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Bibliometric Analysis of Scientific Literature on Mental Health Research in Africa

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Abstract

This bibliometric study presents a comprehensive summary of literature published on mental health research in Africa. The region has a large number of scientific studies conducted in this area. The purpose of this study was to investigate the contributions of African researchers to global mental research. It also investigated the quantity of research and publications about Africa. Bibliographic information for the analysis was retrieved from the Web of Science database. Over 11,960 and 1,144 articles from 1900 to the present were culled and examined respectively. Using scientific mapping tools and performance analysis methods, this study pinpointed the top countries, institutions, collaboration patterns, prolific authors, and developing themes in this research field. Although the results showed that African scholars contributed significantly to worldwide research and publication on mental health, the number of publications that are exclusively about Africa is only 0.09%

of the global output. A closer look at the data showed that South Africa really outperformed all other countries in terms of research output. Anxiety, depression, and Covid-19 were the three most common terms used by authors. The results are noteworthy for the academic community because they provided a historical context for mental health studies.

Keywords: Bibliometric analysis, Science mapping, Citation analysis, Co-occurrence keywords analysis, Performance analysis Co-authorship analysis, Mental health, Co-citation analysis

1 Introduction

According to the World Health Organization (WHO), a person is considered to be mentally healthy if they have a positive outlook on life, are confident in their own skills, are actively contributing members of society through their profession, and are not experiencing any serious mental health problems [1]. Felman defined mental health as the presence of a harmonious blend of cognitive ability, behavioural flexibility, and emotional security [2]. A report by the WHO stated that mental health is often given less attention than physical health in most countries [3]. According to this study, a large percentage of the world's population experiences difficulties relating to their mental health. While these statistics are certainly a cause for concern, the report claims that governments around the world have consistently and publicly ignored and undervalued the issue of mental health (MH). Further, millions of individuals all across the world suffer from mental health issues, as highlighted by the United Nations paper [4]. According to the report, one in four people will suffer from mental illness at some point in their lives. Other researchers have stressed the global nature of mental health issues and the consequential effects they have [5].

1.1 An overview of studies done in Africa on Mental Health

Africa is the second most populous continent after Asia, with over a billion inhabitants. It is a diverse continent with a vast range of faiths, races, and cultures, as well as urban, suburban, and rural locations. Conflict and various forms of political turmoil, gender inequality as well as economic stagnation, impact several regions of the continent [6], and a study [7] suggests that these are the most prevalent social indicators of mental illness in Africa. Consequently, many scholars have reviewed the available material and concluded that mental health has been severely disregarded by successive leaders in developing countries [8]. Developing countries have very poor mental health policies and research funding. Many countries in Africa have only one psychiatrist for every one million citizens. Misconceptions abound about mental illness in Africa [9–11]. Other studies have presented overviews of the fundamental fields of research into mental health in Africa, particularly mental illnesses [12] and

rates of mental illness in young people from Sub-Saharan Africa [13]. In contrast, bibliometric analysis [14, 15] is used in this study to look at Africa's overall impact on the domain of mental health research from 1900 to 2022. The volume of these articles that are focused on the continent of Africa was studied to meet the following goals:

- To assess the contributions of African academics in this field by looking into the number of publications on mental health research.
- To look into the amount of research done exclusively on the subject of mental health in Africa by African authors.
- Using the citations analysis parameter, to examine the number of citations these indicated publications have received to assess their influence.
- To use keyword analysis to determine the research themes and frequently used terms that have been investigated on the subject of mental health in Africa, as well as to gain an understanding of the conceptual framework of the body of knowledge and new developments in the field.
- To evaluate African authors', institutions', and nations' contributions and partnerships in the field of mental health research.

There are several reasons why it is essential to undertake bibliographic studies of research in the field of mental health in Africa. To begin, a bibliometric study would be helpful in that it would reveal previously unnoticed patterns in the success of publications and journals in this field. It would shed light on the collaborative patterns and key players in the field of African mental health research. A bibliometric study of regional publications in the field of mental health would also look into their theoretical foundations and highlight knowledge gaps in the most important research areas. Researchers, doctors, policymakers, government officials, academic institutions, and anyone interested in learning more about the research trends and intellectual framework in this topic will find the results of this study useful [16, 17].

Bibliographic analysis has strong empirical backing in the health sciences. However, no bibliometric analysis of journal articles devoted to research on mental health in Africa has been published as of yet. A few records were found, and they concerned studies of mental health all around the world and their connections to the virus Covid-19 and other illnesses [18–20]. This study examined the theoretical foundations and evolving trends in research articles on mental health in African countries to gain a better understanding of the topic at hand. The study used bibliometric analysis to cover a wider range of publication dates and concentrated on works authored by researchers with ties to African universities, filling a knowledge vacuum that had previously been overlooked.

2 Methodology

Bibliometric methods like performance analysis and science mapping were used to examine the impact and visibility of groups of scientific authors. Science

mapping was used to assess the relevance of published papers to studies of mental health in Africa. Specifically, the project analysed the citation and co-citation patterns and the co-occurrence of words and the co-authorship in the selected academic publications.

Web of Science (WoS), Scopus, and Google Scholar are just a few of the databases that may be utilised to conduct a bibliometrics search and extract data [21]. A bibliometric data search, however, requires careful consideration when deciding which source to use. The WoS database was utilised for data search because, compared to Pub Med, Scopus and Google Scholar (three other sources), it was deemed the most appropriate index for use in this bibliometric analysis. WoS was selected because it is widely recognised as a top resource for scholarly article citations and abstracts [22]. The database is said to index roughly 8500 of the most prestigious and influential scientific papers in the world [23] In addition, the WoS database is widely acknowledged as the most relevant bibliometric data source from which information may be retrieved for comparative analysis of research production across nations, authors, and institutions [24].

The methodology was based on a statistical evaluation of relevant papers from the WoS. The abstract, topic, and title of the identified literature served as criteria for selecting these works. The study's step-by-step procedures are depicted in Figure 1.
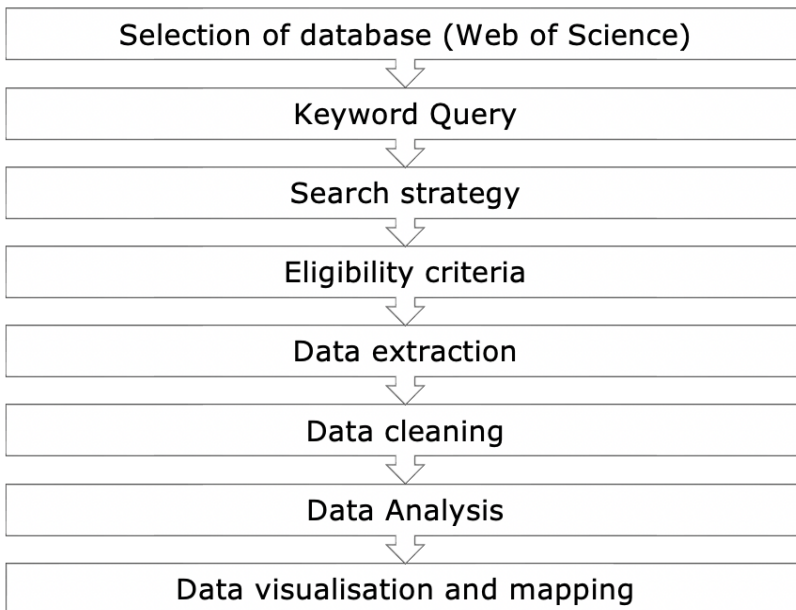

Fig. 1 The flowchart of the proposed methodology

During the data-gathering stage of this research, the team used two strategies. The first method retrieved records about research on mental health by African writers for Africa, while the second method retrieved records about research on mental health by African scholars in general. The mesh word *mental health* and Africa were linked using the Boolean operator "AND". This method was used to collect papers on the topic of mental health in Africa. Using this information, we looked at how many scholarly articles had been written by African authors and about Africa. To assess the contribution of African academics to global mental health research, we gathered articles that were not narrowly focused on the continent using the second keyword, "mental health" and this was used for comparative analysis. The keywords used in the search were derived from an analysis of twenty-five articles from a variety of sources that dealt with the research topic.

Using mesh terms from queries, a thorough search was performed in the WoS database between August 10 and 18, 2022, with one scenario focusing on "mental health*" and Africa and the other focusing on "mental health*" alone. The research utilised asterisks (*) as wildcards in both search techniques to account for variations in keyword spelling to retrieve any publications that shared similarities with the keywords [25]. Publications were obtained on a variety of mental health-related themes, including mental healthcare, mental health care, and mental illness. The quotation marks symbols were used to ensure that only results that had the precise phrase "mental health*" would be returned by the search engine.

2.1 Eligibility

The only parameters employed in the initial search were the article title, abstract, and keywords. To enhance the search, the following inclusion criteria were established because the WoS database allows users to do a variety of searches, including those based on publication year, country/region, source type, and document type:

Date: 1900 to August 2022. There was no time range included in the search. All years of publications in WoS were taken into account, as long as they were relevant to the predetermined search terms.

Document Types: To narrow the search, we disregarded documents that merely corrected previous mistakes or reported recent events. This was achieved by employing WoS's "refine" and "limit" functions. We restricted the scope of the research to scholarly publications such as peer-reviewed articles, early-access journals, review articles, book chapters, book reviews, conference papers, and letters. The majority of the documents obtained for analysis were journal papers, which are regarded as original and novel works [26]. While articles and reviews made up the bulk of the documents extracted, the other publication types listed in Table 3 were also retrieved because each piece contains original research and provides insight into the state of the domain.

Languages: Articles written in English, French, and Afrikaans

Country affiliation to authors: Publication locations were also used as a criterion for the data. Only articles written by African researchers were included in the analysis. The "Countries/Regions" section on WoS was used to manually pick and review African countries and regions.

2.2 Data extraction and cleaning

After taking into account the aforementioned criteria, the final search yielded 11,960 records that were analysed to determine the extent to which African experts have contributed to global mental health research. While the second keyword search query generated a total of 1,144 papers utilised to examine the number of research by African writers and for Africa specifically.

The bibliometric indicators obtained from the extracted data were publication year, keywords, abstract, author, nations, regions, institutions, topic field, document type, journal, and citation rate. Many researchers from different parts of the world have studied mental health extensively over the years. According to WoS database records, however, the earliest or first registered publication on mental health research that largely focused on Africa was published in 1924, while the most recent is expected to be published in 2022. In contrast, the other keyword ("mental health*") search query revealed that mental health research on the continent dates back to 1903 when the oldest publication was published as noted in WoS.

The identified publications were exported as a tab-delimited file which contained the Full Record Content and Cited References. A total of 27 separate files were downloaded for the keyword search of "mental health*". While 3 separate files were downloaded for the second keyword search query "mental health*" and Africa.

Due to a limitation in WoS, large quantities of bibliometric data could only be exported in increments of 500 records. In addition, comma-separated values files with the Wos's Citation Reports for each document returned by the search were created. The significance of publications in the field of mental health research in Africa was evaluated using this exported data set. It is important to remember that, as a dynamic process, citation might cause the citation rate of the retrieved publications to rise and fall. Accordingly, all citation data was accurate at the time this study was completed.

During the data-cleaning phase of the investigation, two methods were used. To begin, the dataset was manually inspected to rule out the possibility of any major missing records, outliers, or coding discrepancies. Second, we made sure that the field content was consistent with the field titles and that the coverage of the content was the same as stated in the field names. Several glaring inaccuracies were uncovered, including misspelt words, inaccurate publishing dates, and the use of anonymous authors. The end result of this was the deletion of all data that had been input erroneously. Data identified through citation reviews were selected, filtered, extracted, and saved in a new file format following data cleansing.

2.3 Data Analysis

The data analysis phase made use of two quite different kinds of software to perform the analysis and display the findings. A descriptive analysis of the retrieved records was performed first, using Microsoft Excel. In this study, we analysed the number of scholarly articles published on mental health in Africa, as well as the characteristics of the research journals themselves and the number of citations to those articles. Data, such as highly cited journals, prominent research institutes and nations in the domain, and the pattern of publications, were analysed, rated, and tallied in MS Excel.

Second, we utilised the VOSviewer, a bibliometric visualisation network tool, to create a network map of the retrieved data. VOSviewer may display data in three distinct ways: through a network, an overlay, and via density [26]. The co-authorship, co-citation, and citation networks were visualised by network visualisation in this study, while the co-occurrence keywords network was revealed through overlay visualisation. In network visualisation, the interactions and interconnections between entities and between entities and themes published in a given field are depicted graphically. These connections provide graphical depictions of how each node in the network functions [27] and that the distance between two circles is representative of the depth of the connection between the ideas [24]. We compared the relative strength of connections by measuring line thickness. This was employed as a metric of author and institution collaboration. It was believed that greater relative link strength led to greater collaboration. For the most part, a larger circle size indicated increased output or citations. In addition, the VOSviewer's colour-coded data helps users see the trajectory and association between various term components. The colour of the connecting phrases grows more prominent as the "phrase" is used or mentioned in more works of literature. However, a tenuous bond is indicated when the colour is pale.

No other sources' keywords were used in the co-occurrence analysis. Using the link strength measurement, the research determined the frequency with which two or more terms co-occur in a single publication. A visual depiction of the keyword analysis is provided below.

The co-authorship analysis aimed to do the same thing by looking into the level of cooperation between the most influential authors in the field. The number of documents written by two or more related institutions served as the analytical unit, while an examination of the total link strength provided insight into the depth of the co-authorship ties between all the countries associated with a certain nation. Therefore, authors without a relationship were omitted from the analysis. Excluding these authors from the analysis would not significantly alter the outcome because they only had one publication and made minor contributions to the study. This research treated university departments and research centres within a single country or region as discrete units for the purposes of its institutional analysis. It should be emphasised, however, that when such information was missing, the university was regarded as a single entity. This research used the author's institution's home nation

as the basis for its country analysis. The purpose of the journal analysis was to determine which journal is the most prominent in this field of study. Journal characteristics were analysed to see how representative the journals were of the articles that were retrieved. For this journal evaluation, we employed a cutoff of 10 articles per journal. Journals were sorted by their publication output and citation frequency.

3 Results

3.1 Description and publications growth

Only 5,168 (or 42.8%) of the 11,960 data used for analysis were research publications. Also, 11,645 (or 97.3%) of the documents retrieved and analysed were written in English. There were 17,771 authors from 1,164 different institutions, and the papers appeared in 2,654 journals. WoS claims that the first related paper appeared in the Archives De Psychologie in 1903. Figure 2 shows the total number of academic papers published between the years 1903 and 2022. It can be seen from the graph that between 1904 and 1959, there was a negligible increase in the number of research publications in this sector, with the number fluctuating between zero and ten per year. Slight increases of around 30-50 publications per year were seen between 1961 and 1970, but the number of publications has been on a steady decline since then. After a lengthy period of gradual growth, however, there was a sudden rise between 2003 and 2022. According to the graph's tendency, there was a maximum of 762 records of papers authored by African scholars in the year 2021. From 2011 to 2021, there was a significant increase of 485 total publications. This highlighted the increasing attention paid to studies of mental health in Africa, both by academics and publishing houses.
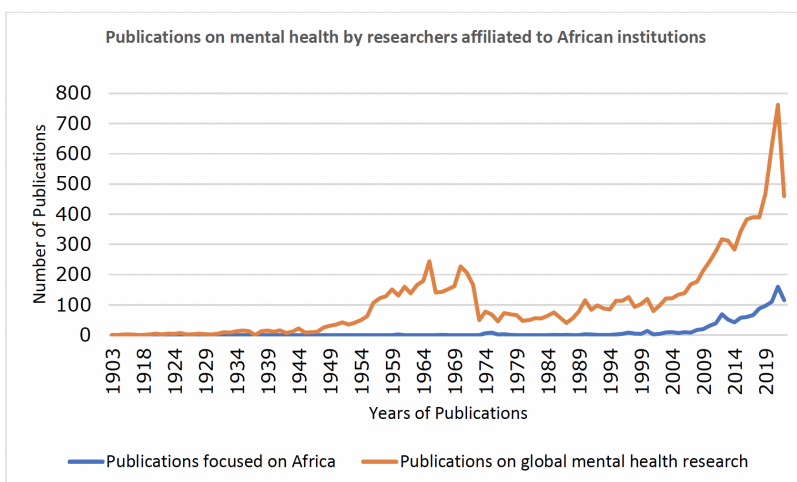

Fig. 2 Chronological analysis of Global vs African focused publications

In contrast, the current research combined the two data sets and cross-referenced the results to count the number of articles that specifically addressed Africa. As the investigation progressed, it became clear that research publications likewise made up the bulk of published content. On the other hand, the data showed that only 0.09% of all studies on mental health around the world included Africa as a setting. According to the figure, between 1924 and 1959, there was essentially no change in the number of publications. Two publications were cited as being available in 1960. The total number of published papers fluctuated between one and eight between 1961 and 1990. In 2021, a total of 160 articles were produced, making it the most prolific year.

3.2 Institution and country analysis

As part of our study, we tallied up the number of scholarly works published by each African country to evaluate their relative impact and research output. According to the data, as shown in Table 1, South Africa had the most articles published and link popularity (59,821). Nigeria published the second-highest records (464) and link strength of 31,154; while Ethiopia came in third place (24,543). Table 1 summarised the five leading countries in research on mental health on the continent, while Figure 3 shows the strength of the connections between these countries in terms of publications.

Table 1 Top five countries with the most publications

Countries	No. of Publications	Total Link Strength
South Africa	1,543	59,821
Nigeria	464	31,154
Ethiopia	285	24,543
Ghana	120	12,977
Egypt	171	9,130

The research also investigated the region's top research institution for mental health publications. Based on their link counts, the analysis revealed which institutions and organisations were the most active. After analysing the published research on mental health in Africa, researchers discovered 1,164 affiliated institutions. Table 3.2 below lists the top 10 of these organisations. With a total of 62,412 links and 307 articles, the University of Cape Town topped the charts in this section. Additionally, the university (4,573) obtained the highest number of citations, solidifying its position as one of the continent's leading centres for mental health research. The inter-institutional network of collaboration in Figure 4 shows a visualisation of these connections. It was found that over 270 different institutions collaborated with one another across African regions, as evidenced by the presence of more than 50 links between them.
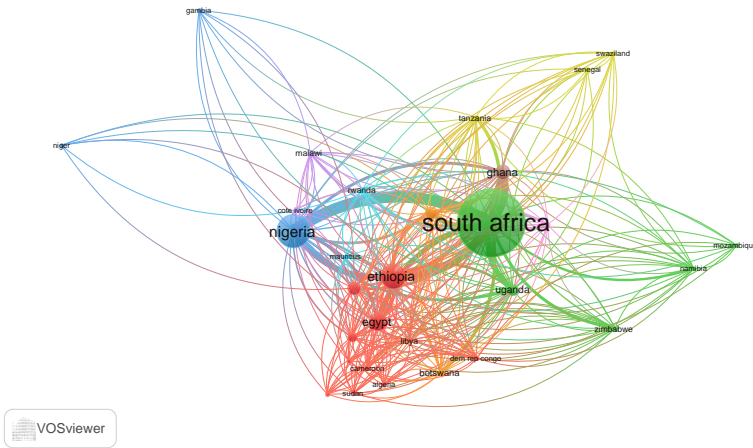
Fig. 3 The link strength of countries by publication count

Table 2 Affiliations and Publication Count

Affiliations	Publication Count	Total Links	Location
University of Cape Town	307	62,412	South Africa
University of KwaZulu Natal	271	47,698	South Africa
University of Witwatersrand	250	33,095	South Africa
Stellenbosch University	237	28,226	South Africa
University of Pretoria	160	22,781	South Africa
North-West University	153	21,713	South Africa
South African Medical Research Council	139	21,248	South Africa
University of Ibadan	125	15,599	Nigeria
University of Gondar	125	15,373	Ethiopia
University of Ghana	82	13,159	Ghana

3.3 Analysis of Country/Region collaboration

Furthermore, the publication collaboration pattern by country was shown in Figure 5. VOSviewer is based on the general tenet that a stronger relationship exists between any two countries that are significantly closer to one another in the application's user interface and that the thickness of the line between them reflects the degree of this relationship [28]. According to the results of the co-authorship analysis, South Africa is associated with 19 other countries and/or territories through a total of 1,546 co-authored works. The number of documents written in collaboration by authors from Nigeria (464 total) placed them in second place. Despite having more scholarly articles and citations than Kenya and Uganda, Egypt had a lower regional interaction profile. Kenya is the third most linked country in international collaborations, despite having only published 88 documents with 442 citations. With a total of 25 links, 120 co-authored papers, and 904 citations, Ghana is certainly an active research
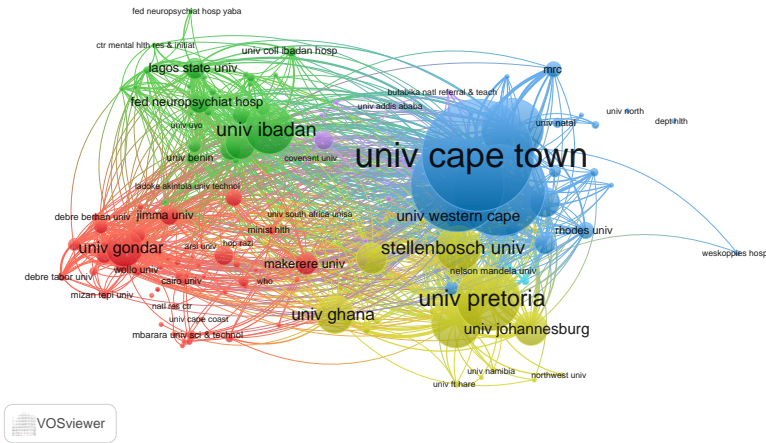
Fig. 4 The Institutional interaction network.

hub in the continent. The research also found that 41 of the identified countries, or 2/3 of them, had an inter-regional collaboration with fewer than 2 nations. However, researchers from Libya, Algeria, Senegal, Cote d'Ivoire, and Madagascar were not affiliated with any other countries in the publication of articles on mental health research.
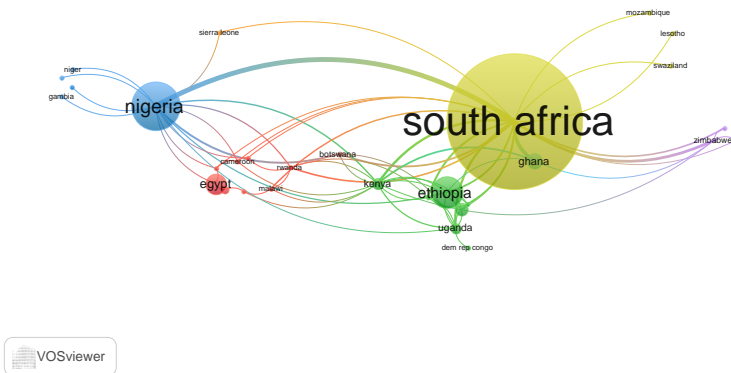

Fig. 5 Country collaboration network analysis based on co-authorship.

3.4 Analysis of Scholarly Journals

In total, 2,654 different journals from all over the continent were found to have published articles related to mental health. Based on a comprehensive literature assessment, the study identified the top ten journals in the field (shown in Figure 6) as measured by the total number of articles published. The American Journal of Psychiatry, the American Journal of Orthopsychiatry, and the Mental Hygiene Journal were the top three journals in this category.
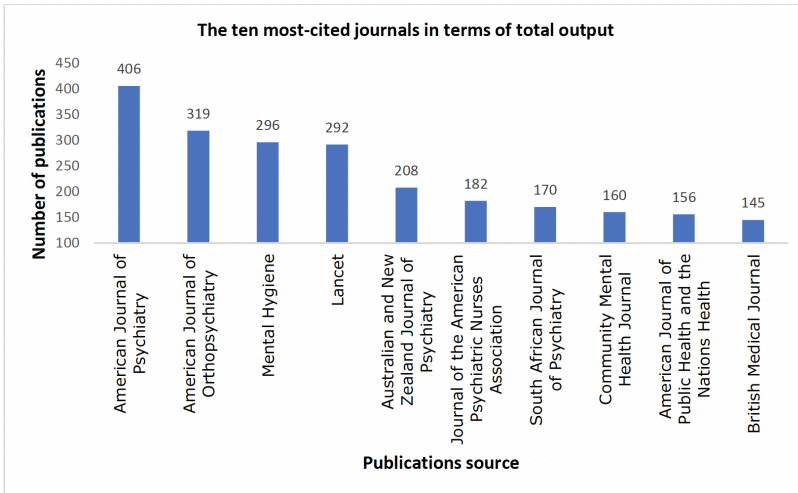

Fig. 6 The top ten journals in the publications of Africa's global mental health research output

Several scholarly journals, including the Lancet and the Australian and New Zealand journal of psychiatry, have played important roles in disseminating research findings in this area. In Figure 6, we can see that most studies that analysed the total contributions of African scholars to global mental health research appeared in peer-reviewed international periodicals. This proved that academics from different regions worked together to advance global mental health research.

Moreover, we looked at the volume of citations received by each publication to determine its influence in the field of mental health research in the region. While the American Journal of Psychiatry may have produced more papers in the domain, VOSviewer's examination of citation data shows that the Journal of Paediatrics is more frequently cited. As shown in Figure 7, the latter received 4,659 citations. The British Journal of Psychiatry and Archives of General Psychiatry came next.
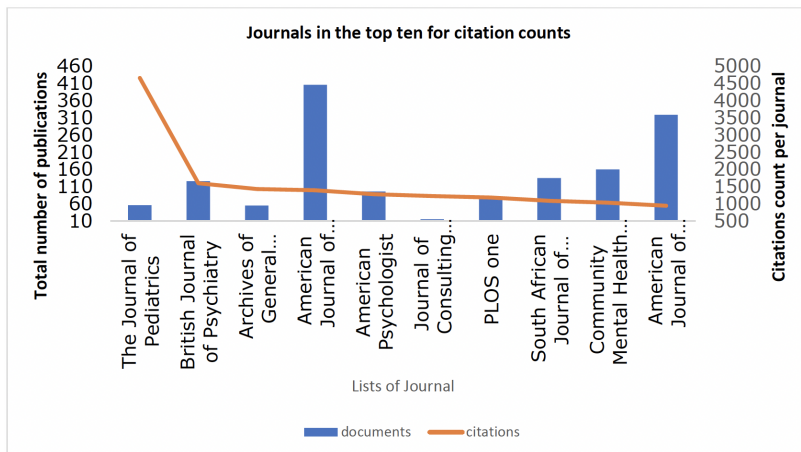
Fig. 7 Journals in the top ten for citation counts

3.5 Analysis of citations

The purpose of the citation study was to look at how citations have changed over time and to provide a descriptive analysis of the most cited publication in the field. Figure 8 analyses the total number of citations per year in relation to the number of publications from 1900 to 2022, thereby illuminating the citation pattern. A study of the fluctuation of citation counts over a five-year period is presented. The total number of citations showed a gradual increase from 1930 to 1958, as depicted by the graph. The graph showed that the total number of citations rose steadily between 1959 and 1975. During this time span, there was a rise in citations from 72 in 1959 to 486 in 1975. Still, between the years 1990 and 1993, there was a significant drop. The subsequent years saw a dramatic increase in citations, from 370 to 1063. The number of citations began rising again in 2010, reaching a high of 8,276 in 2021.

The retrieved documents also produced a total of 63,867 citations, with citation counts ranging from 0 to 8,276. The overall h-index is 88 and the average number of citations per publication is 12.1. The h-index measures an author's overall contribution to their field and serves as a measure of their success, as stated by [29]. The high h-index of the identified records indicates widespread interest from both authors and readers. Among academic works released in 2017, "Handbook for the Study of Mental Health: Social Contexts, Theories, and Systems, 3rd Edition" was the most often cited. Understanding mental health and mental disease in the context of mental health delivery systems was the focus of this document. Table 3.5 displays the 20 most-cited papers. There was a total of ten published books, four editorial pieces/chapters, and three scholarly works included on the list. However, most of these articles need payment to see their content. Articles published in open-access journals are more likely to be referenced by other researchers.
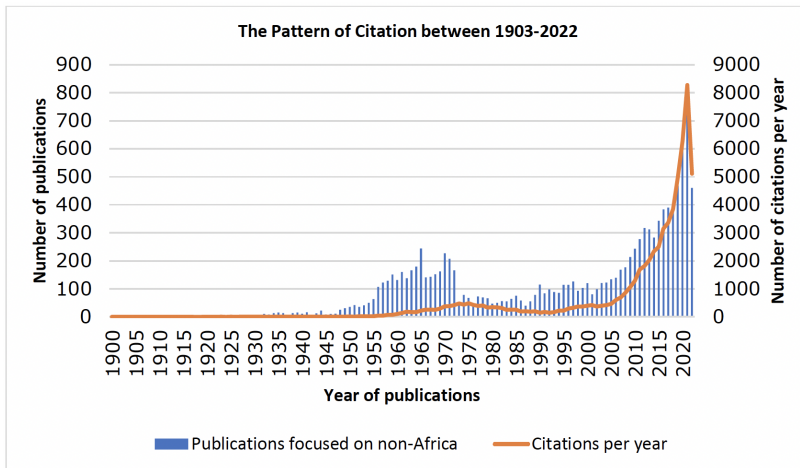
Fig. 8 The pattern of citation over time

Table 3 The 5 most frequently referenced publications

Article Title	Cited Reference Count
"Handbook for the Study of Mental Health: Social Contexts, Theories, and Systems, 3rd Edition"	4003
"The handbook of sociology and human rights preface"	2392
"Movements for human rights locally and globally introduction"	2390
"Peace Psychology: A Comprehensive Introduction"	1641
"Child Welfare Challenge: Policy, Practice, and Research"	1379

In addition, a citation analysis of African institutions was conducted to assess the research output of a specific institution by looking at the number of citations generated by that institution's academic activity. Figure 9 depicts the citation network of various educational institutions. The study revealed that the University of Cape Town, the University of Stellenbosch, the University of KwaZulu Natal, the University of Witwatersrand, and the University of Ibadan were the top five most referenced universities in the study of mental health on the continent.

3.6 Analysis of the Authors' contributions

A count of publications was used in an authorship analysis to determine which individuals had the greatest impact on the field. Authors with at least 10 works published on the topic were considered for the analysis. According to the data, 11,960 articles collected from WoS were written by 17,771 different individuals. The threshold was reached at 82 authors. Table 4 displays the results of the study, which analysed only the publications of the top ten most prolific authors. Without a shadow of a doubt, these writers are the most prominent on the continent in the study of mental health around the globe.
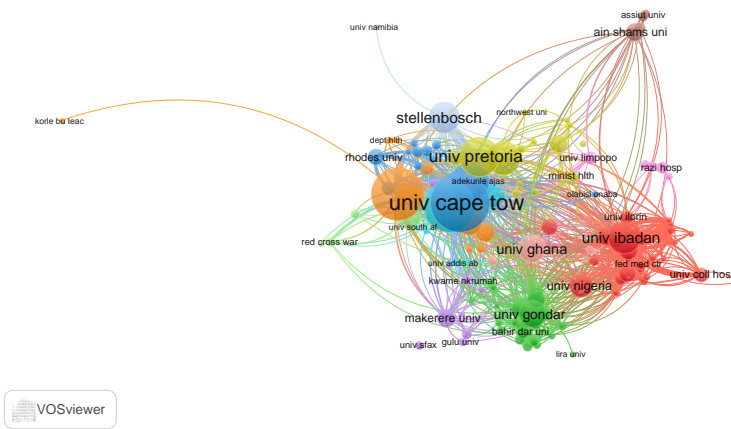
Fig. 9 The citation network of institutions

These authors were found to have ties to the top 25 universities. The research found that DJ Stein, with 60 publications and 1,217 citations, had the largest impact in this area. With 55 records and 1,283 citations, Lund C is the most often cited journal, placing it in second place. Table 4 below provides a visual representation of these results.

Table 4 List of the ten most prolific researchers in the subject of global mental health

Author	Documents	Citations	Affiliations
Stein, DJ	60	1217	University of Cape Town
Lund, C	55	1283	University of Cape Town
Swartz, L	47	439	Stellenbosch University
Petersen, I	43	1131	University of KwaZulu Natal
Seedat, S	41	1013	Stellenbosch University
Gureje, O	35	944	University College Ibadan
Kagee, A	30	463	Stellenbosch University
Atilola, O	26	207	University College Ibadan
Pillay, AL	26	185	University of KwaZulu Natal
Rothmann, S	25	206	North West University

It was also found that African researchers do engage in some type of collaboration. Only 86 authors out of a total of 17,771 authors satisfied the criterion, according to the co-authorship study. Table 4 shows that Lund C. is the most linked author, followed by Stein DJ (77 links), and then Swartz I. (47 links). Figure 10 depicts a typical example of collaboration between African scholars. There are a minimum of 10 publications by each author with a connection strength of at least 2. The network visualisation reveals six unique groups of co-authorship.
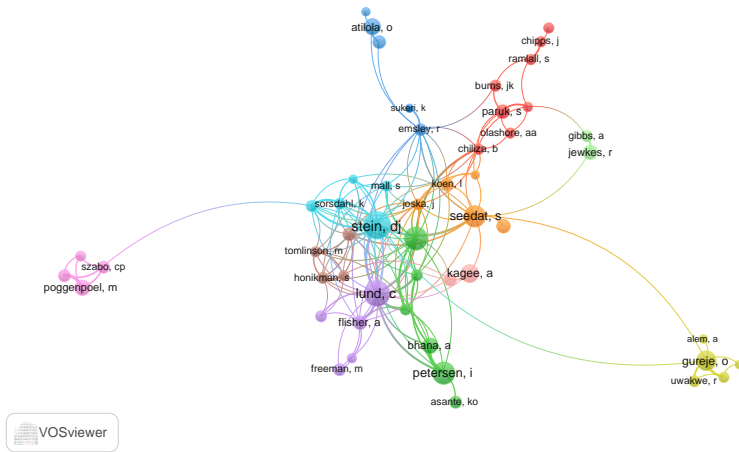
Fig. 10 Co-authorship network of collaboration among African researchers

3.7 Analysis of co-occurrence keywords

The most used words and phrases by writers reflect the primary areas of attention and interest in the scientific community. To understand the changing trend in the research field, we used VOSviewer to conduct a co-occurrence analysis of the authors' keywords. The analysis's findings were presented in a graphical overlay that showed how often specific keywords occurred annually. The information was analysed so that the study's fourth goal could be achieved. The investigation found 6,408 unique writers' keywords. The analysis was refined by excluding some keywords in order to create a keyword map that reflected a more thorough grasp of the concepts involved. In total, 157 of the authors' keywords that appeared at least 10 times or more across the works were used for analysis. Network visualisation of the analysis of co-occurrence keywords is shown in Figure 11.

With 333 co-occurrences, the term "depression" has the highest overall link strength, followed by Covid-19 (221), anxiety (141), teenagers (138), and mental illness (114). Furthermore, the selected keywords were divided into six categories as illustrated in Figures 11. The six groups on the map represented various subjects connected to African mental health research. In general, these findings are consistent with prior findings on the intellectual structure of mental health-related knowledge during the Covid-19 pandemic [24].

4 Discussion

Good mental health is a given, but when it declines to the point that it interferes with daily life, it is considered a disability. The review demonstrates a rise in research focused on mental well-being in recent years. Following the devastating Covid-19 outbreak [30–32], this curiosity skyrocketed. This study
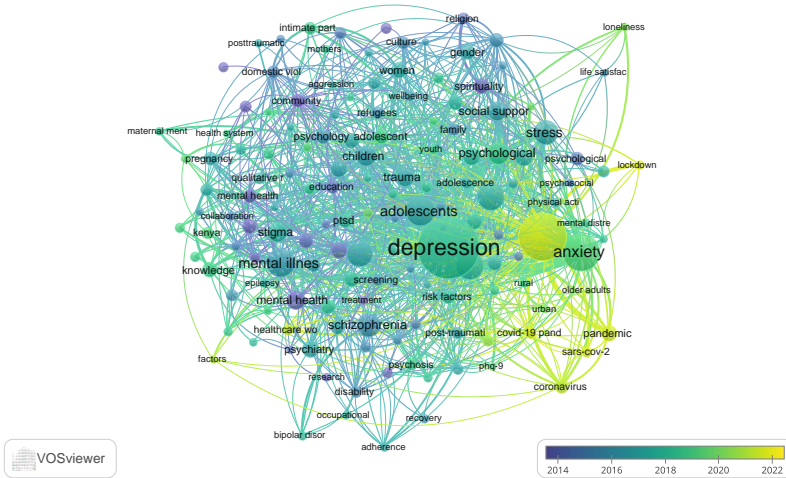
Fig. 11 Analysis of the time-related co-occurrence of keywords

evaluated the trajectory of African authors' explorations of mental health by analysing bibliometric and visualisation data. As part of this investigation, the current state of affairs and the characteristics of these scholarly works were analysed. Researchers in this study also analysed the impact of scholarly authors in the field. According to the findings, there has been a significant rise in the number of academic journals during the past five years. The research team hypothesised that poverty, conflict, social exclusion, refugees, discrimination, poor health policies, the rising HIV prevalence in Africa, violence against women, stigmatisation, and, most importantly, the impact of the Covid-19 pandemic were to blame for this rise in the occurrence of mental health problems like schizophrenia, anxiety, depression, and suicide.

It seemed that the most commonly reported issues in this area were depression, Covid-19, and anxiety [33, 34]. This supported [35] claim that mental health and depressive illnesses accounted for a sizable proportion of the world's disease burden in the year 2000. Similarly, [36] foresaw a significant shift in the mental health requirements of the world's population over the next two decades as a result of the increasing incidence of mental diseases such as depression, dementia, alcoholism, and schizophrenia. By 2030, depression is expected to overtake cancer as the biggest cause of death worldwide, according to a United Nations assessment published document [37].

Furthermore, it was not unexpected that African scholars were also interested in Covid-19. For all human history, the year 2020 will go down as a turning point of monumental significance. The consequences of Covid-19 were obvious all throughout. This year was marked by increased security measures, strained healthcare services, corpse bags, deserted streets, and a general sense of hopelessness. Modern society was profoundly affected by the pandemic. In

addition, despite having the longest history of wars, Africa ranked last in the number of country-specific studies published in this area of study.

Journals in psychiatry, psychology, public and occupational health, internal medicine, social work, nursing, and rehabilitation were mined for research articles on mental health. Mental health has become more of a mainstream research topic in the medical and public health fields thanks in large part to the efforts of specialised journals like Mental Hygiene, Community Mental Health Journal, American Journal of Psychiatry, British Medical Journal, and American Journal of Orthopsychiatry. There was also evidence of increased international interest in the publication of mental health research through the inclusion of papers authored in languages other than English. According to the findings, researchers studying mental health who are connected to institutions in Africa have made significant contributions. However, different regions of the continent had varying degrees of involvement and attention paid by these publications. According to the findings, South Africa is the leading nation on the continent in this research area. The analysis reveals and places Nigeria as the continent's number two nation in the domain. There have been major contributions from other countries, such as Ethiopia, Ghana, and Egypt. Each of the four nations represented a different region of Africa: West Africa, East Africa, and North Africa. Despite making such a significant impact, the analysis showed that only 0.09 per cent of the world's research in this sector was conducted in Africa. Because mental health was not seen as a public problem in the regions under study until relatively recently, the research output of African-specific publications was limited. A lack of resources to carry out the study and publish findings could be another contributing factor. Figure 2 displays an upward trend in the number of articles published in this subset between 2018 and 2021, which may be indicative of a growing interest in research with an African focus. Contrarily, the research team opines that there is not enough demand for the service. There will likely be more papers released in the near future.

Furthermore, universities were also identified as the most crucial organisational support structures for scientific research in the region. The University of Cape Town in South Africa is the organisation with the most impact. Universities in the South, West, and East African regions clearly exhibit geographical differences when it comes to organisational collaboration. Universities were also identified as the most crucial organisational support structures for scientific research in the same way. The University of Cape Town in South Africa is the most significant school there. When comparing universities in South Africa, West Africa, and East Africa, there are clear geographical differences. Moreover, the analysis conducted using VOSviewer reveals that South African institutions have the most bibliographic couplings and links with institutions from other countries. Based on this analysis, it is clear that South African institutions are at the forefront of this field of study in Africa. Articles made up roughly 42.3% of all retrieved documents when analysed by type. This indicated that non-periodical publications such as books, reviews, book reviews,

letters, and editorials also contributed significantly to the area. Co-occurrence keyword analysis found that major central topics within the domain included depression, Covid-19, anxiety, mental disease, HIV, teenagers, stress, and quality of life. Figure 11's use of colour to represent the development of concepts across time is very instructive. The keywords that were more than a few years old were shown in a dark purple colour, while the more recent ones were shown in a brilliant yellow. Moreover, the image showed six separate clusters related to studies on mental health in Africa.

5 Conclusion and Limitations

Findings from this study dispute the belief that African researchers have made no contributions to this field of study. The data showed that during the past five years, there has been an increasing rate of research being published. Publication growth has been strong, and it is expected to climb even further as governments around the world (African countries/regions) continue to fight the consequences of the Covid-19 pandemic and other economic, and sociopolitical challenges.

Conclusions for future researchers on the subject of mental health include suggestions for reading material, authors, and topics to consider. Interesting findings were found through the bibliometric analysis, but there are still questions that need answering. To begin, the research spanned a huge time frame, from 1900 to 2022. The most influential academic journals in this area during the past decade could be the focus of follow-up studies. Second, it's possible that the interdisciplinary approach used produced conflicting results. Reviewers in the future may wish to pay special attention to the literature concerning mental health disorders as a whole in order to address this issue. Last but not least, because the data utilised in the analysis came from the WoS, there is always the possibility that some significant papers from other databases were left out, making the data suspect. It's possible that in the future, researchers will use data from additional bibliometric resources.

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