



Bibliometric Study of Post Partum Contraception During COVID-19 Pandemic

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Abstract. This research determinant the trends of academic articles on the use of postpartum contraception during the COVID-19 pandemic and provides a roadmap for possible future studies on this topic. In this context, bibliometric and content analysis methods were used. Data were collected through the Google scholar data based. As a result by filtering process on publish of perish, 111 scientific articles were included in this research. Data analysis processed with term “postpartum contraception during COVID-19” which was published between 2019 and 2020 and generally in English. As a result, data analysis articulated that there are 8 clusters terms with most frequently was used by the authors are ‘contraception’ ‘women’ and ‘COVID’. Meanwhile, postpartum contraception, accessibility and use of contraception (contraceptive use) are topics which to be more widely discussed further.

Keywords: postnatal · contraception service · COVID19 · pandemic

1 Introduction

Family planning is important for reproductive life for individuals as well as couples and families. Postpartum family planning is expected as an effort to reduce maternal mortality, particularly in low and middle income country [1]. Efforts to prevent pregnancy are carried out by using contraceptive devices and drugs immediately after giving birth up to 42 days or 6 weeks after giving birth. Postpartum family planning has an important role in strategies to reduce unmet need for family planning [2]. Postpartum women are among those with the greatest unmet need for family planning. However, they often do not receive the services they need to support longer birth intervals or reduce unwanted pregnancies and their consequences. Post-natal family planning is able to address the needs of those who want to have children in the future (referred to as ‘distancers’), as well as those who have reached the desired family size and wish to avoid future pregnancies (referred to as ‘barriers’) [3]. Postpartum family planning is recommended so that subsequent pregnancies can be prevented at least two years from the next pregnancy to reduce maternal, prenatal, and infant risks [4]. Pregnancy and the puerperium are considered an ideal time to provide family planning because pregnant/postpartum women visit health facilities more often during this time and may be more motivated to change health behavior, after childbirth [5].

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On the other hand, the COVID-19 pandemic has an impact on all sectors including the health sector, especially family planning services. A significant decrease in birth-hospitalization related with the contraception services [6]. This is very possible due to a decrease in the quantity and quality of health services, especially family planning services [7]. Health services during the COVID-19 pandemic are more focused on more urgent services, such as health services for handling and preventing COVID-19 [8]. WHO has published questions and answers on contraception, family planning and COVID-19. In short, women and their partners can choose modern methods of contraception that are acceptable and safe for them. If a couple does not want to get pregnant, then the couple should start or continue to use their preferred method of contraception. Some contraceptive methods are available without a prescription, but not everywhere [9]. If a woman adapts well to her current method, she should stick with it. While it may be difficult to access all methods of contraception, due to movement restrictions, lack of supply and increasing demand on healthcare providers and services, it is still possible to start new contraceptive methods during the COVID-19 pandemic. Lack of information and counselling about long term contraception which useful to reduce misperception in family planning [10]. For policy makers, UNFPA also recommends that innovative strategies be developed to ensure as many eligible people as possible have access to information and contraception during this period. This includes the use of mobile phones and digital technology [11]. Counseling new users on contraception, screening for medical eligibility criteria and managing contraceptive side effects can be done through various communication methods that do not require direct contact; SMS, WhatsApp, video call, phone call, also telemedicine [12, 13].

Referring to the importance of reproductive life plans, studies on postpartum family planning during the COVID-19 pandemic need to be studied further. Because, although the majority of women knew about postpartum contraception, but more a half of them did not used contraception [14]. Understanding of knowledge about postpartum contraception from previous research is related to how to adapt to the conditions of the COVID19 pandemic which globally impacts all sectors of life, including women's reproductive health.

2 Methodology

This research is literature review research using bibliometric analysis [15]. The research was carried out in April-August 2021. The scope of the research area was carried out in online journals that could be tracked with the data search engine on Google Scholar for the publication period between 2019 and 2021 when the COVID19 pandemic occurred. The variables studied in this study were: title of publication, author, abstract, keywords, year of publication, name of journal, type of publication, and affiliation. Data extracted from Google Scholar storage using Mendeley Desktop tool with 2 keywords; postpartum contraception and COVID19. In this research, there will be 5 stages [16]; defining the research keywords, initial search results, refinement of the search results, compiling statistics on initial data, and data analysis.

3 Result and Discussion

This study was done using the Publish or Perish software, on data based on Google Scholar. The search is limited to 2019 to 2021. Initial search results, refinement of search results, preparation of initial data statistics, and data analysis will be explained in detail in the following subchapters:

3.1 Defining the Research Keywords

Searching was using the keyword ‘postpartum contraception during the COVID-19 pandemic’. The search was carried out through the Publish or Perish software using the Google Scholar database to collect data. In Step setting special conditions for ‘journal’, ‘title word only’, and year ‘2019–2021’. We exclude newspapers, books, book reviews and book chapters. From the database “postpartum contraception during the COVID19 pandemic”, 216 articles were obtained at the beginning of the search period from 2019 to 2021 (2 years).

3.2 Initial Search Results

In the initial search stage with terms, sources and time constraints and in the first 1000 articles, the publish or Perish tool displays 216 titles. The remainder of the next nine articles that appear are shown in Table 1.

3.3 Refinement of the Search Results

We excluded articles that did not meet the screening criteria, Table 2 shows References of articles that seemed important to meet the requirements for 2 years.

In the initial search, 216 original articles were found according to the keyword search. The disbursement improvement was carried out by sorting the appropriate titles, and obtained 111 article titles from leading journals based on the Scopus preview. After examining the titles in the abstracts, 59 articles were excluded for various reasons (Table 2). Table 3 shows a comparison of metric data from initial searches and incomplete searches.

3.4 Compiling Statistic on Initial Data

The search generated after the fix is downloaded, stored in Mendeley software, and exported to RIS format to include all important information related to the paper, including title, author name, abstract, keywords and journal specifications (journal of publication, year of publication). Publications, volumes, editions, and pages). The data is analyzed so that articles can be classified by year and publication source and publisher. Of the queries using the maximum timeframe, POP obtained 216 journal articles from 2019 to 2021. Regarding publisher groups, magonlinelibrary.com appeared most frequently, followed by Wiley Online Library, Taylor and Francis, journals.sagepub.com and Elsevier. Magonlinelibrary.com has published and continues to publish in many leading journals, including the British Journal of Midwifery, British Journal of Nursing’, ‘British Journal of School Nursing’, ‘British Journal of Mental Health Nursing’ and ‘Journal of Health Visiting’.

Table 1. Top Ten Identified Journal Articles

Year	Article Identified	
	Title	Author
2021	The Impact of The COVID-19 Pandemic on Postpartum Contraception Planning	Hayley E. Miller, Kate A Shaw.
2021	Use of Postpartum Contraception During Coronavirus Disease 2019 (COVID-19): A Retrospective Cohort Study	Kristen J.H. Das, Megan Fuerst, Ciara Brown, Jenifer Lesko
2021	The Association Between COVID-19 Related Health Services Changes and Postpartum Contraception	Allie SAKowicz, Chloe Matovina, Sidney Imeroni, Maya Daiter, Olivia Barry, Willian A. Grobman, Emily S. Miller
2021	Acceptability of ENG-releasing Subdermal Implants Among Postpartum Brazilian Young Women During The COVID-19 Pandemic	Mariane Massaini Barbieri, Thuny Bento Herculano, Amanda Dantas Silva, Luis Bahamondes, et.al
2020	'Our COVID-19 Cloud Silver Lining': The Initiation and Progress of Postnatal Contraception Services During The COVID-19 Pandemic In a UK Maternity Hospital	Kate Johana Campbell, Rachel Barlow-Evans, Suzanne Jewell, Natalie Woodhead, Ruchira Signh, Kulsum Jaffer
2021	Increasing Postpartum IUCD Coverage Through a QI Initiative: a Step Towards Reducing The Unmet Need of Postpartum	Swati Agrawal, Manju Puri, Anuradha Singh, Sushma Sehrawat, et.al
2021	Assessing The Impact of The COVID-19 Pandemic on Postpartum Contraception Uptake	Paige Rattner, Chelsea DeBolt, Lorraine Toner, Guillaume Stoffels, Sharon Gerber, Luciana Vieira
2021	Assessing The Role of Race in Contraceptive Counseling and Postpartum Contraceptive Attainment	Charlotte B. McCarley, Kimberly B. Fortner, Megan M. Lacy, Nikki B. Zite
2021	Abortion and Contraception Practice in COVID -19 Era	Bharti Maheswari, G.S Marchanda, Preeti Sharma, Taniya Setiya

3.5 Data Analysis

This article presents a bibliometric analysis of the term 'postpartum contraception during the COVID19 pandemic' from the Google Scholar database. The bibliometric review in this paper used Publish or Perish (PoP) software developed and launched in 2006 by Professor Anne Wil Harzing of Tarma Research Software Pty Ltd-Melbourne. (Bensman 2011) For this analysis, we used version 5.28.1.6296. Research using this software was conducted on August 11, 2020, obtained 216 papers in preliminary results with 8767 citations (33 citations/year).

Refinement search for fixes yielded 111 articles (a decrease of 21.5%); data on citations also changed, namely 6615 citations (decrease 24.6%) and 315 citations/year

Table 2. Filtering Criteria

Filtering criteria of detailed search	Total
Not relevant	30
Not in English	11
Unknown link	5
Editorial/book review	9
Nothing from the list	4
Total	59

(increase 15.7%). This finding indicates that the Q1 and Q2 journals have an increasing impact on the number of citations compared to other journals, a conclusion supported by changes in the h-index. Complete results of comparison metrics before and after search refinement.

After taking into account the citation frequency and other metrics, it then analyzes the output from the PoP software into the VOSviewer software to determine what keywords appear frequently. The keyword frequency can be set by 1, 5, 10, 20, or any other occurrence. The VOSviewer tool was developed by van Eck and Waltman in 2010 (see <http://www.vosviewer.com>) and is used to visualize bibliometric maps. The software shows bibliometric mapping on three different visualizations, a network visualization (Fig. 1), an overlay visualization, and a depth visualization (Fig. 2). VOSviewer can classify keywords into different groups. The bullet indicates the weight of the incident. This explanation answers the first research question.

Extracting from the title and abstract fields, the full count with the minimum number of occurrences set to 10, we get 1852 terms and 39 items meet the threshold. Common words (1) are excluded (i.e., work). Six clusters are identified here. The first cluster consists of 8 items, with the most frequent terms being ‘contraception’ ‘contraception use’. Focus’, ‘intrauterine device’, ‘obstetric’, ‘postpartum’, ‘pregnancy’, and ‘risk’. Cluster 2 has 7 items including ‘access’, ‘contraceptive method’, ‘knowledge’, ‘opportunity’, ‘patient’, ‘postpartum contraception’ and ‘study’. The 3rd cluster identified 7 other words that appeared most frequently, with the most common being ‘childbirth’, ‘contraceptive’, ‘coronavirus disease’, followed by ‘woman’ and COVID-19. Occurs most frequently, with the most common being ‘pregnancy’, followed by ‘pandemic’ and ‘access’. In the fifth cluster, the words ‘contraceptive service’, family planning, and post partum appear. Cluster 6, the words that often appear are ‘Covid’, ‘pandemic’ and ‘impact’ and reproductive health.

Table 3. .

Metric Data	Preliminary Data	Re-Searching
Query	Journal, postpartum contraception during COVID-19	Journal, postpartum contraception during COVID-19 pandemic, from 2019–2020
Source	GoogleScholar	GoogleScholar
Papers	216	111
Citations	313	313
Years	8767	6615
Cites_Year	156.50	156.50
Cites_Paper	31.88	2.82
Cites_Author	3686.45	2807.05
Papers_Author	130.5	101.4
Authors_Paper	3.81	3.34
h_index	12	9
g_index	23	14
hc_index	15.56	14.58
hI_index	29	25
hI_norm	1038.12	949.52
AWCR	32.22	30.81
AW_index	424.47	387.07
AWCRpA	66.88	55.62
e_index	29.13	27.5
hm_index	8/11/2020	9/18/2020
QueryDate	111.71	133.66
Cites AuthorYear	0.88	1.19
hI_annual	75.2	73.4
h_coverage	90.6	89.8
g_coverage	24	23
star_count	1019	2000
year_first	2020	2020
year_last	8767	6615
ECC	169	153
acc1	129	116
acc2	58	63

(continued)

Table 3. (continued)

Metric Data	Preliminary Data	Re-Searching
acc5	8	7
acc20	15	14
hA	15	11

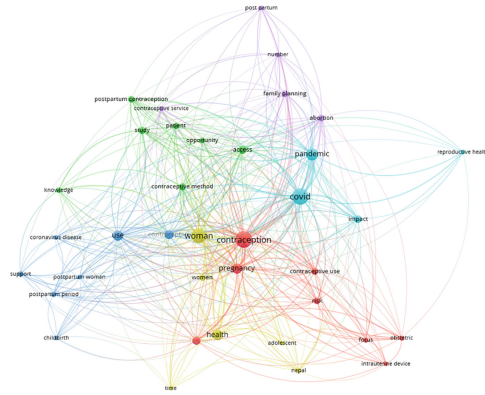


Fig. 1. Network Visualization Mapping

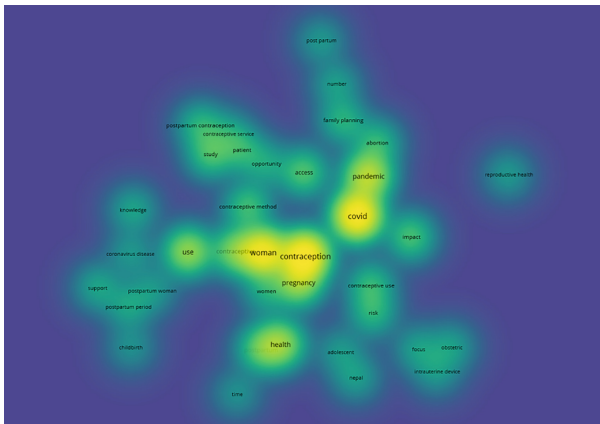


Fig. 2. Depth visualization mapping

4 Conclusion

Based on the results of the analysis of the data obtained, during the period 2019–2021 (2 years), or during the COVID-19 pandemic, published studies relating to post-partum family planning were identified as many as 111 articles. Can be concluded that there

are 6 research clusters on post-partum family planning during the COVID-19 pandemic, namely 'contraception', 'woman', 'COVID', 'pregnancy, pandemic' access'. It is known that the research trend on post-partum family planning during the COVID-19 pandemic is research on contraception, about women and COVID-19. The depth of research results on family planning during the COVID-19 pandemic, topics on contraception, COVID 19 and about women seem to be more widely discussed, so there are research opportunities on topics related to postpartum contraception, accessibility and use of contraception (access, contraceptive use).

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