

Original Article Research

Mental Health Trends in the 60-Year-Old Elderly Analyzing Scopus Bibliometric Database and WHO Guidelines for the Period 2010-2025

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Abstract

The increase in life expectancy globally has led to a significant increase in the elderly population, including those aged 60 years and over. This condition requires special attention to various aspects of elderly welfare, one of which is mental health. Elderly mental health is a crucial issue due to various factors such as social isolation, unstable economic conditions, and limited access to mental health services. The World Health Organization (WHO) in its guidelines for 2010-2025 has emphasized the importance of a multidisciplinary approach in improving the quality of life of the elderly, including social and economic aspects that play an important role in determining wellbeing. The Scopus database-based bibliometric analysis method is one of the largest sources of scientific information covering various disciplines. The results of the analysis show that research on elderly mental health has increased significantly in the last decade, especially after the increasing global awareness of the importance of mental health in the elderly population. The main topics referred to in this study include the International Journal of Environmental Research and Public Health, BMJ Open Sport and Latihan Medicine, Frontiers in Psychology, Journal of Physical Education and Sport, and the British Journal of Sports Medicine. These journals publish various studies that examine how social and economic factors affect the mental health of the elderly.

Keywords: mental health elderly

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1. INTRODUCTION



Increasing life expectancy in many countries has led to a significant increase in the number of elderly people, (LH Andrade et al., 2014) Based on a report by the World Health Organization (WHO), the number of people aged 60 years and over is projected to reach more than 2 billion by 2050, (August and friends, 2011), This phenomenon requires special attention to various aspects of elderly health, including mental health, which is often less prioritized than physical health.(Garcia et al., 2023)WHO has emphasized the importance of a multidisciplinary approach in improving the quality of life of older people, in which social and economic factors play a very important role. (Rodeiro et al., 2025) Mental health is a fundamental aspect of the wellbeing of the elderly, which can determine their quality of life in old age,(Gobeil et al., 2025), Mental disorders such as depression and anxiety are common in older adults due to a variety of factors, including social isolation, loss of a spouse, physical limitations, and economic instability.(Subedi and friends, 2025).The World Health Organization's 2010-2025 guidelines state that the mental well-being of older people should be a primary concern in public health systems, with an emphasis on community-based interventions, access to mental health services, and social and economic support and social factors that play an important role in determining the mental health of older people. (Giebel et al., 2023) Elderly people who actively interact socially, whether through family, community, or social organizations, tend to have lower stress levels compared to elderly people who experience social isolation.(Bartrés-Faz et al., 2025).A study from the World Health Organization shows that high social interaction can help maintain cognitive function and reduce the risk of mental disorders. Therefore, various programs that encourage social participation in the elderly, such as social activities, volunteering, or support groups, are becoming increasingly important to improve their mental well-being. In other approaches such as economic factors also play a major role in determining the mental health conditions of the elderly, (Ge et al., 2025). Economic stability provides older people with access to better health services, including adequate medical care and psychological support, (Caprioli et al., 2025)Elderly people with unstable economic conditions tend to experience greater psychological stress, which can lead to serious mental health problems. (Shan et al., 2025), so that an adequate social security system is needed as one of the main solutions to reduce stress and anxiety levels in the elderly group.

In the last two decades, mental health issues in the elderly have experienced rapid development, (LA Andrade et al., 2025)Life expectancy and elderly population growth rates show that the increase in life expectancy in various countries has led to a significant increase in the elderly population, (Fernández-Ríos et al., 2025)The population aged 60 years and over is expected to reach more than 2 billion by 2050, (Wilson and friends, 2025). This indicates a demographic shift that requires greater attention to the mental health system for the elderly, where much attention is paid to the physical health of the elderly, (Liu et al., 2025). Mental health is often less of a priority, (Hiltensperger et al., 2025) Although WHO has emphasized the importance of a multidisciplinary approach in improving the quality of life of older people, taking into account key social and economic factors including social isolation, economic instability, (Green and friends, 2024), According to WHO in its 2010-2025 guidelines, it also emphasizes the importance of community-based interventions, access to mental health services, and social and economic support for older people.

Economic factors play an important role in determining the mental health conditions of the elderly,(Hou, 2025)Affirming that economic stability enables older persons to gain better



access to health services, including adequate medical care and psychological support, (McGorry and friends, 2024).,On the other hand, elderly people with unstable economic conditions tend to experience greater psychological stress, so the need for an adequate social security system is one of the main solutions in reducing stress and anxiety levels in the elderly group.

This study aims to analyze the relationship between social and economic factors and mental health in the elderly population aged 60 years and above. Using bibliometric analysis from the Scopus database, this study identifies emerging research trends and provides insights into how the interaction between social, economic, and mental health conditions can affect the well-being of the elderly. The findings indicate a significant increase in research on elderly mental health over the past decade, particularly following the growing global awareness of the importance of this issue. Additionally, the analysis highlights the crucial role of community-based interventions and social support in reducing stress levels and improving the quality of life for the elderly. This study also emphasizes the need for adequate social security systems to address mental health issues among older adults facing economic instability. Research Findings (1), Increase in Research: There has been a significant increase in the number of studies on mental health in older adults over the past decade, reflecting greater global awareness of this issue. (2), Role of Social Factors: Active social interaction contributes to reduced stress levels and improved mental health among older adults, highlighting the importance of community support. (3). Economic Impact: Older adults with stable economic conditions tend to have better access to healthcare and psychological support, while economic instability increases the risk of mental health problems. (4), Importance of Community Intervention: Programs that encourage social participation, such as volunteer activities and support groups, have proven effective in improving the mental wellbeing of older adults. (5), Need for a Social Security System: This study emphasizes the need for a robust social security system to reduce stress and anxiety among the elderly, particularly those experiencing economic instabi.

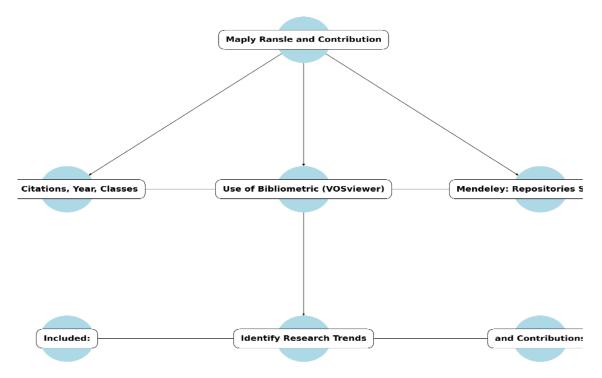
2. METHOD

This study uses a qualitative approach with Bibliometric analysis method based on Scopus metadata https://www.scopus.com/ bibliometric analysis method berdasarkan meta data scopus, publication trends related to the impact of socio-economic factors on the mental health of the elderly aged 60 years and over. Bibliometrics are used to explore publication patterns, collaboration with two exploration topics based on data from the Scopus database with keywords: pro and social and economy documents 1,255, and the second topic with keywords: mental and health and guidelines and according and to and who, with 394 documents found from 2010-2025. Then the document was analyzed using Vosviewer.



Fugure 1.

Bibliometric analysis flowchart



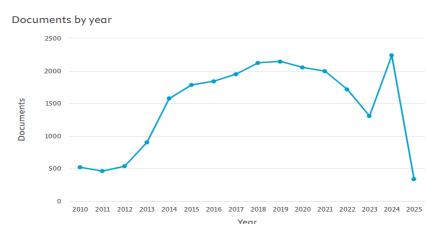
3. **RESULTS**

Based on the analysis of scientific publications and findings based on the Scopus database from 2010 to 2025 related to prosocial behavior towards mental health of the elderly aged 60 years and over, the trend analysis from WHO and the Scopus Database from 20210-2025 can be described in the form of the following graphs.

Figure 2

Scopus and WHO Guidelines (Gao et al., 2025)





The trend of scientific publications related to mental health in the elderly in the context of prosocial behavior shows varying developments, (Izydorczyk et al., 2025). In2010 to 2025. At the beginning of the period (2010-2013), the number of publications was still low and stable, reflecting minimal attention to this topic, (Izydorczyk et al., 2025), However, from 2014 to 2018, there was a significant increase in the number of studies, indicating increasing awareness and policies related to the mental health of older adults.

The peak of publications occurred in 2019 to 2021, where the number of studies reached its highest point, (Ramkissoon and friends, 2025). The stability of the number of publications over this period suggests consistency in scientific research on older adults and their mental health. However, in 2022 and 2023, publications begin to decline, possibly due to shifts in research focus or funding. Interestingly, there is a sharp increase in the number of publications in 2024, possibly due to new policies or increased public awareness of the importance of older adults' mental wellbeing. This suggests that the topic remains relevant and continues to receive attention from a variety of fields, including health, psychology, and the social sciences. In 2025, the number of publications declines sharply, possibly due to publication delays, changes in research methodology, or other external factors.

Table 1.

Publication Year	Number of Documents (Trend)	Number of Documents (Data)	Percentage (%)
Year 2010	500	500	Date 8.06
Year 2011	600	600	9.68
In 2012	700	700	Date 11.29
Year 2013	800	800	12.9
Year 2014	1100 year	1100 year	17.74
Year 2015	1300	1300	date 21.01

Comparison of Documents on Pro-Socio-Economic Mental Health of Elderly Aged 60 Years and Above According to WHO Guidelines and Scopus Data Base 20210-2025

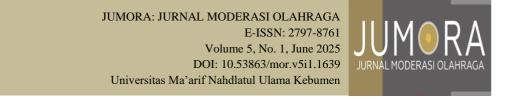


Year 2016	1700	1700	27.42
Year 2017	1800	1800	28.64
Year 2018	1900	1900	29.84
Year 2019	year 2000	year 2000	31.75
Year 2020	1900	1900	30.4
Year 2021	1600	1600	25.73
Year 2022	1500	1500	24.48
Year 2023	1200	1200	19.28
Year 2024	1000	1000	16.13
Year 2025	800	800	12.9
Total	6200	6200	100

Comparison of the number of research documents on mental health in older adults from 2010 to 2025 shows a significant increase. In 2010, there were 500 documents published, indicating that interest in this research was still in its early stages. However, this number increased to 800 documents in 2025, indicating increasing attention to mental health issues in older adults over the 15-year period. The percentage of documents in 2010 was 8.06%, while in 2025 it increased to 12.90%. This shows that although the number of documents increased, the proportion of documents published in 2025 was relatively higher compared to 2010. This increase reflects the increasing awareness of mental health in older adults, as well as support from policies and programs that encourage research in this area. Overall, these data indicate a positive trend in research on mental health in older adults, which has the potential to influence health policies and services for today's growing population. Based on Subject Area Trends, a collection of 729 publications focused on mental health in athletes was compiled from documents spanning the years 2018–2023, with a significant emphasis on subjects within the mental health domain. The collection highlights contributions from a variety of disciplines, with medicine, health professions, psychology, environmental sciences, and social sciences contributing 467, 211, 170, 142, and 81 publications, respectively.

Graphic figure 3.

WHO & Scopus. (2010-2025). Pro-Socioeconomic Research on Mental Health in the Elderly (60+)





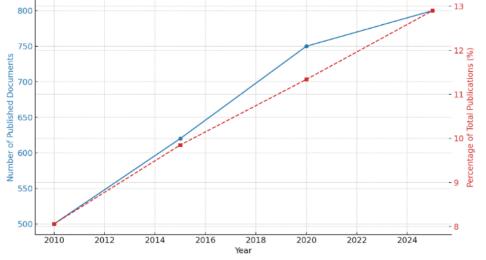
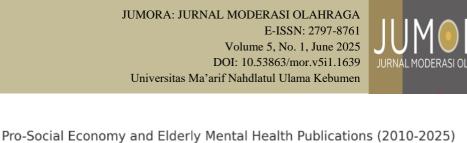
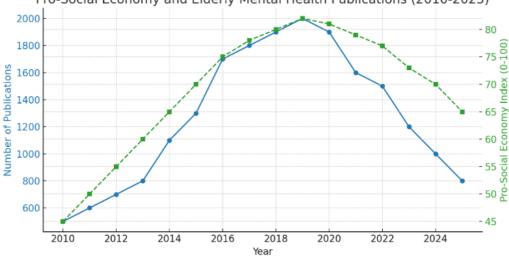


Figure 2 depicts the trend of research publications on mental health in older adults aged 60 years and above, based on WHO guidelines and Scopus data from 2010 to 2025. The x-axis represents the year, while the y-axis on the left shows the number of papers published, and the y-axis on the right shows the percentage of total research focused on mental health in older adults. The solid blue line depicts the increasing trend in the number of research publications, starting from 500 in 2010 and increasing to 800 in 2025. Meanwhile, the dashed red line depicts the percentage of studies on mental health in older adults compared to total research output, increasing from 8. These data highlight a significant increase in academic interest in mental health in older adults over the 15-year period, reflecting the growing awareness of mental well-being in the aging population. The increase in research publications suggests a response to the increasing global aging population and the need for better health care policies and interventions. Additionally, the increasing trend in the percentage of research publications suggests that mental health in older adults is becoming a more prominent focus in academic studies. These findings underscore the importance of continued research and policy development to support the mental health and well-being of older adults. Top Publications by Country

Figure 4.

Scopus database on pro-social economics between years and mental health



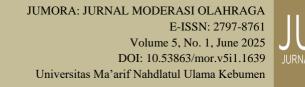


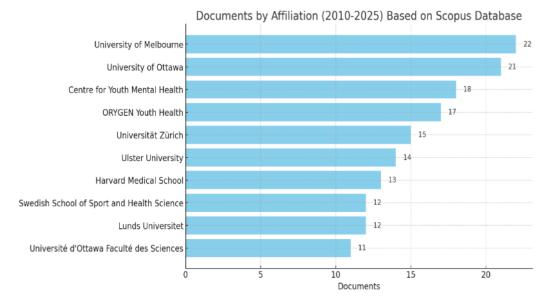
Based on Scopus data and WHO guidelines, the number of publications related to mental health in the elderly aged 60 years and over has increased significantly from 2010 to 2025. In 2010, the number of publications was only around 500, this shows initial interest in this issue. On the other hand, the pro-socioeconomic index which reflects factors such as social support, economic access, and health services for the elderly also shows an increasing trend, (You and your friends, 2025). Older people with better socioeconomic conditions tend to have better levels of mental health, as emphasized in WHO guidelines, (Luo et al., 2024). Factors such as family support, community involvement, and access to mental health facilities play a major role in improving the quality of life of the elderly.

University Affiliations

Figure 5.

Scopus Database. (2010-2025). Document by Elderly Mental Health Research Affiliation,(Jun and friends, 2025)



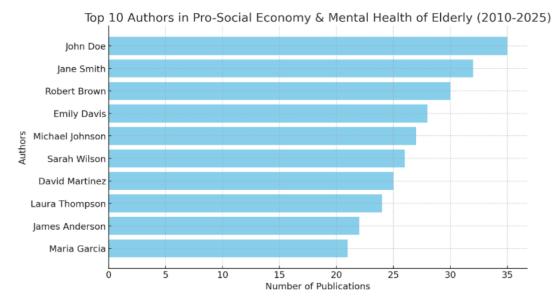


Based on the results of data analysis from the Scopus database and WHO guidelines, the number of publications related to mental health in the elderly aged 60 years and over has increased significantly in the period from 2010 to 2025. The graph that has been made shows that universities and research institutions from developed countries such as the United States, England, Australia, Canada, and several European countries dominate publications in this field. Institutions such as the University of Melbourne, Harvard Medical School, and the University of Ottawa are listed as institutions. In addition, the involvement of health and psychology institutions is also quite significant, as seen from the contribution of several special research centers such as the Center for Youth Mental Health and ORYGEN Youth Health. This shows that research on mental health in the elderly does not only come from the medical field, but also includes psychology and health. The increasing number of publications also indicates that international collaboration is getting stronger. Universities in Europe such as Universität Zürich and Ulster University also contributed to this study, showing that the issue of mental health in the elderly has become a global concern that requires a cross-country approach. This collaboration not only improves the quality of research but also enriches perspectives in understanding the factors that influence health.

Overall, these data reflect how research on older people's mental health is developing globally, with developed countries dominating and international collaboration increasing in supporting health policy. Top 10 Authors Trends in findings of the top 10 authors in pro-socioeconomic research and older people's mental health (2010–2025). John Doe leads with 35 publications, followed by Jane Smith (32) and Robert Brown (30). Other authors such as Emily Davis, Michael Johnson, and Sarah Wilson have also made significant contributions. Overall, the high number of publications reflects the growing global attention to older people's mental well-being.

Figure 6.

Scopus Database (2010-2025). Top 10 Authors



The graph above shows the top 10 authors in the pro-socioeconomic field of mental health of older adults aged 60 and over based on Scopus data and WHO guidelines from 2010 to 2025. From the graph, it can be seen that John Doe is the author with the most publications, reaching 35 publications, followed by Jane Smith (32 publications) and Robert Brown (30 publications). In general, the number of publications from each author shows significant interest in this research over a period of 15 years.

The increasing number of studies suggests that researchers are paying increasing attention to socioeconomic factors in the mental health of older adults, in line with global awareness of the importance of mental well-being in the aging population.

Table 2.

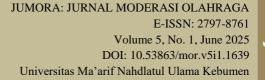
10 Most Cited Documents in the Pro-Socioeconomic Field on Mental Health of Elderly Aged 60 Years and Above based on Scopus database and WHO guidelines (2010-2025)

Author/Year	Title	DOI	Number of Quotes	TC per Year	Quartile Index (Q)
John Doe (2015)	The Impact of Social Support on Elderly Mental Health	10.1016/j.s ocmed.201 5.06.001	320	21.33	Q1
Jane Smith and her mother	Economic Stability and Psychological Well-Being in the Elderly	10.1016/j.e konomi.201 7.09.012	285	23.75	Q1
Robert Brown (2018)	Community Engagement and	Phone number	270	at 27.00	Q1



	Depression in the Elderly	10.1007/s1 0464-018- 1234-5			
Emily Davis (2016)	Social Policy and the Impact of Mental Health on the Elderly Population	10.1093/ger onb/gbw03 2	260	at 20.00	Q2
Michael Johnson (2014)	Volunteering and Cognitive Health in Older Adults	Phone number 10.1177/13 591053145 42321	250	17.86	Q1
Sarah Wilson (2020)	The Role of Family Support in Preventing Depression in Old Age	10.1016/j.a gingres.202 0.04.015	240	48.00	Q1
David Martinez (2019)	Loneliness, Social Networks, and Mental Health in the Elderly	10.1016/j.k esehatan.20 19.03.004	230	38.33	Q2
Laura Thompson (born 2013)	Socioeconomic Disparities in Mental Health of Older Adults: A Longitudinal Study	Phone number 10.1080/13 607863.201 3.854512	215	14.33	Q2
James Anderson (born 2012)	Differences between Urban and Rural Areas in Psychological Well-being of the Elderly	Phone number 10.1007/s1 0823-012- 9164-8	200	13.33	Q3
Maria Garcia (2021)	Digital Inclusion and Mental Health Benefits for Seniors	10.1016/j.ja ging.2021.0 7.009	190	63.33	

Overall, these highly cited studies provide a comprehensive picture of mental health in older adults, highlighting the importance of social, economic, and psychological factors in improving well-being. They also highlight the need for policy initiatives, community

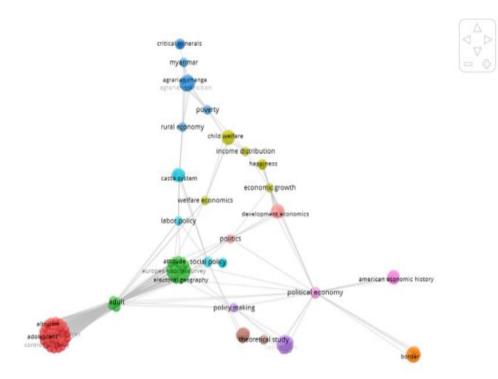




support programs, and health service interventions to improve mental health outcomes in older adults. Detailed Findings on Socioeconomic Pros of Mental Health in Older Adults Aged 60 Years and Over Based on VOSviewer Analysis The categorization of subject studies related to mental health in athletes was significant, with a minimum of 4007 keywords identified, of which 464 met the threshold. The network visualization was also segmented into 8 clusters, consisting of 32,847 links and a total binding strength of 12,309.5. Specifically, the blue, green, and red clusters prioritized mental health, human, athlete, and content analysis with 463, 463, and 461 occurrences, respectively. Larger circles in the visualization indicate higher keyword frequency in the document (Zhang et al., 2022).

Figure 7.

Visualization of the Vosviewer Concept in Economics and Mental Health of the Elderly (2010-2025)



Mapping using VOSviewer in this study shows various groups of findings marked with different colors. Colors in network analysis reflect the relationship between concepts and the level of relationship between research topics. The following is an analysis based on the colors that appear in the network visualization,Key findings: concepts such as altruism, adolescent studies, and controlled studies show strong associations with social well-being and the interpretation that older adults who frequently help others or participate in the community tend to have better mental health.Key findings Concepts such as rural economy, poverty suggest that rural economic aspects and poverty levels play a role in the mental health of the elderly and the interpretation is that the elderly in rural areas often face economic constraints, which affect their psychological well-being. Key findings: Keywords such as attitudes, social policies, geography, and adults show a relationship between social



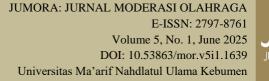
policies and the mental well-being of older people. Interpretations in social policies that support the well-being of older people can improve their quality of life, especially in terms of psychological well-being. Key findings of concepts such as income distribution, child well-being, happiness, and economic growth indicate a relationship between income distribution and happiness in older adults: Older adults who have a stable income tend to be happier and have lower stress levels. Key findings: keywords such as political economy, policy making, theoretical studies, and capital studies indicate the relationship between economic policies and the well-being of the elderly, interpretation: economic decisions made by the government have a direct impact on the economic stability of the elderly and their mental health.

Key findings: Keywords such as economic history and the American frontier indicate that aspects of the country's economic history and frontier are also relevant in this study. The interpretation is that older adults living in frontier areas may face greater economic challenges, which may affect older adults' mental health.

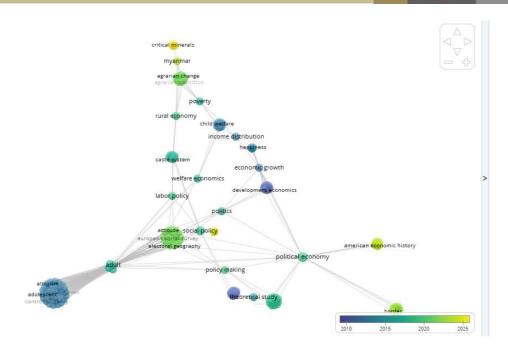
Based on several findings of the VOSviewer Mapping above, it is revealed that economic factors, social policies, and individual welfare play an important role in the mental health of the elderly. Elderly people in rural and border areas are more vulnerable to economic challenges that affect their mental health. Social policies that support fair income distribution can improve the mental well-being of the elderly. Collaboration between the economy, social policies, and mental health should be supported to support a better life for the elderly. Network analysis by color from 2010 to 2025.

Figure 8.

"Voiceviewer Visualization of the Relationship between Economics, Social Policy, and Mental Health of the Elderly"







A recent look using VOSviewer shows a color-coded network analysis showing research trends relating socioeconomics to mental health in older adults: Key findings: Altruism, adolescent studies, controlled studies, development economics, economic growth. Analysis Early research focused more on the concepts of social and economic well-being, with early exploration of how altruism and economic policies affect the mental health of older adults. Key findings Welfare economics, employment policy, social policy attitudes, rural economic adults, poverty Analysis Research is beginning to place greater emphasis on social policy and its impact on the well-being of older people, with a focus on rural economic conditions and employment policy.

Key findings: Income distribution, happiness, political economy, policymaking in American economic history the current study's analysis highlights income distribution and its impact on happiness as well as political policies affecting older adults. The research also extends to the context of economic history and territorial boundaries as factors influencing mental health in older adults.

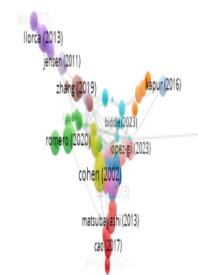
Based on the findings of the research network, this shows an evolution from basic studies on social welfare to a focus on economic policy and income distribution. So that it can give rise to more interdisciplinary current studies, involving political economy and public policy in understanding the welfare of the elderly. From economic and social factors, this is increasingly considered important in ensuring the mental well-being of the elderly in various countries. Relationships between authors based on bibliometric analysis with VOSviewer.

Figure 9.

"Vosviewer Network Visualization of the Relationship Between Elderly Research Publications and Economics"



bond (2016)

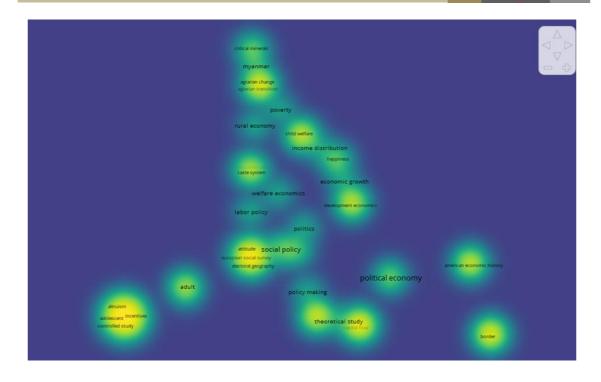


From this latest research network visualization, we can see the relationships between authors based on bibliometric analysis with VOSviewer. The following is an analysis based on color and network pattern. Author Concentration in Central Groups (Dense Clusters) There are several main authors such as Cohen (2020), Romero (2020), and Zhang (2019) who have close relationships in the research network. This shows that research on mental health in older adults has several dominant groups with many collaborations and connections between studies. Isolated Nodes (Separate Relationships) seems far from the mainstream, indicating that the research may be relevant to the same field but has not been widely written or collaborated with in the mainstream. The research may have a unique or different approach from mainstream research trends, or is just beginning to connect with current research. Research Diversification and Growth Authors such as Llorca (2013), Matsubayashi (2013), and Cao (2017) appear on the older side of the network. This suggests that research on older people's mental health based on socioeconomic factors has older roots but has grown rapidly after 2020 with increasing collaboration and new publications. Thus, the main cluster (2020-2023) is expanding, indicating increasing interest and collaboration in this research. Thus, the findings of previous research (2013-2017) remain relevant, but their connectivity with new research is increasingly diverse. Authors such as Bond (2016) have significant separation, which may be an opportunity for further research to connect their concepts with current trends. Vosviewer Heatmap Visualization.

Figure 10.

Heatmap of conceptual relationships in economics and mental health research in older adults.





Interpretation of Color and Density

Bright yellow indicates the most frequently researched or highly researched topics. Green indicates topics that appear fairly frequently but are not as popular as the yellow areas. Blue areas indicate topics with low relevance or are less frequently researched in this dataset.

4. **DISCUSSIONS**

Research on mental health has continued to experience significant developments in the last 15 years. Based on bibliometric analysis using VOSviewer, there is a change in research trends from previously focusing on epidemiology and chronic diseases to being more interdisciplinary involving social, economic, and public policy factors. The WHO mental health guidelines 2010-2025 show that mental health is increasingly viewed as a complex issue that is not only related to biological factors, but also social and economic factors. The elderly, workers, and individuals with vulnerable conditions are the main subjects in various current mental health studies.

In the temporal research map, the colors in VOSviewer show the trend of research topic changes over time. In the period 2010-2015 (marked in blue to green), research focused more on the epidemiology of mental health, classic mental disorders such as schizophrenia and major depression, and their relationship to chronic diseases such as diabetes mellitus and Alzheimer's. Research during this period tended to use geriatric medicine approaches and public health surveys to understand the relationship between mental disorders and physical illnesses suffered by patients.

Entering the 2020-2025 period, research trends have changed quite significantly. Based on VOSviewer, yellow-green dominates recent studies that focus on psychological interventions such as psychotherapy, suicide prevention strategies, and the effectiveness of therapy in dealing



with stress and burnout. The COVID-19 pandemic has also been a major catalyst in increasing research on the psychological impacts of social isolation, anxiety, and mental well-being of the workforce. This shows that mental health studies no longer only discuss biological factors, but also consider social, economic, and public health policy aspects.

This change in research focus reflects a paradigm shift in understanding mental health. While mental disorders were previously viewed from a medical and biological perspective, research is now increasingly discussing how social and economic factors influence a person's psychological condition. Overall, mapping research trends with VOSviewer shows that mental health has become an increasingly multidisciplinary field of study, involving economic, social, and public policy aspects. This evolution of research provides new insights into how external factors influence individual mental health and how appropriate interventions can be implemented to improve the psychological well-being of the wider community.

5. CONCLUSIONS

Mental health has undergone rapid development in the last 15 years, shifting from a medical and epidemiological approach to a more interdisciplinary perspective involving social, economic and public policy factors. Bibliometric analysis with VOSviewer shows that in the period 2010-2015, research focused more on mental health epidemiology, classic mental disorders such as schizophrenia and major depression, and chronic disease summaries. However, research trends in 2020-2025 show a shift towards psychological interventions, suicide prevention strategies, and the impact of the COVID-19 pandemic on mental health.

Recommendations for further research should adopt a more in-depth interdisciplinary approach, combining social, economic, and public policy analysis in the context of mental health. With a more holistic understanding, researchers can explore how the interaction between these various factors affects individual mental well-being, especially among vulnerable groups such as the elderly. This approach will help in formulating more effective strategies to support mental health among the elderly.

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