A Bibliometric Review on Maternal Mental Health in Africa and Future Research Directions

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Abstract

This bibliometric analysis evaluates the current research on maternal mental health in the African context using citation analysis, co-authorship analysis, and keyword analysis. The analysis reveals trends in interdisciplinary collaborations and advanced technologies in data analysis, as well as patterns in frequently cited authors and keywords. However, gaps in existing research are identified, particularly in subtopics that have received limited attention. Key findings include a growing focus on technology and education, a gap in research on socio-economic factors, a strong collaboration network among researchers, and emerging themes like personalized learning, online education, and student engagement. These findings are crucial for informing future research priorities and guiding interventions to improve maternal mental health in the African context.

Keywords: bibliometric review, maternal mental health, Africa, trends, patterns

1.0 Introduction

The impact of maternal mental health on women is observed on a global scale, encompassing various regions, such as Africa. The mental well-being of mothers has been found to have an impact on the physical and cognitive development of their children, as evidenced by studies conducted by Cooper et al. (1999) and Madeghe (2016). Nevertheless, numerous African nations disregard the importance of maternal mental health.

Maternal mental health challenges are prevalent in the African context. The lack of mental health services, the pervasive societal stigma associated with mental illness, and the inadequate education and comprehension of mental health issues all serve to exacerbate the issue (Weobong et al., 2015). Thompson et al. (2022) claim that various socioeconomic factors, such as poverty and violence, exacerbate the mental health of African mothers.

The adverse outcomes associated with maternal mental health are significant. This condition has the potential to hinder a mother's capacity to provide care for her children. Maternal mental health disorders can have an impact on the cognitive and emotional development of offspring (Cooper et al., 1999; Madeghe et al., 2016; Weobong et al., 2015).

In order to effectively address maternal mental health in Africa, it is imperative to develop a comprehensive and multifaceted approach. The aforementioned strategy aims to enhance the accessibility of mental health services, raise public consciousness, reduce social stigma, and incorporate mental health treatment within maternal and child health initiatives. In order to attain enduring transformation, it is imperative to incorporate poverty and gender inequality as crucial social determinants that influence mental health outcomes.

The bibliometric analysis conducted in this study focuses on the topic of maternal mental health in Africa. The primary objective is to examine the existing scholarly literature in order to identify prevailing trends, patterns, and areas of research that have not been adequately explored. The aforementioned methodology evaluates the current corpus of knowledge and has the potential to inform subsequent scholarly investigations and interventions (Drolet & Makhoul, 2021; Zhu & Liu, 2020; Zupic, 2015).

Researchers commonly utilize databases such as PubMed, Scopus, and the Web of Science to identify pertinent scholarly articles for the purpose of conducting bibliometric analyses. According to Drolet and Makhoul (2021), the subsequent steps in the research process would involve citation, co-authorship, and keyword analysis.

Citation analysis is a technique for determining the number of citations that articles have received, locating papers with a significant number of citations, and identifying significant authors and journals within a particular academic discipline. The analysis of co-authorship serves to identify potential research networks and partnerships by examining the collaborative efforts between researchers and institutions. The utilization of keyword analysis aids scholars in the identification of crucial themes and subjects within the body of literature (Drolet & Makhoul, 2021).

Bibliometric analysis can serve as a valuable tool for scholars seeking to explore the field of African maternal mental health research. Gaps in information, unexplored areas, and emerging trends can be discerned. The aforementioned data possesses the potential to contribute to the establishment of future research objectives, the formulation of policies, and the advancement of initiatives aimed at improving maternal mental health in the African context.

Bibliometric reviews encompass quantitative analyses of existing literature rather than the collection of primary data. Hence, the aforementioned statement succinctly encapsulates academic research.

without introducing novel discoveries. Nevertheless, it can facilitate comprehension of current knowledge and provide direction for future research.

Insufficient scholarly investigation has been conducted regarding the interconnections, classifications, and affiliations of the themes. The aforementioned statement underscores the pressing necessity to broaden the conceptual framework and conduct comprehensive analyses of interconnections across various academic fields in order to ascertain forthcoming areas of research focus.

Therefore, the objective of this study is to address the subsequent inquiries:

How is the organization of research on maternal mental health in Africa structured?

To what extent does the review comprehensively address the diverse array of topics pertaining to maternal mental health and the breadth of research conducted in this field?

What contributions have researchers in the field of maternal mental health in Africa made?

2.0 Methodology

The main data source for this study was the Scopus database, which Elsevier provided. Elsevier currently owns the Scopus database, which launched in 2004. According to Zupic (2015), some scholars in the field of bibliometrics argue that it offers a broader range of coverage when compared to the Social Sciences Citation Index (SSCI). This approach's increased coverage scope makes it possible to map smaller study areas that might not be well-represented in the SSCI (WOS) database. The majority of widely used bibliometric software programs provide support for the importation of data from Scopus. Nevertheless, the utilization of this particular characteristic within the community of management and organization scholars has not been widely prevalent (Zupic, 2015). The incorporation of complete author data in the

references cited within Scopus improves the accuracy of author-based citation and co-citation analysis (Zupic, 2015).

The present study utilized various bibliometric indexes to examine the data from multiple perspectives. After determining the title of the study, a search string was created on the Scopus database by incorporating appropriate keywords.

We conducted a systematic data collection and archiving process using the "title, abstract, keywords" search function available in the Scopus database. Our data collection was limited to journal article documents published between 1991 and 2022, specifically focusing on articles at the final stage of publication and written in the English language.

The search results were saved in a comma-separated values (CSV) format, containing important information about the papers such as the title, author names and affiliations, abstract, keywords, and references.

Table 1: Initial Search Query

120 document results

TITLE-ABS-KEY (("postpartum psychosis" OR "baby blues" OR "perinatal mental health" OR "maternal mental health" OR "post-partum mental disorder" OR "post-partum psychiatric disorder" OR "post-partum depression" OR "postnatal mental disorder" OR "postnatal psychiatric disorder" OR "postpartum depression" OR "postpartum anxiety") AND africa) AND (LIMIT-TO (PUBYEAR , 2023) OR LIMIT-TO (PUBYEAR , 2022) OR LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012) OR LIMIT-TO (PUBYEAR , 2011) OR LIMIT-TO (PUBYEAR , 2010) OR LIMIT-TO (PUBYEAR , 2009) OR LIMIT-TO (PUBYEAR , 2008) OR LIMIT-TO (PUBYEAR , 2007) OR LIMIT-TO (PUBYEAR , 2006) OR LIMIT-TO (PUBYEAR , 2005) OR LIMIT-TO (PUBYEAR , 2002) OR LIMIT-TO (PUBYEAR , 2000) OR LIMIT-TO (PUBYEAR , 1999) OR LIMIT-TO (PUBYEAR , 1992) OR LIMIT-TO (PUBYEAR , 1991)) AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (SRCTYPE , "j")))

The search query yielded a total of 120 documents as results.

An analysis was performed on a selection of twenty highly influential authors, prominent institutions, impactful countries, frequently cited publications, and statistical data pertaining to keywords. The examination of publication frequency pertains to historical indicators of growth, prominent areas of research, favored formats, and leading academic journals that focus on the intersection of maternal mental health in Africa. In order to analyze the expansion of scientific literature regarding the intersection of maternal mental health in Africa, we initially gathered scholarly information from the Scopus database, covering the time frame from 1999 to December 2022. Following this, we utilized Vos viewer, a commonly employed tool for visualizing bibliometric analysis, to visually depict the collected data (Pirri et al., 2020). According to Falagas et al. (2008), the Scopus database provides a broader range of journals in comparison to PubMed and Web of Science. Additionally, Scopus offers a more efficient and comprehensive citation analysis.

A comprehensive analysis was conducted on a total of 120 articles using the VOS viewer and R software. The bibliometrix package was specifically employed for this analysis. These articles were obtained from

the Scopus database. The data underwent analysis through the utilization of document statistics, co-authorship statistics, journal impact, national publication trends, document citation impact, and key words. The primary objective of this study was to analyze the correlations, interconnectedness, and categorizations of scientific inquiries related to maternal mental health in the African context.

The utilization of this analytical approach enables the generation of an all-encompassing bibliography, thereby facilitating the identification of hidden correlations (Falagas et al., 2008). The subsequent tables present a comprehensive analysis of the findings derived from our research.

Table 1. Description of dataset

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	1991:2022
Sources (Journals, Books, etc)	76
Documents	120
Annual Growth Rate %	9.13
Document Average Age	5.48
Average citations per doc	27.01
References	6230
DOCUMENT CONTENTS	
Keywords Plus (ID)	1012
Author's Keywords (DE)	338
AUTHORS	
Authors	634
Authors of single-authored docs	4
AUTHORS COLLABORATION	
Single-authored docs	4
Co-Authors per Doc	7.04
International co-authorships %	67.5
DOCUMENT TYPES	
article	120

From the table of descriptions, it can be seen that interest in maternal mental health in Africa has seen an annual growth rate of 9.13%, with average document citations of 27.01 and references of 6230 of the 120 documents reviewed. A total of 634 authors were involved in the 120 journal papers, with only 4 papers authored by single authors. The international co-authorship percentage was 67.5, signifying the international interest in the construct.

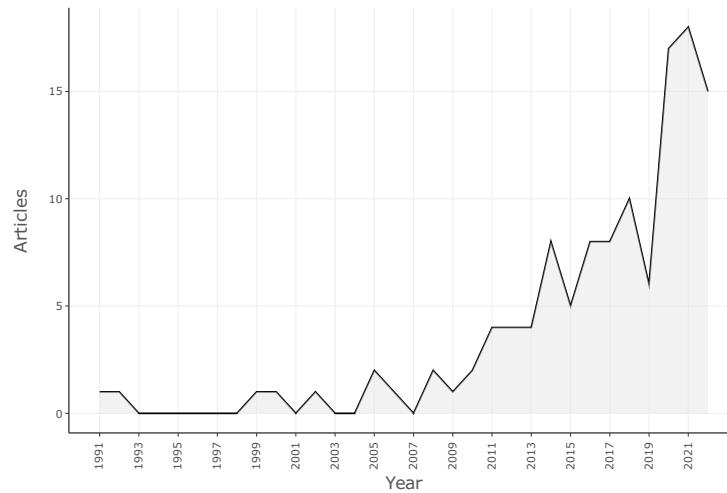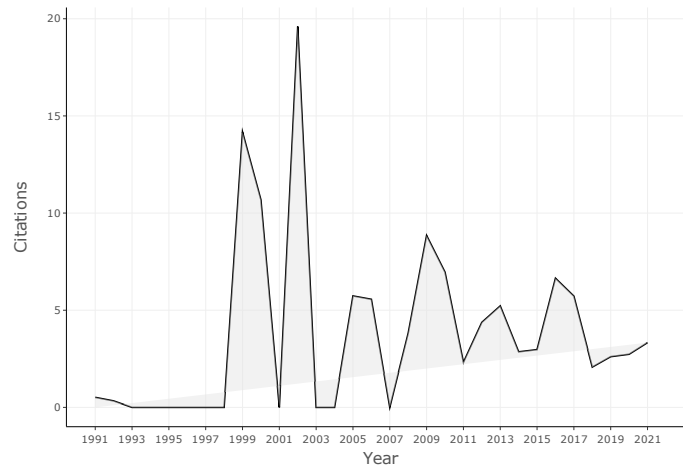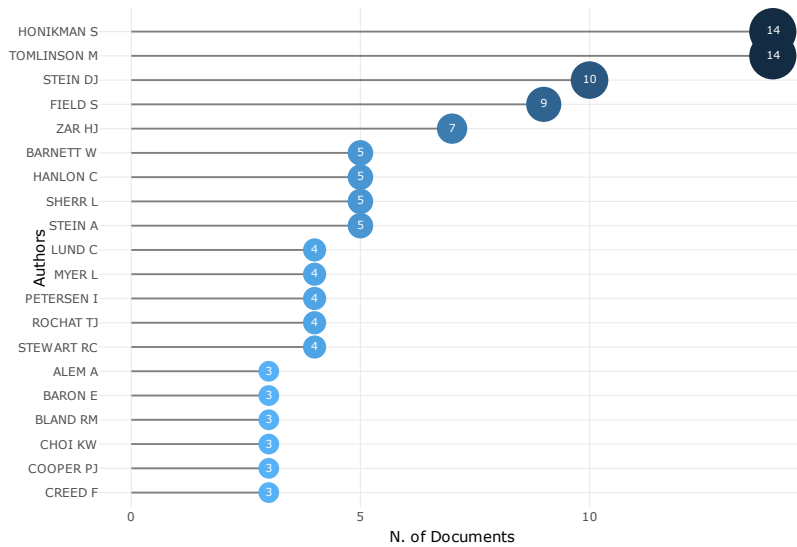Figure 1a. Annual scientific production

Figure 1b. annual citations

The key citations occurred between 1997 and 2003. Docosahexaenoic acid (DHA) levels in breast milk and the relationship between consuming seafood and the risk of postpartum depression in various nations were examined (Hibbeln, 2002). According to Hibbeln (2002), it was found that lower levels of docosahexaenoic acid (DHA) in mothers' milk and decreased seafood consumption are associated with higher rates of postpartum depression. The study of the mother-child relationship and postpartum depression both gained attention during the time period (Affonso et al., 2000; Hibbeln, 2002; Cooper et al., 1999; Tomlinson et al., 2005).

In contrast to papers published in later years, the length of the papers also allows for adequate time for the inclusion of citations.

Table 2.0 20 most relevant authors

According to the data presented in Table 2.0, Honikman S. and Tomlison M. have each published 14 articles on the construct in question, making them the most significant authors during the study period. The primary focus of the studies conducted by these authors is situated in South Africa (Cooper et al., 1999; Heyningen et al., 2016; Tomlinson et al., 2005; van Heyningen et al., 2017). Dr. Stein, Dr. Field, and Dr. Zar have published 10, 3, and 7 articles, respectively. The remaining individuals possess a range of publications, specifically between 3 and 5. A total of six authors, each with three publications, are considered to be the most relevant in this context.

Table 3.0 20 most relevant sources

Sources	Articles
Journal OF Affective Disorders	9
. ARCHIVES OF WOMEN'S MENTAL HEALTH	7
MATERNAL AND CHILD NUTRITION	5
AIDS AND Behavior	4
BMC Public Health	4
PLOS ONE	4
AIDS CARE - PSYCHOLOGICAL AND SOCIO-MEDICAL ASPECTS OF AIDS/HIV	3
BMC PREGNANCY AND CHILDBIRTH	3
South African Journal OF Psychology	3
Tropical Medicine AND International Health	3
BMJ OPEN	2
Child: Care, Health, AND Development	2

International Breastfeeding Journal	2
International Journal OF Gynecology AND Obstetrics	2
International Journal OF Mental Health Systems	2
Journal OF Affective Disorders Reports	2
MATERNAL AND CHILD HEALTH JOURNAL	2
MIDWIFERY	2
PLOS MEDICINE	2

According to Table 3.0, the journal that holds the highest relevance is the Journal of Affective Disorders. The primary objective of the Journal of Affective Disorders is to disseminate academic research articles that center around a diverse array of affective disorders, encompassing, though not limited to, depression, mania, the mood spectrum, emotions and personalities, anxiety, and stress. The discipline stands out for its interdisciplinary nature, which aims to integrate various methodologies and viewpoints in order to accommodate a large readership. This academic journal exhibits the most extensive publication record, consisting of nine articles, with a particular focus on archives pertaining to women's mental health, encompassing a total of seven articles.

Nine academic journals, on the other hand, have published a total of two articles each on the aforementioned subject during the specified study period.

Table 4.0 20 most relevant institutions

Affiliation	Articles
University OF Cape Town	106
STELLENBOSCH UNIVERSITY	34
University OF Oxford	24
University OF THE Witwatersrand	22
University OF Kwazulu-Natal	21
ADDIS ABABA UNIVERSITY	16
UNIVERSITY COLLEGE LONDON	13
JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH	10
University OF Miami Miller School OF Medicine	10
DUKE UNIVERSITY	9
UNIVERSITY OF MANCHESTER	9
UNIVERSITY OF STELLENBOSCH	9
Medical Research Council	8
University OF California	8
University OF Reading	8
BERNHARD NOCHT INSTITUTE FOR TROPICAL MEDICINE	7
GOETHE-UNIVERSITY	7
KILIMANJ	7

ARO CHRISTIAN MEDICAL UNIVERSITY COLLEGE	
London School OF Hygiene AND Tropical Medicine	7
BERNHARD NOCHT INSTITUTE FOR TROPICAL MEDICINE	6

Among the initial five institutions that are considered the most pertinent, a total of four (4) are located within the geographical boundaries of South Africa. The University of Cape Town emerged as the leading institution with a total of 106 articles, while Stellenbosch University followed closely with 34 articles. The University of Oxford adheres to a set of 24 articles. The remaining institutions possess fewer than 34 articles.

Table 5.0 20 corresponding authors country

Country	Articles	SCP	MCP	Freq	MCP_Ratio
SOUTH AFRICA	45	21	24	0.375	0.533
USA	25	6	19	0.208	0.76
UNITED KINGDOM	14	1	13	0.117	0.929
	10	4	6	0.083	0.6
ETHIOPIA	4	2	2	0.033	0.5
CANADA	2	0	2	0.017	1
GERMANY	2	0	2	0.017	1
GHANA	2	2	0	0.017	0
KENYA	2	0	2	0.017	1
NIGERIA	2	1	1	0.017	0.5
TANZANIA	2	0	2	0.017	1
UGANDA	2	0	2	0.017	1
AUSTRALIA	1	0	1	0.008	1
CHILE	1	0	1	0.008	1
DENMARK	1	0	1	0.008	1
GREECE	1	1	0	0.008	0
IRELAND	1	0	1	0.008	1
OMAN	1	0	1	0.008	1
PAKISTAN	1	0	1	0.008	1
QATAR	1	1	0	0.008	0

The primary author's investigation utilized the quantity of papers, simple country publication (SCP), and multiple country publication (MCP) as its three main determinants with a focus on the evaluation of the leading nation. The analysis of two relevant publications was also carried out to examine maternal mental health. According to the corresponding author, South Africa, the United States, and the United Kingdom hold considerable importance, which is evident from the data in Table 5. The countries have been arranged in descending order according to the number of articles published as well as the SCP and MCP values.

These values are as follows: (45, 25, and 14), (21, 6, and 1), and (24, 19, and 13), respectively. The countries that possess significant importance are those that demonstrate considerable levels of both intra-country and international collaboration. The use of the multiple country publication ratio as an evaluative measure is considered insufficient because the maximum value is achieved only when the number of publications involving multiple countries is equal to the total number of publications associated with a particular country. The aforementioned phenomenon is illustrated by the nations of Pakistan, Oman, Ireland, Denmark, Chile, Australia, Uganda, Tanzania, Kenya, Germany, and Canada, as previously indicated.

Table 6.0 20 most cited documents

Paper	DOI	Total Citations	TC per Year	Normalized TC
HIBBELN JR, 2002, J AFFECTIVE DISORD	10.1016/S0165-0327(01)00374-3	392	18.67	1.00
COOPER PJ, 1999, BR J PSYCHIATRY	10.1192/bjp.175.6.554	326	13.58	1.00
AFFONSO DD, 2000, J PSYCHOSOM RES	10.1016/S0022-3999(00)00176-8	235	10.22	1.00
TOMLINSON M, 2005, CHILD DEV	10.1111/j.1467-8624.2005.00896.x	162	9.00	1.66
AVAN B, 2010, ARCH DIS CHILD	10.1136/adc.2009.164848	133	10.23	1.59
HANLON C, 2009, TROP MED INT HEALTH	10.1111/j.1365-3156.2008.02198.x	115	8.21	1.00
HONIKMAN S, 2012, PLOS MED	10.1371/journal.pmed.1001222	99	9.00	2.26
TSAI AC, 2013, PLOS ONE	10.1371/journal.pone.0082521	89	8.90	1.89
TOMLINSON M, 2006, CHILD CARE HEALTH DEV	10.1111/j.1365-2214.2006.00598.x	89	5.24	1.00
BRITTAIN K, 2015, PAEDIATR PERINAT EPIDEMIOL	10.1111/ppe.12216	74	9.25	3.56
HEYNINGEN TV, 2016, J AFFECTIVE DISORD	10.1016/j.jad.2016.05.052	71	10.14	1.78
BARON EC, 2016, BMC HEALTH SERV RES	10.1186/s12913-016-1291-z	66	9.43	1.66

VAN HEYNINGEN T, 2017, ARCH WOMEN'S MENT HEALTH	10.1007/s00737-017-0768-z	63	10.50	2.20
STEWART RC, 2008, MATERN CHILD NUTR	10.1111/j.1740-8709.2008.00147.x	57	3.80	1.07
KAKYO TA, 2012, MIDWIFERY	10.1016/j.midw.2011.05.001	53	4.82	1.21
CHOI KW, 2017, J AFFECTIVE DISORD	10.1016/j.jad.2017.01.004	52	8.67	1.82
BASS JK, 2008, TROP MED INT HEALTH	10.1111/j.1365-3156.2008.02160.x	50	3.33	0.93
ROGATHI JJ, 2017, J AFFECTIVE DISORD	10.1016/j.jad.2017.04.063	48	8.00	1.68
EVAGOROU O, 2016, PSYCHIATR Q	10.1007/s11126-015-9367-1	44	6.29	1.10
MADEGHE BA, 2016, BMC RES NOTES	10.1186/s13104-016-2307-9	42	6.00	1.05

There are several methodologies available for the analysis of data obtained from Scopus. One methodology entails the systematic arrangement of a collection of academic papers, taking into account the number of citations they have received. This facilitates the identification of publications that have received substantial recognition within the scientific community. Table 6.0 presents a compilation of publications that have garnered the most substantial number of citations.
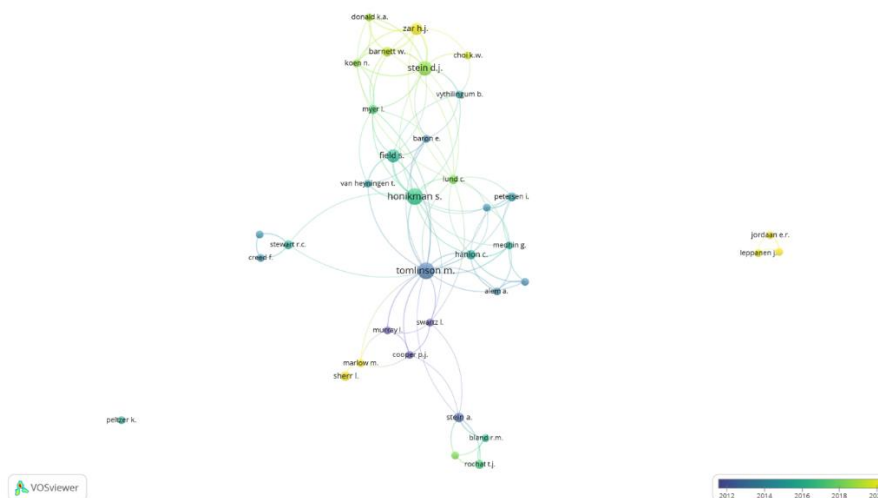
Based on the data provided in the table, it can be observed that the paper cited as (Hibbeln, 2002) has garnered the highest count of citations. The present study posited a potential association between the concentrations of DHA (docosahexaenoic acid) in breast milk and the intake of seafood, alongside the prevalence rates of postpartum depression across various nations. The analysis integrated prevalence data on postpartum depression from multiple studies that employed the Edinburgh Postpartum Depression Scale. The combined sample size across the 41 research investigations included a total of 14,532 subjects. Throughout the designated research period, this scholarly article has accumulated a cumulative total of 392 citations. The aforementioned research article was published in the esteemed academic publication known as the Journal of Affective Disorders.

Another article that received considerable attention, accumulating 326 citations, is the study conducted by Cooper et al. (1999). The primary aim of this research is to evaluate the prevalence of post-partum depression and its influence on the mother-infant relationship within Khayelitsha, a peri-urban community located in South Africa. The objective of the study was to assess the psychological well-being of a sample of 147 postpartum women, two months after childbirth. The researchers evaluated the level of their interaction with their infants in order to gauge the incidence of mental symptoms. Furthermore, the objective of the study was to ascertain the risk and protective factors associated with psychological distress in the population. The research findings were disseminated in the British Journal of Psychiatry, revealing a noteworthy association between maternal depression and insufficient emotional and practical support

from the partner. Moreover, there was a correlation observed between this phenomenon and a deficiency in exhibiting sensitivity during interactions with the infants.

The Journal of Affective Disorders received a significant number of citations among the top 20 most cited articles. A cumulative citation count of 563 was attributed to four articles (Choi et al., 2017); Heyningen et al., 2016; Hibbeln, 2002; Rogathi et al., 2017) published in this journal. On the other hand, the remaining sixteen articles within the top 20 collectively obtained a cumulative citation count of 1,697.

Figure 2.0 co-authorship minimum documents 3 minimum citation=1 (authors biggest network 36 out of 507)
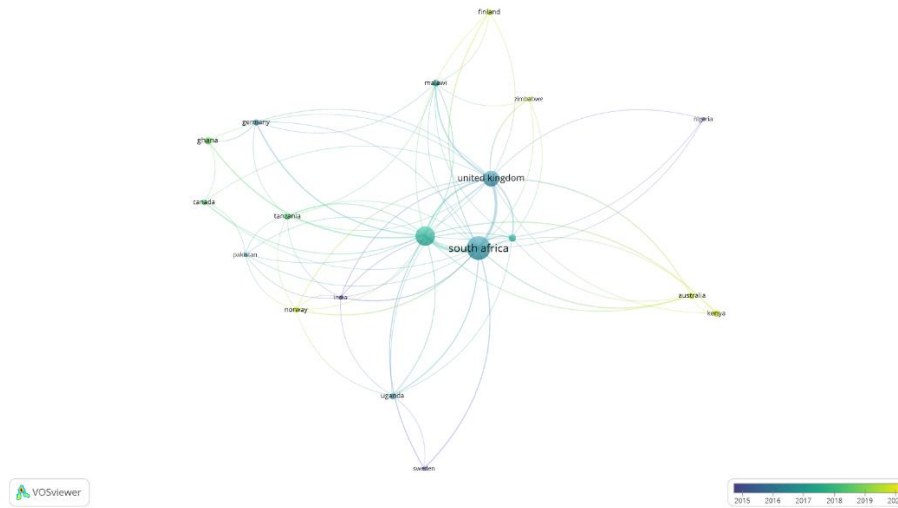

The data visualization was conducted using VOS viewer 1.6.18 software by the researchers. The examination of co-authors focuses on the social networks that scientists form while collaborating on academic papers (Acedo et al., 2006). The attribution of multiple authors to scientific articles is widely recognized as a reflection of collaborative endeavors. The application of co-authorship is particularly beneficial in the analysis of social networks, as opposed to the intellectual framework of research disciplines, because it can provide a more comprehensive representation of social connections compared to alternative measures of association. The utilization of co-authorship can also be employed as a method to investigate an author's associations with institutions and countries, as bibliographic data frequently contains details about authors' institutional affiliations and geographic locations.

In the domain of visualization, it is evident that nodes exhibiting larger dimensions are indicative of more robust collaborative relationships.
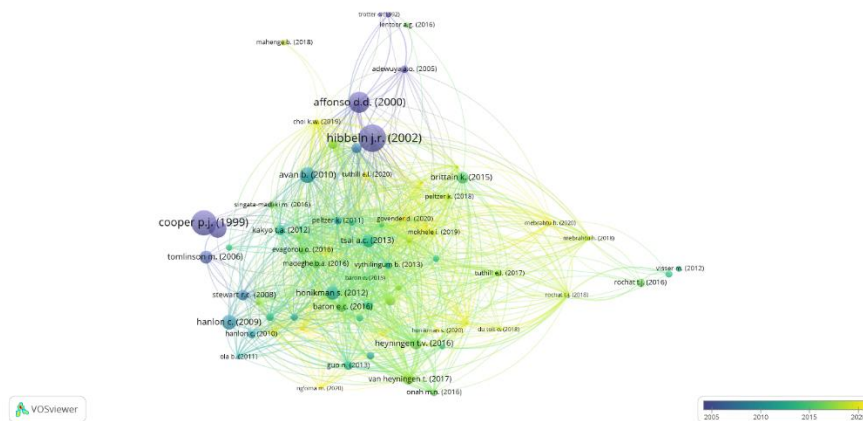
Upon examination of Figure 2, it can be observed that Honikman S, Tomlinson M, and Stein D.J demonstrate the most noteworthy instances of collaboration. The implementation of color differentiation, spanning from deep blue to light yellow, aids in the differentiation of studies with different levels of recency. Publications that are more recent are represented by a yellow hue.

Figure 3.0 co-authorship (country biggest network, minimum doc 3, minimum citation =1, 19 out of 40 met criteria)

According to Figure 3.0, it can be observed that South Africa, the United States of America, and the United Kingdom exhibit the highest degree of collaboration. It is evident that countries such as Kenya, Australia, Zimbabwe, and Finland have recently begun to exhibit collaborative efforts.

Figure 4.0 Bibliographic coupling documents (min citations per document=5, 75 out of 120 met the criterion). The largest connections is 71 with 4 outliers. Figure only shows largest connections

Bibliographic coupling employs a similarity metric to establish a connection of similarity between documents through the analysis of citations. Bibliographic coupling is a phenomenon that arises when two academic publications make references to a shared third scholarly work (Zupic, 2015). The network structure is thoroughly examined by employing rigorous bibliometric methodologies, including citation and co-citation analyses. The present study investigated a corpus of 120 documents, employing a minimum citation threshold of 5. Out of the collection of documents under consideration, a total of 75 met the predetermined criteria, as illustrated in Figure 4.0. The research conducted by Hibberlin in 2002 has attracted considerable attention, as indicated by the substantial size of its node. Another study that has received considerable attention is the research conducted by Cooper (1999).

Figure 5.0 Bibliographic coupling sources (min doc 2, min citations =1, 18 out of 76 met the criterion)
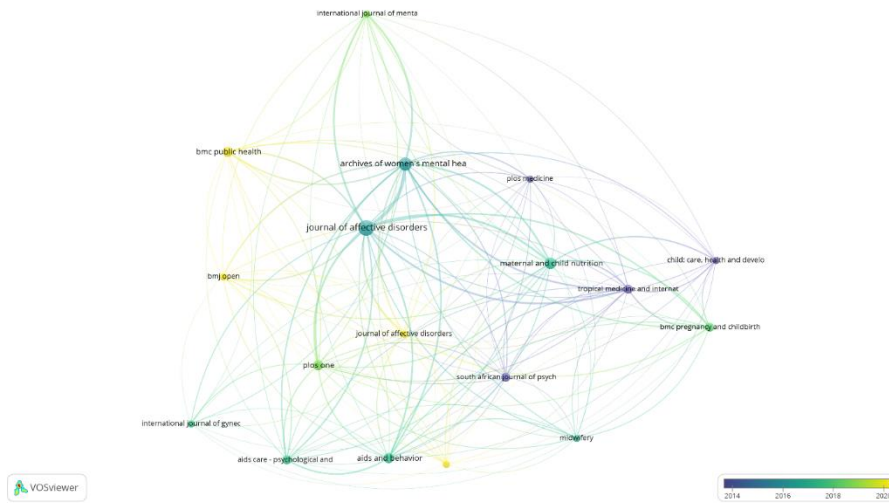

Figure 6.0 Bibliographic coupling authors (minimum documents= 1 minimum citations =30, 154 Out of 507 met criteria)
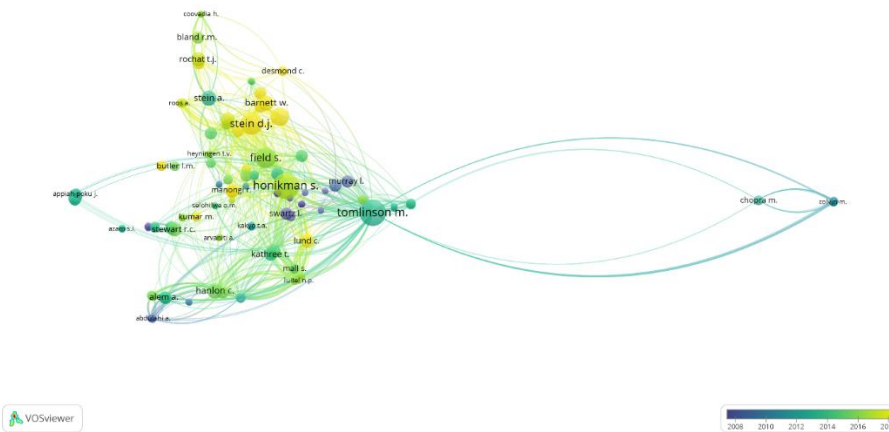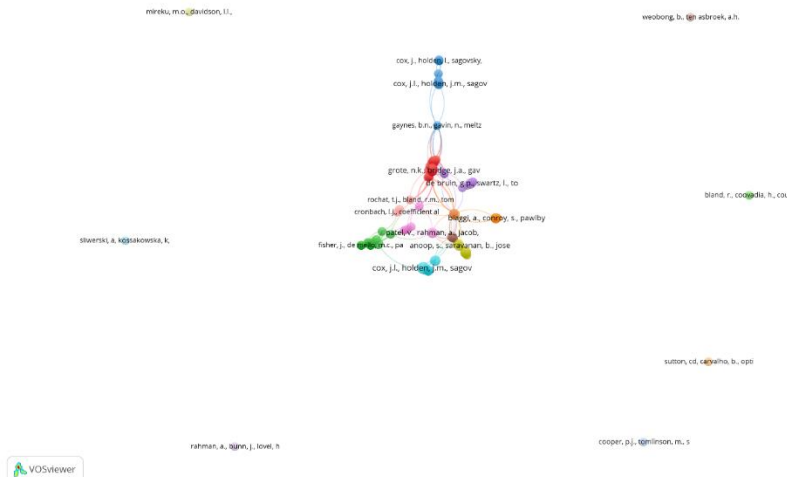

Figure 7.0 Co-citation (cited references minimum citations=2, 97 out of 6191 met criteria)

Figure 8.0 Co- citation (cited sources minimum citation =10, 85 out of 2538 met criterion)

Figure 9.0 Co- citation (cited authors minimum citation=20, 77 out of 10503 met criterion)

Figure 10.0 co-occurrence all keyword (minimum number of occurrences 5, of 1245 keywords, 149 meet threshold)

As indicated by the source cited as (Zupic, 2015), co-citation is a technique that establishes connections among publications, authors, or journals by virtue of their mutual occurrences in references or reference lists. The examination of figures 7, 8, and 9 provides an insight into the graphical depiction of co-citation patterns in connection with the cited references, cited sources, and cited authors, respectively, alongside the simultaneous occurrence of all keywords.

The visualization presented above demonstrates the significant focus that researchers and academic journals have dedicated to the topic of maternal mental health in Africa.

3.0 Discussion

The mental well-being of mothers is a crucial component of their overall health, and this holds true for women in Africa as well. The mental well-being of mothers residing in Africa holds substantial implications for both their personal health and the overall development of their offspring. Nevertheless, the issue of maternal mental health in Africa frequently encounters neglect and insufficient attention (Cooper et al., 1999).

Africa encounters a multitude of challenges when it comes to addressing maternal mental health. The issue at hand is exacerbated by a combination of factors, including restricted availability of mental health services, the prevailing social stigma associated with mental illness, and a general lack of knowledge and comprehension regarding mental health concerns (Shidhaye et al., 2015). Furthermore, it is important to consider that African mothers encounter additional mental health challenges due to various social and economic factors, including poverty, conflict, and gender inequality (Madeghe et al., 2016; van Heyningen et al., 2017).

In order to address the matter of maternal mental health in Africa in a thorough and diverse manner, it is crucial to embrace a comprehensive and multifaceted strategy. This approach involves improving the accessibility of mental health services, promoting awareness and reducing societal stigma, and integrating mental health care into existing maternal and child health programs (Shidhaye et al., 2015; Tomlinson et al., 2005). Furthermore, it is crucial to take into account the underlying social determinants that impact mental well-being, such as socioeconomic disadvantage and disparities based on gender, in order to achieve enduring and significant societal change (Heyningen et al., 2016; Honikman et al., 2012; Tomlinson et al., 2005).

The utilization of bibliometric analysis is an essential methodology for acquiring a comprehensive perspective on a particular field of study or scholarly journal. The aforementioned analyses possess considerable appeal to stakeholders with a vested interest in a specific field of study or journal, as they facilitate the identification of prevailing patterns and pertinent matters. objective of this study is to evaluate the progression and present state of research endeavors pertaining to maternal mental health in Africa, spanning the period from 1992 to December 2022. The primary focus of this study is to engage with academicians who have previously published on the construct or are intending to publish in the future. Moreover, these studies can also offer a well-defined research agenda or set of guidelines for future development, taking into account the current direction of a specific research field or academic journal.

This study employed a retrospective evaluation of the journal, utilizing bibliometric indicators to yield insightful findings, primarily relying on the Scopus database. Specifically, the research employed the quantification of citations and publications as a means to provide a comprehensive analysis of the authors, universities, and countries with the highest productivity, as well as the most influential articles and significant trends. Additionally, the research conducted in this study involved the utilization of VOS

viewer software to create a graphical representation of the bibliometric data. In order to accomplish this, the study took into account the co-authorship, co-citation of journals, and bibliographic coupling of documents, sources, and authors.

Based on the findings outlined in Table 1, it can be observed that the quantity of publications has exhibited a consistent upward trend commencing from 1991, accompanied by an annual growth rate of 9.3%. The construction industry achieved an average citation per document of 27.01, based on a total of 6230 references within the specified period.

This study examines the relationship between authors, universities, institutions, and countries. The research paper demonstrates that most citations were in 1999 and 2002 and that Honikman S and Tomlinson M exhibit high levels of productivity, having published 14 scholarly articles, each. Regarding the journals that have made contributions, journal of Affective Disorder with 9 articles followed by Archives of Women's mental Health with 7 articles.

Through a comprehensive analysis of various countries, it has been determined that the University of Cape Town Stellenbosh University emerge as the leading contributors in this field with 106 and 34 published articles respectively. Another noteworthy measure of performance is to examine the most relevant countries. Using the measure of articles published, single and multiple country publications, south Africa a and united state of America were the leaders in the field.

Additionally, the utilization of co-citation visualization and bibliographic coupling of countries and universities facilitated the identification of knowledge dissemination patterns within the construct. Furthermore, the examination of the co-occurrence of keywords revealed a discernible pattern in the prominent concepts spanning the years 1992 to 2022. figure 10 presents the frequently utilized keywords, predominantly associated with the construct. These keywords have significantly contributed to the existing knowledge base of maternal mental health in Africa and have played a pivotal role in advancing the domain of environmental research. Similar to other academic studies, the analysis conducted in this particular study is not exempt from limitations.

limitation pertains to the temporal scope of our analysis, which spans from 1992 to 2022. It is important to acknowledge that the results obtained may be subject to change in the future due to the dynamic nature of maternal mental health. This dynamism may introduce novel topics, concepts, and methodologies that could potentially yield substantial alterations to the aforementioned findings.

This study is reliant on data obtained from the Scopus database; therefore, it is important to acknowledge that the limitations inherent to the Scopus database may also apply to this study. Therefore, it is recommended that future analysis be undertaken using data collected from multiple sources. The analysis of bibliometric data conducted in this study contributes to the existing literature by offering a comprehensive and in-depth examination of the construct.

4.0 Future research agenda

The aforementioned bibliometric study has made significant contributions to the existing body of knowledge in the field of maternal mental health in Africa. Nevertheless, this study provides several key insights that can be examined by future researchers. This study aims to conduct a comprehensive analysis of the journal's content through the application of content analysis methodology. By employing this approach, a more in-depth examination of the various subjects addressed within the journal can be achieved. Additionally, this research seeks to explore the potential thematic connections that exist between the authors' contributions and the external factors that may have influenced these overlaps (Farrukh et al.,

2020). Future research endeavors may explore the interplay between mental illness and food insecurity, as well as the provision of child and mental health services. These topics have emerged as prominent areas of interest based on recent keyword co-occurrence analyses.

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