARDA was used to ensure the reliability and reproducibility of the methodology. For instance, during the data collection process, how the documents were selected and the criteria for their inclusion in the study were detailed. The CARDA checklist, in particular, ensured transparency in terms of the documents' nature, scope, and acquisition processes.

Data Collection Process

Research data was retrieved from the Web of Science (WoS), a comprehensive and prestigious database that includes scientific articles, conference papers, and other academic sources published in various disciplines. The research universe is formed by the existing literature in the WoS database. On September 2, 2023, the WoS database was searched using the keywords "active ageing," "active and healthy ageing," "healthy and active ageing," and "ageing well" without any restrictions on publication year, language, etc. Publications containing any of these keywords in their subject, title, or abstract were included in the sample. The search keywords were selected based on their established prominence in the literature related to ageing and their alignment with the World Health Organization's definitions and frameworks. These terms encapsulate the critical concepts of promoting health, participation, and quality of life in older adults.

Variables

The studies included in the scope of the research were examined based on the following variables: type, publication frequency, relationship with sustainable development goals, country, topic, top 10 journals with the highest number of publications (publication count, citation count, impact factor, and Q level), co-author relationships, author citation relationships, and the top 10 most frequently used keywords, considering bibliographic matches in the texts.

Statistical Analysis

Bibliometric analysis of the data obtained from the WoS database were presented using descriptive statistics and graphics. VOSviewer software (version 1.6.19) (https://www.vosviewer.com/) was utilized for data visualization. Through VOSviewer, analyses including co-author analysis, author citation analysis, source citation analysis, country citation analysis, institution citation analysis, keyword analysis, bibliographic coupling analysis of texts, and co-citation analysis of authors were conducted.

RESULTS

Through searches with keywords, 1740 studies were identified in the WoS database. A total of 423 studies in editorial material, book review, correction, meeting, meeting abstract, book chapter, conference paper, and letter formats were excluded from the research. The studies ranged from the oldest in 1991 (n=1) to the most recent in 2023 (n=95). Of the identified studies, 1203 were articles, and 114 were reviews, making a total of 1317 studies forming the database for this research. When the publication years of the studies were examined, it was observed that their distribution increased compared to the previous year. In the last five years before 2023, the frequency of publications for the studies,

moving backward in time, were 204, 164, 157, 113, and 90 publications, respectively.

Of the 1160 studies related to Sustainable Development Goals, it was observed that they covered 15 out of 17 goals, excluding the goals "16. Peace, Justice, and Strong Institutions" and "17. Partnerships for the Goals." It was determined that 71% of the studies covered Goal 3, "Good Health and Well-being."

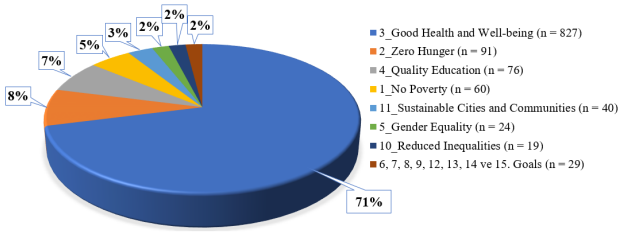

Figure 1. Distribution of studies according to sustainable development goals

While Spain was identified as the country with the most studies related to the concept of active ageing (n=201 publications), the country receiving the most citations for these publications was the United Kingdom (n=3073 citations). Figure 2 displays the publication and citation numbers of the top 10 countries where the studies are most frequently conducted. Data for Taiwan and Germany were also presented in the figure since both countries had an equal number of publications (n=63), placing them in the last position.

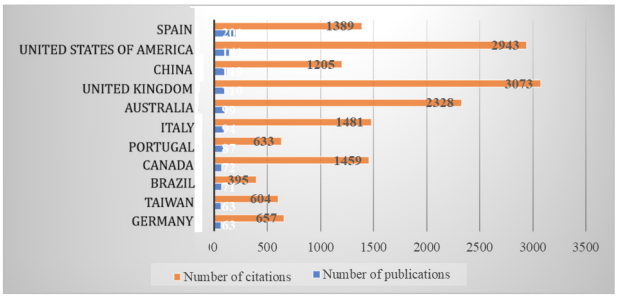

Figure 2. Publication and citation numbers of the top 10 countries with the most conducted studies

In the distribution of studies based on their topics, the top 10 topics were, in order: palliative care (n=225), nutrition and dietetics (n=185), social psychology (n=179), health policy (n=61), management (n=59), walking and posture (n=47), economics (n=45), political science (n=43), neurodegenerative diseases (n=32), and nursing (n=20).

The top 10 journals where studies on the concept of active ageing were most frequently published, along with the citation numbers, impact factors from the last five years obtained from the WoS, and the latest Q levels, were presented in Table 1.

Table 1. Top 10 journals with the most published studies and some characteristics

No	Journal name	Number of publications	Citation numbers	Impact factors	Q levels
1	International Journal of Environmental Research and Public Health	75	468	4.799	Q1 - Q2
2	Frontiers in Public Health	31	56	5.5	Q1
3	Journal of Aging and Physical Activity	25	233	2.2	Q4
4	Educational Gerontology	23	251	1.8	Q4
5	Gerontologist	19	1651	6.2	Q1
6	Ageing & Society	19	532	2.8	Q3
7	Journal of Aging Studies	16	288	2.8	Q3
8	Ageing International	15	155	1.6	Q4
9	Sensors	14	241	4.1	Q2
10	Sustainability	14	87	4	Q2 - Q3

Co-author Analysis

According to the co-author analysis conducted to examine the relationships and collaboration of authors who have collaborated in articles or research projects, 3744 authors had at least one publication and 1 citation related to the concept of active ageing. The top 3 authors conducting the most research on this topic were, in order, Taina Rantanen (n=16),

Erja Portegijs (n=13), and Milla Saajanaho (n=10). For the 235 authors with the highest collaboration and total link strength among the 3744 authors, a network and density map was presented in Figure 3.

Figure 3. Co-author analysis map

Author Citation Analysis

The top three authors who received the most citations for their research were Philip Atherton, Mike Larvin, and John Lund (each with 723 citations for their respective single studies). The top three authors with the highest link strength were, in order: Taina Rantanen (16 publications, 243 citations, 319 link strength), Erja Portegijs (13 publications, 202 citations, 289 link strength), and Milla Saajanaho (10 publications, 180 citations, 263 link strength). The author-citation analysis map for the shared citations of authors were presented in Figure 4.

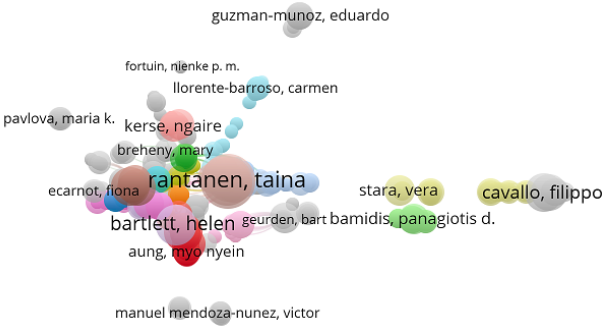

Figure 4. Author citation analysis

Keyword analysis

A total of 312 keywords were identified, each repeated in at least three studies. Based on the strength of connections established with other keywords for each of the 312 keywords, the keywords with the highest link strength were presented in Figure 2. The top 10 most used keywords, in order, were: active ageing (401 repetitions, 736 link strength), ageing (147 repetitions, 321 link strength), older adults (125 repetitions, 257 link strength), physical activity (69 repetitions, 189 link strength), quality of life (72 repetitions, 181 link strength), elderly (72 repetitions, 161 link strength), healthy ageing (55 repetitions, 121 link strength), ageing (63 repetitions, 119 link strength), older people (52 repetitions, 110 link strength), and health (44 repetitions, 99 link strength).

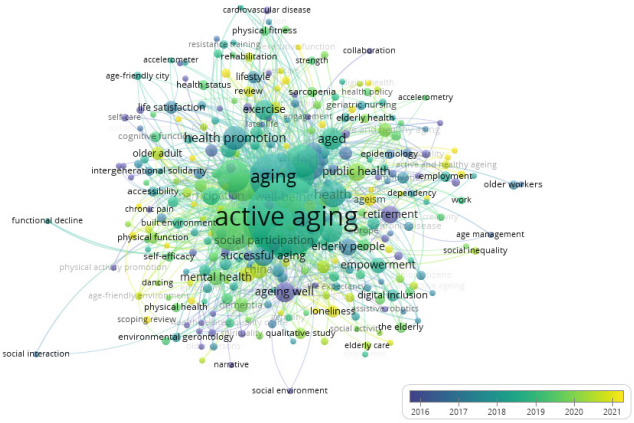

Figure 5. Keyword network analysis

Bibliographic match analysis of texts

A bibliographic match analysis was conducted through journals to determine the similarity and connections between articles that cite other articles, aiming to assess the impact capacity of the cited publications. According to the bibliographic match analysis results, the journal Gerontologist has been identified as the most influential journal in the field.

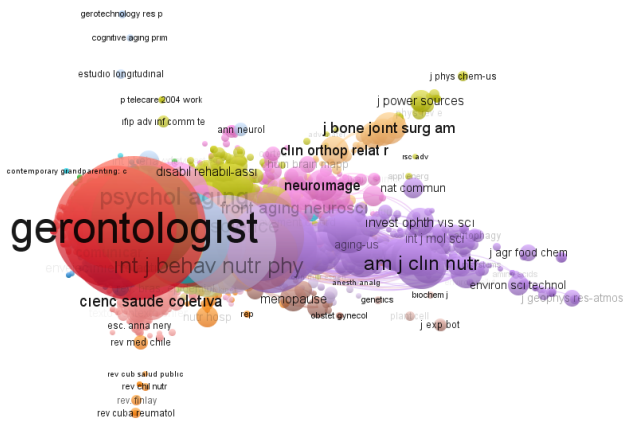

Figure 6. Journal-based bibliographic matching map

DISCUSSION

This study has presented a bibliometric analysis of research on the concept of active ageing and has revealed significant findings. The analysis results indicate an increasing trend in research on active ageing, particularly with a noticeable rise in the number of publications in recent years. The findings from this study contribute to a growing body of literature that frames ageing not only as a clinical or biological process but also as a social and participatory one.

However, it is essential to go beyond a descriptive account of these trends and consider how the current state of active ageing research can inform future research directions and policy changes. Active ageing research differs in scope and focus from more established fields, such as gerontology and geriatrics. While gerontology offers a comprehensive view of ageing, exploring the social, psychological, and biological changes associated with age, geriatrics is primarily concerned with the clinical care of elderly individuals.[16] On the other hand, active ageing emphasizes societal and policy interventions that promote autonomy, participation, and well-being in later life. This distinction suggests that the rise in active ageing studies may reflect a shift towards more holistic and preventive approaches to ageing, focusing on maintaining the quality of life rather than solely addressing the medical needs of older individuals.[17] This shift reflects a growing recognition of the need to focus on treating ageing-related diseases and creating environments that enable older individuals to thrive.

It is known that the effects of ageing vary across cultures and societies.[5] For instance, Barbabella et al. note that Italian policymakers prioritize interventions in labor market participation, lifelong learning, social and economic inequalities, health, and welfare in active ageing. They highlight, however, less attention to issues such as gender, equal opportunities, and sustainable cities.[1] Puspitasari et al., on the other hand, emphasize the need for creating a supportive environment focusing on addressing the informal employment of the elderly and meeting their primary health and social needs in Indonesia.[8] While the challenges affecting the elderly may vary from country to country, the Sustainable Development Goals are universal and can contribute to areas such as health, education, economic well-being, social participation, and the human rights of the elderly.[5,6] This analysis study also indicates the connection active ageing and sustainable development goals. Notably, studies focusing on health-related goals play a crucial role in promoting the healthy and quality living of elderly individuals.

Our study observed that the top five countries where studies on active ageing were conducted were Spain, the United States, China, the United Kingdom, and Australia, respectively. Mainly, the higher proportion of

the elderly population in Spain compared to other countries may had led to more extensive research on the concept of active ageing in this country. As of 2023, the percentage of individuals aged 80 and over is 6.2% in Spain, 5.3% in the United Kingdom, 4.4% in Australia, 4% in the United States, and 2.5% in China.[18] However, beyond demographic factors, Spain's proactive policy environment, mainly promoting healthy and active lifestyles for the elderly, has likely fostered a robust research output in this area. Spain has implemented several national strategies focused on elderly well-being, including the national strategy for active ageing, which aligns well with the growing academic interest in active ageing.[19,20] Within the Decade of Healthy Ageing 2020-2030 framework, Spain's ageing plans are aligned with the core principles set by the United Nations, such as active ageing, healthy ageing, social participation, independence, dignity, and care.[20] Moreover, Spain's solid public healthcare system and government investment in geriatric and public health research may have provided fertile ground for active ageing studies.[20,21]

In contrast, although the proportion of the elderly population is lower in the United Kingdom compared to Spain, the UK has a long history of gerontology and ageing research, supported by well-established institutions such as the Centre for Ageing Better and the UK's National Institute for Health Research (NIHR). The UK's research infrastructure is highly developed, with significant funding opportunities and a focus on interdisciplinary collaborations.[22,23] These factors may explain why the UK received more citations despite having fewer publications than Spain (n=3073). The UK's global research impact is enhanced by its involvement in international ageing studies and networks and its emphasis on translating research into policy recommendations that influence national and global discourses on active ageing. The UK's focus on high-impact publications in leading journals may also contribute to the higher citation count. Additionally, both countries' emphasis on preventive health measures, public health policy, and social inclusion for the elderly have likely fostered an environment conducive to active ageing research.

Although the proportion of the elderly population was lower in the United Kingdom and Australia, factors such as a large population (having a higher number of elderly individuals in absolute terms compared to other countries), research infrastructure, financial support, and effective collaboration between healthcare systems and research institutions may contribute to the leading position of the United States and China in scientific research on active ageing. In conclusion, these data suggest increased studies on active ageing in countries with a higher elderly population.

When examining the topic distributions of the concept of active ageing, it was observed that a broad spectrum of studies was conducted, including palliative care, nutrition and dietetics, social psychology, health policy, management, economics, and nursing. This situation allows us to understand the ageing process in a multifaceted way, indicating that the subject is not limited to health alone but also encompasses social, economic, and managerial dimensions. The investigation of the concept of active ageing in different fields signifies a multidimensional subject area, suggesting that it should be approached with an interdisciplinary perspective. Strong collaboration among geriatrics and

gerontology experts, palliative care specialists, nutrition and dietetics professionals, social psychologists, health policy experts, managers, economists, and nurses can contribute to finding comprehensive and effective solutions for ageing-related issues. By comparing the research outputs and citation impacts across these ageing-related fields, our study highlights that active ageing, while newer in scope, contributes to the broader discourse on ageing by emphasizing social determinants of health and promoting a multidisciplinary approach. It would be valuable for future research to integrate findings from gerontology and geriatrics further to contextualize active ageing within the broader ageing research landscape.

Although this study highlights significant research outputs in areas such as palliative care (n=225), nutrition and dietetics (n=185), and social psychology (n=179), several underrepresented areas within the active ageing research landscape remain. Notably, despite the increasing emphasis on physical and mental well-being, there is a lack of research on the role of digital technologies and intelligent environments in supporting active ageing. While topics such as health policy (n=61), management (n=59), and even walking and posture (n=47) have been explored, the growing trend of digital transformation in healthcare and social services has yet to be fully integrated into active ageing research. Future studies could focus on how technologies such as telemedicine, wearable health devices, and smart homes can facilitate active ageing by promoting independence, monitoring health, and improving the quality of life for elderly individuals. In addition to addressing existing research trends, future studies should focus on underexplored areas such as social participation, age-friendly environments, and policy interventions to promote active ageing in marginalized communities. The existing research tends to focus heavily on health and medical aspects, yet the social dimensions of active ageing should be more frequently studied. For example, while social psychology and social participation have been addressed to some extent, much remains to be explored regarding the role of social networks, community engagement, and lifelong learning in promoting active ageing. Future research could examine how social policies, such as age-friendly public spaces or intergenerational programs, contribute to the well-being of elderly individuals and how these initiatives can be scaled to different contexts.

When looking at the journals where studies on active ageing were most frequently published, the International Journal of Environmental Research and Public Health (75 publications) and Frontiers in Public Health (31 publications) stand out. The fact that both of these journals operate in the "Public Health" field indicates the importance of research on active ageing in this field. Additionally, bibliographic analyses conducted in the journals reveal that Gerontologist was the most influential source in the field. The Gerontologist journal received more citations than other journals in the field, making it a prominent source for studies on active ageing.

Limitations of the Study

The methodology used in this study followed standard bibliometric analysis practices, utilizing the WoS database. However, there are some limitations to conducting an analysis based solely on the WoS database. The exclusion of other major databases, such as

Scopus and PubMed, may result in overlooking significant contributions from specific regions or disciplines. Access to studies conducted in regions or disciplines where WoS is less prevalent may be limited. This could restrict the comprehensiveness of the research and introduce potential bias.

Nevertheless, WoS was chosen for this study due to its high reputation and broad coverage in academic literature. By combining different databases, future research could offer a broader and more interdisciplinary perspective. Such an approach could provide a more holistic view of active ageing research, reflecting regional and disciplinary diversity better. Despite this limitation, the study's findings offer valuable insights into understanding key trends and research gaps in active ageing.

Another limitation of this study was that the search was restricted to three specific keywords, which may limit the comprehensiveness of the analysis. Related terms, such as "productive ageing," could also be relevant and capture additional studies pertinent to active ageing. Future research could incorporate a broader range of keywords to ensure a more thorough exploration of the literature on ageing. Addressing this limitation in subsequent studies may provide further insights into active ageing and its various dimensions.

CONCLUSION

This bibliometric analysis sheds light on the overall development and trends in research on the concept of active ageing. The number and impact of studies on active ageing have increased, indicating a growing interest in the subject and its significant position in the scientific literature. Most studies focus on the sustainable development goals, particularly the goals of a healthy and quality life. This underscores the importance of active ageing as a crucial component of sustainable living. The leadership role of Spain in this field and the United Kingdom's status as the most cited country are noteworthy. The studies on the concept of active ageing cover various topics, including palliative care, nutrition and dietetics, and social psychology, indicating the multidimensional nature of the subject. A significant portion of the studies in this field were published in the Gerontologist journal, highlighting its contribution to the topic.

Based on the results of this study, the following recommendations can be made for future research on the topic of active ageing: To gain a more comprehensive and in-depth understanding, collaboration with colleagues from different disciplines and countries can be fostered, increasing the diversity of studies in this field. Active ageing research can be further associated with sustainable development goals, potentially encouraging a stronger focus on developing health policies and practices. The significance and impact of studies in this field have substantial potential to enhance the quality of life for the future elderly population and promote their societal contributions. Additionally, as the active ageing research continues to grow, there is an opportunity to influence global and national policies focusing on preventative health measures, public health policy, and social inclusion for the elderly. Aligning research with these policy priorities will help shape interventions that improve individual outcomes and reduce the societal burden associated with ageing populations.

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Ethical Declaration: Since this bibliometric analysis was a literature review, ethical approval was not required to execution the study. However, the research was conducted with ethical principles, such as respecting copyright and using data with proper citation. Any research or data collection processes involving humans or animals were excluded from this study. The methodology and limitations of the study have been clearly stated, and the results of the study are presented in an unbiased manner.

Author Contrubition: Concept: PD, ŞÖ, Design: PD, ŞÖ, Supervising: PD, Data collection and entry: ŞÖ, Analysis and interpretation: PD, Literature search: PD, ŞÖ, Writing: PD, ŞÖ, Critical review: PD.

REFERENCES

1. Barbabella F, Cela E, Socci M, Lucantoni D, Zannella M, Principi A. Active ageing in Italy: A systematic review of national and regional policies. Int. J. Environ. Res. Public Health. 2022;19(1):600.
2. World Health Organization. Ageing and Health, 2022, 1 Oct [online]. Available at https://www.who.int/news-room/fact-sheets/detail/ageing-and-health Accessed 8 September 2023.
3. Türkiye İstatistik Kurumu. İstatistiklerle Yaşlılar, 2022 [online]. Available at https://data.tuik.gov.tr/Bulten/Index?p=%C4%B0statistiklerle-Ya%C5%9Fl%C4%B1lar-2022-49667&dil=1 Accessed October 17, 2023.
4. World Health Organization. Active ageing: a policy framework, 2002 [online]. Available at https://apps.who.int/iris/handle/10665/67215 Accessed September 8, 2023.
5. Cox C. The sustainable development goals and aging: Implications for social work. J. Hum. Rights Soc. Work. 2020;5:39-47.
6. United Nations. Sustainable Development Goals. United Nations. [online]. Available at https://sustainabledevelopment.un.org/post2015/transformingourworld Accessed September 8, 2023.
7. Avcı C, Erhan G. Ageing versus active aging: how old age is represented in children's books. Educ. Gerontol. 2022;48(4):145-159.
8. Puspitasari MD, Rahardja MB, Herartri R, Surbakti IM. Managing age-related disability in Indonesia: An issue that extends beyond the concept of active aging. J. Aging Soc. Policy. 2023;35(6):1-17.
9. Brüchert T, Quentin P, Baumgart S, Bolte G. Barriers, facilitating factors, and intersectoral collaboration for promoting active mobility for healthy aging—a qualitative study within local government in Germany. Int. J. Environ. Res. Public Health. 2021;18(7): 3807.
10. Abud T, Kounidas G, Martin KR, Werth M, Cooper K, Kyaw-Myint P. Determinants of healthy ageing: a systematic review of contemporary literature. Aging Clin. Exp. Res.. 2022;34:1215-1223.
11. Cheng H, Yang Z, Ren Y. Understanding elderly rural stayers in China: A new model for active ageing. Tour. Manag. Perspect. 2022;43(100995).
12. Aung MN, Koyanagi Y, Ueno S, Tiraphat S, Yuasa M. A contemporary insight into an age-friendly environment contributing to the social network, active ageing and quality of life of community resident seniors in Japan. J Aging Environ. 2021;35(2):145-160.
13. Barbabella F, Cela E, Di Matteo C, et al. New multilevel partnerships and policy perspectives on active ageing in Italy: a national plan of action. Int. J. Environ. Res. Public Health. 2020;17(24):9585.
14. Andres A. Measuring Academic Research: How to Undertake a Bibliometric Study. 1st Edition ed. Chandos Publishing; 2009.
15. Cleland J, MacLeod A, Ellaway RH. CARDA: Guiding document analyses in health professions education research. Med. Educ.2023;57(5):406-417. doi:10.1111/medu.14964
16. Gilleard C, Higgs P. Gerontology versus Geriatrics: Different Ways of Understanding Ageing and Old Age. In: Scarre G, ed. The Palgrave Handbook of the Philosophy of Aging. Palgrave Macmillan; 2016.
17. Zaidi A. Active aging and active aging index. In: Gu D, Dupre ME, eds. Encyclopedia of Gerontology and Population Aging Springer International Publishing; 2022:chap 32-36.
18. World Health Organization. Percentage of total population aged 80 years or over, 2023 [online]. Available at https://platform.who.int/data/maternal-newborn-child-adolescent-ageing/

indicator-explorer-new/MCA/percentage-of-total-population-aged-80-years-or-over Accessed December 25, 2023.

19. Ministry of Social Rights, Consumer Affairs and 2030 Agenda of Spain. Spain's new National Strategy for a new model of care in the community: a de-institutionalisation process. Global Observatory of Long-Term Care, Care Policy and Evaluation Centre, London School of Economics and Political Science blog. 2024, 21 June, 2024.

20. Ruiz-Clavijo ABC, Diez ER. Social planning for ageing within the framework of the decade of healthy ageing (2020-2030). Revista de Gestão Social e Ambiental. 2024;18(7):e06027-e06027. doi:10.24857/rgsa.v18n7-033

21. Macia ES, del-Carmen-Segura M, Paz EC. Challenges of the aging policies in Spain. Humanities and Social Sciences. 2018;6(5):143-149.

22. NIHR. National Instıtute for Health and Care Research. 2024. [online]. Available at https://www.nihr.ac.uk/about-us/who-we-are Accessed September 28, 2024.

23. Centre for Ageing Better. Centre for Ageing Better: Action today for all our tomorrows. [online]. Available at https://ageing-better.org.uk/about-us Accessed September 28, 2024.