

# What are the mental health issues of postpartum mothers during a pandemic? A scoping review

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## Abstract

**Background.** Postpartum mothers' mental health has a significant role in mothers' well-being and child's growth and development. This issue is worsened during a pandemic when social restrictions are regulated, resulting in perceived stress, baby blues, postpartum depression, and other mental health issues.

**Objective.** This study intends to investigate postpartum mothers' mental health during the COVID-19 pandemic.

**Methods.** This study's methodology is a scoping review using the prism-ScR checklist, the Joanna Briggs Institute critical appraisal tool, and a population, exposure, outcome framework. It uses 4 databases: Pubmed, Willey, Proquest, and ScienceDirect; its inclusion criteria is original English articles that can be accessed in full text between 2020 and 2022.

**Results.** Out of 190 publications, we found 7 that are pertinent to the research goals. Qualitative research, cross-sectional studies,

and longitudinal studies make up the research. The mapping result includes 4 themes: the types of mental health problems experienced by postpartum moms during the Pandemic, risk and predictive factors, postpartum mothers' experiences, and the effects of mothers' mental health problems.

**Conclusion.** After giving birth, most mothers experience stress, anxiety, and depression. Postpartum mental health concerns are influenced by isolation, social exclusion, and crises. The creation of a customized plan for early assistance for a woman's mental health requirements, as well as the establishment of an accessible mental health provider, including medical personnel and medical facilities, is advised for pregnant and postpartum women.

## Introduction

The coronavirus disease (COVID-19), also known as the 2019 novel corona SARS-nCoV-2 virus, has emerged as a hazard to global health. COVID-19 started in Wuhan City, China, in November 2019, and it quickly expanded to other parts of the world. The World Health Organization (WHO) proclaimed COVID-19 a global pandemic on March 11, 2020.<sup>1-3</sup> In addition, such mandatory social restrictions limit access to health facilities and lead to unsolved problems that appear during their perinatal period. These difficulties are made even more difficult by pandemic-exacerbated inequalities, including limited access to healthcare and racial and ethnic inequality.<sup>4</sup> The isolation and disturbance of the natural rhythm of social connections caused by restrictions to stop the spread of COVID-19, such as physical and *stay-at-home* regulation, have a negative influence on mental health during the postpartum period.<sup>5,6</sup>

Since the COVID-19 pandemic is a worldwide stressor, its effects on mental health are probably going to vary depending on contextual and interpersonal circumstances.<sup>7</sup> In general populations, mental health problems like depression, anxiety, stress, frustration, phobias, obsessive-compulsive symptoms, and post-traumatic stress disorder have been caused by or have become worse due to social isolation during these trying times, quarantine restrictions, the stigma associated with the virus, and a sense of fear and uncertainty.<sup>8</sup> Mental health professionals believe that both risk factors associated with the virus itself (such as anxiety about contracting the virus, concerns about the lack of care alternatives and/or being in a high-risk group for fatalities, and unpredictability referring when the virus will be controlled) and risk factors connected with the lockdowns are likely to be to blame for the increase in mental health issues.<sup>9</sup> This period is challenging and stressful for new mothers who experience psychological struggles during the pandemic.<sup>10</sup>

Women who are already vulnerable, especially pregnant women and postpartum women, may have more difficulties on how to cope with the issues.<sup>11</sup> A study showed that the pandemic create a gap in several changes regarding childbirth, such as accompanied person, nursing arrangements, and birth site, which

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had a substantial influence on the emergence of trauma symptoms after childbirth.<sup>12</sup> Nearly 50% of women in a survey by Zivoder *et al.* (2019) reported experiencing psychological issues and disruptions during the postpartum period such as baby blues, postpartum depression, and anxiety disorders.<sup>13</sup> Psychological symptoms in pregnant and postpartum women during COVID-19 are mostly depressive and anxiety disorders.<sup>14</sup>

The perinatal period is a period of psychological and economic stress that is frequently linked to an increase in the demands of women in terms of their mental health. Around 10-20% of women experience prenatal depression and anxiety symptoms which can raise the likelihood of a disrupted mother-infant attachment and delayed cognitive and emotional development of their children.<sup>15-18</sup> In low-middle income countries, postpartum depression can even increase up to 90% the risk of getting childhood stunting and underweight.<sup>19</sup> In previous research about postpartum depression and a child's mental development, they found a connection between them.<sup>20</sup> Women with psychological problems are less attentive to their babies, which might lead to an unstable bond between the two.<sup>21,22</sup> In addition, it also affects exclusive breastfeeding where depressed mothers showed a decrease in breastfeeding their babies.<sup>23</sup> Depressed mothers have been reported to be more likely to be dissatisfied with nursing and to have major difficulties with breastfeeding within the first week after delivery.<sup>24</sup> To prevent this, interpersonal support and social networking are needed.<sup>25,26</sup> Comprehensive summaries on how postpartum mothers feel and experience are scarce. The current research review identifies and summarizes the problems and their impact, giving a clear understanding of the importance of tackling the issues of postpartum mothers, in this difficult time.

## Materials and Methods

This is a scoping review that uses prism-ScR, which is an ideal approach to determine the scope or scope of a collection of literature on a particular theme to provide a broad overview of the researcher.<sup>27</sup> PRISMA (preferred reporting items for systematic reviews and meta-analyses) is used to guarantee the search process and adequate reporting.<sup>28</sup> Scoping review aims to map the literature and explore information about research activities related to specific topics. Besides that, scoping reviews can be used to synthesize research evidence.<sup>29,30</sup>

Systematic reviews, literature, scoping reviews, meta-analysis as well as editor letters and commentaries are excluded from this review. This review only included English language studies and the studies with abstracts. Finally, articles describing the (theoretically derived) concept of the intervention but not reporting on its implementation, or describing the current situation or the results of a needs assessment were not considered.<sup>31</sup>

Articles were identified by database searching (Pubmed, Willey, Proquest, and ScienceDirect). Title, abstract, and key words were searched with the following search term: ((mental health AND postpartum mothers AND covid-19 AND the Pandemic)).

The study design is as follows: all articles related to postpartum mothers and mental health issues during the COVID-19 Pandemic (quantitative, qualitative, mixed method).

This review used the modifications to the original framework of a scoping review,<sup>32</sup> which includes six steps.

Step 1 is to identify questions of the research by clarifying and connecting the purpose and research question in scoping review, the researchers develop the focus review and search strategy through the Population, Exposure, Outcome (PEOs) framework to

arrange and solve the focus review: P (population) - postpartum mothers; E (exposure) - mental health issues; O (outcome) - mental health issues during the covid-19 pandemic.

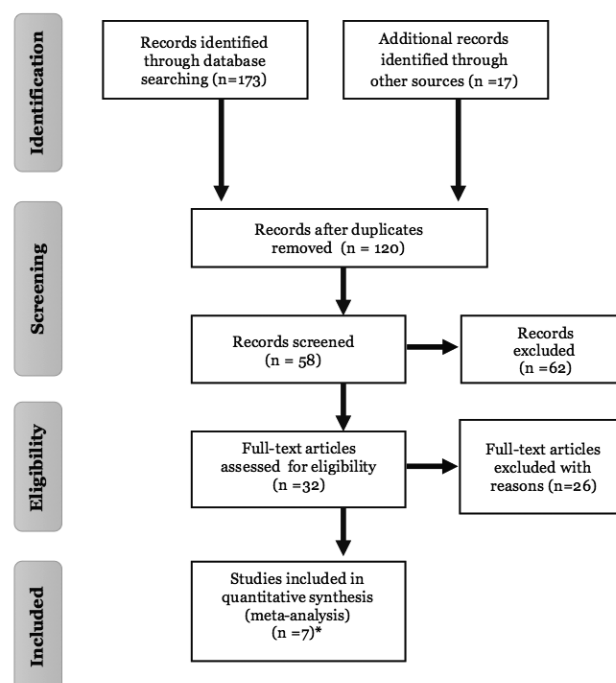
Based on the framework above, the research question was: how are the mental health issues among postpartum mothers during the covid-19 pandemic?

Step 2 is to identify the relevant articles of studies by balancing feasibility with breadth and comprehensiveness. The researchers identified the articles using several databases: Pubmed, Willey Online, Proquest, and ScienceDirect. The relevant article will be included based on inclusion criteria and exclusion criteria. The inclusion criteria are i) article from 2020-2022; ii) article in English; iii) original articles; iv) full-text articles; v) article that explains mental health problems among postpartum women during the COVID-19 pandemic. Whereas, the exclusion criteria are: i) opinion papers, systematic reviews, meta-analyses, editor letters, and commentaries; ii) article about mental health issues among postpartum mothers but not during the COVID-19 pandemic.

Step 3 is to use an iterative team approach to study selection and data extraction (Figure 1). To examine which article is suitable for this study, the researchers use a PRISMA flowchart in this study.

Step 4 is to work on data charting which incorporates the numerical summary and qualitative thematic analysis. After the evidence has been selected, the evidence is extracted. At this stage, all articles that have been selected are entered into a table which includes: the article title, author's name, year, country, purpose, type of research, participants/sample size, and results. Data charting is reported in Table 1.

Step 5 is to compile, condense, and present the findings,



**Figure 1. Flow diagram of the study selection process (\*7 studies were finally included).**

Table 1. Data charting.

Number	Article title	Author's name	Year	Country	Purpose	Type of research	Participants	Results
1	Latent class analysis of health, social, and behavioral profiles associated with psychological distress among pregnant and postpartum women during the COVID-19 pandemic in the United States	Ellen Goldstein, Roger L. Brown, Robert P. Lennon, Aleksandra E. Zgierska,	2022	United States	Identify risk and protective factors associated with mental health and well-being among pregnant and postpartum women during the pandemic.	Cross-sectional	616	Higher (31.8%), moderate (49.8%), and lower (18.4%) psychological distress levels are all present. Support from one's social network was the main factor that caused discrimination. Between these three classes, there were large disparities in the severity scores for depression, anxiety, and stress. Access to mental health care was not as widespread as claimed need.
2	Psychological health of pregnant and postpartum women before and during the COVID-19 Pandemic	Yvonne J. Kuipers, Roxanne Biejenbergh, Laura Van den Branden, Yannic van Gils, Sophie Rimaux, Charlotte Brosens, Astrid Claerbout, Eveline Mestdagh	2022	Belgium	Measured psychological health with the Whooley questions, Generalized Anxiety Disorder 2-item (GAD-2) and the Edinburgh Postnatal Depression Scale (EPDS) and compared the scores of pregnant and postpartum women before and during the COVID-19 pandemic.	Non-concurrent cross-sectional study	1145	The Whooley, GAD-2, or EPDS scores among pregnant women did not differ from one another. Significant variations were seen between the postpartum total GAD-2 scores before and after the epidemic. We discovered a minor main favorable effect of having a child during COVID-19 ( $F(1.13)=5.06$ , $P.025$ , $d.27$ ) after adjusting for covariates. For women who had experienced prenatal psychiatric issues in the past, the effect was much stronger ( $F(1.12)=51.44$ , $P.001$ , $d.82$ ). During the pandemic, postpartum women's GAD-2 scores were substantially correlated with their emotional support ( $F(1.90)=35.54$ , $P.001$ ). Compared to pregnant individuals, postpartum women reported significantly greater behavioral consequences of the epidemic ( $P.034$ ).
3	Mental health status of pregnant and breastfeeding women during the COVID-19 pandemic - a multinational cross-sectional study	Michael Ceulemans, Veerte Foulon, Elin Ngo, Alice Panchaud, Ursula Winterfeld, Léo Pomar, Valentine Lambelet, Brian Cleary, Fergal O'Shaughnessy, Anneke Passier, Jonathan L. Richardson, Titia Hompes, Hedvig Nordeng	2020	Ireland, Norway, Switzerland, the Netherlands, and the UK	Assess the mental health status of pregnant and breastfeeding women during the pandemic, to explore potential associations between depressive symptoms, anxiety, and stress and women's sociodemographic, health, and reproductive characteristics.	Cross-sectional	9041	In the sample of women who were pregnant and nursing, the prevalence of major depressive symptoms (EDS 13) was 15 and 13%, respectively. The percentages of pregnant and breastfeeding women who experienced moderate to severe generalized anxiety symptoms (GAD 10) were 11 and 10%, respectively. Women who were pregnant or breastfeeding received mean (SD) PSS scores of 14.1 6.6 and 13.7 6.6, respectively. Chronic mental illness, chronic somatic illness in the postpartum period, smoking, an unexpected pregnancy, professional status,

Table 1. Data charting.

Number	Article title	Author's name	Year	Country	Purpose	Type of research	Participants	Results
4	Maternal mental health and coping during the COVID-19 lockdown in the UK: Data from the COVID 19 New Mum Study	Sarah Dib, Eline Rougeaux, Adriana Vázquez-Vázquez, Jonathan C. K. Wells, Mary Fewtrell	2020	UK	To assess how mothers are feeling and coping during lockdown, and to identify the potential pathways that can assist them	Descriptive analysis	1329	The majority of the 1329 participants said they had experienced some level of depression (56%), loneliness (59%), irritability (62%), and worry (71%), although 70% said they had been able to deal with it. Higher gestational age of the infant (95% CI=0.000-0.063), accessing infant support groups (95% CI=0.003-0.252), and support with her own health (95% CI=0.004-0.235) all indicated improved mental health. Poorer mental health was predicted with traveling for work (95% CI=0.680-0.21), the effect of lockdown on one's capacity to purchase food (95% CI=1.202-0.177), and having an income of less than £30,000 (95% CI=0.475-0.042). Better coping was correlated with her own health support and a more equitable distribution of family duties.
5	Resilience and post-traumatic growth in the transition to motherhood during the COVID-19 pandemic: a qualitative exploratory study	Gill Thomson, Julie Cook, Rebecca Warren Nowland, James Donnellan, Anastasia Topalidou, Leanne Jackson, Vicky Fallon	2022	UK	bridge this knowledge gap by exploring how women have adapted to becoming a new parent during the pandemic and identifying elements of resilience and growth within their narratives	mixed-methods study	20	Personal (active coping, reflective functioning, and meaning-making), relational (social support, partner relationships, and family relationships), and contextual (health and social connectedness) aspects were among the salient resilience themes. Post-traumatic growth was also demonstrated by the possibility of new employment and leisure options as well as by the expansion and improvement of women's social networks.
6	The lived experience of postpartum anxiety during COVID-19: a hermeneutic phenomenological study	Walker Ladd	2022	United States, and two resided in Canada	Know the lived experience of women with postpartum anxiety (PPA) during a global pandemic	Qualitative research	8	Five themes—Wired, Trapped, Lost in Time, No Safety Net, and Doubting Myself—were identified through analysis as capturing the lived experience of PPA during COVID-19. The pandemic's unpredictability and restrictiveness contributed to the lived experience of PPA being both mirrored and obscured by the pandemic.
7	Prenatal and postpartum maternal mental health and neonatal motor outcomes during the COVID-19 pandemic	Alissa Papadopoulou, Emily S. Nichols, Yalda Mohtsenzade, Isabelle Giroux, Michelle F. Mottola, Ryan J. Van Lieshout, Emma G. Duerden	2022	Canada, United States, India, Kingdom, and other countries in Europe, South America, and Asia	Evaluate the relationship between prenatal and postpartum stress and depression and motor outcome in infants born during the COVID-19 pandemic	Online prospective survey study	117	Total infant motor ability was significantly negatively correlated with prenatal maternal depression outcomes (EPDS median=10.0, IQR=6.0–14.0, B=0.035, 95% CI=0.062-0.007, P=0.014), as well as postpartum maternal depression outcomes (median=7, IQR=4–12, B=0.037, 95% CI=0.066-0.008, P=0.012). Infant motor function was not linked to either felt stress during pregnancy or postpartum. According to a cluster study, preterm and low-birth-weight babies had the worst motor results when their moms had elevated depressive symptoms both during pregnancy and after giving birth.



together with any implications for practice, policy, or research. After data charting, researchers collate and summarize the result by adjusting the policy, practice, and research.

Step 6 involves consultation with experts. Researchers have consulted mental health experts regarding postpartum to get the results of the analysis following the scope that has been studied.

## Results

### The type of mental health issues suffered by postpartum mothers during the pandemic

In comparison to those who were receiving treatment and even those who reported having access to mental health services, more women reported greater mood, anxiety, or stress severity.<sup>5,33</sup> In the UK, the majority of participants experienced worry, irritability, loneliness, and depression.<sup>34</sup>

### Risk and predicting factors of mental health issues suffered by postpartum mothers during the pandemic

The 5 primary factors, which contribute to psychological discomfort during the lockdown, which can lead to persistent anxiety, tension, depression, and obsessive thoughts, are the length of the lockdown, fear of infection, emotions of annoyance and boredom, shortage of resources, and lack of information.<sup>33,35</sup> Additionally, according to Ceulemans, generalized anxiety in women who are pregnant or nursing is favorably correlated with chronic mental illness and negatively correlated with working in the healthcare industry.<sup>36</sup> Anxiety symptoms are associated with smoking during pregnancy, having an unexpected pregnancy, breastfeeding while unemployed, and having a chronic physical ailment in the postpartum period among pregnant women residing in the UK.

However, living in the UK or Ireland, having a chronic condition, and being pregnant or nursing were all related to less stress among these women. Similarly, women who reported smoking during pregnancy, unexpected pregnancies, breastfeeding while unemployed, and women who were no longer breastfeeding were more likely to experience stress symptoms. With age, the stress in expectant mothers lessens. Concerning COVID-19, pregnant and nursing women who tested positive for SARS-CoV-2 were no more likely than women without a positive test result to have significant depressive symptoms, generalized anxiety, or stress at the time the survey was completed. Additionally, reproductive traits including parity and gestational trimester were not linked to a woman's mental health condition.

Women with chronic illnesses may not have been able to see doctors due to the pandemic's limited availability of healthcare facilities, which could have added to their psychological load. The amount of stress and anxiety also appeared to be influenced by professional status. Women who worked in the healthcare industry may have had some measure of protection, but being unemployed increased their vulnerability to mental discomfort. At the time the study was finished, the first wave of the pandemic was nearly gone in most countries, which may have caused some cautious optimism, a decrease in workload, or (slightly) more pleasant working conditions for healthcare personnel. Healthcare professionals may also be the most knowledgeable about COVID-19 and lactation or pregnancy. On the other hand, given the current health crises' high rates of employment losses and significant job insecurity.<sup>36</sup>

### The experience of postpartum mothers

According to Dib, the perception of how evenly home duties have been distributed since the lockdown started was related to

mental health and adjusting to the lockdown. In the current poll, 63% of women thought that the distribution of duties had improved since the lockdown started.<sup>34</sup> According to their research, Dib found that visiting mother and baby support groups and receiving adequate care for the mother's health, especially their physical health, were indicators of better mental health. Mothers with greater mental health stated that household responsibilities were *just somewhat or to a considerable extent* more equitably shared.

A lower home income (between £20,000 and £30,000) and the influence of women traveling for work on their ability to afford food were linked to worse mental health while receiving adequate assistance for the mother's health was a predictor of better coping. Better mental health was linked (95% CI=0.003-0.252) with help for mothers in the form of mother-baby or breastfeeding support groups. In these sessions, other women can connect to the experience of parenthood during the lockdown and offer sympathetic support and validation, which may be important for peer support. They looked into relaxing techniques and engaging in physical exercise outside as potential coping mechanisms for the subjects in their study.<sup>34</sup> In addition, the use of digital technology has enabled the prevention of social isolation during lockdown as well as maintaining interpersonal connections with others.<sup>37</sup>

### The pandemic's impact on neonatal outcome and social relationship

A study by Papadopoulos *et al.* (2022) showed that infants born prematurely or with low birth weight who had depressed mothers may be more likely to have poor motor outcomes.<sup>38</sup> The combination of adverse events which are low birth weight and premature baby with a depressed mother during prenatal and postpartum increased the risk of motor development. The insecure attachment created by less responsive mothers who suffer from depression could result in less engagement in developing their motor skills.<sup>38</sup> Less confidence in the ability to care for their children is also felt by mothers with anxiety.<sup>39</sup>

On the other side, according to Thomson, the pandemic had given mothers special chances to bond and spend time together.<sup>37</sup> Women sought help from their families using both old and new digital methods, which frequently resulted in more frequent communication. The normal gatherings that took place before the pandemic also took on new significance, with women frequently feeling more connected to their families and enjoying life in new ways. It is important to note that although global cross-sectional studies have indicated elevated levels of depression, stress, and anxiety during the pandemic, these increases were not always sharp.<sup>37,39</sup> Moreover, although the bad effect related to the pandemic in all sectors, some women reported an increase in social connection, community spirit, and quality relationships.<sup>37</sup>

## Discussion

For women who are pregnant or just gave birth, the COVID-19 pandemic has presented particular difficulties. Uncontrollable stress increases the likelihood of maternal depression and anxiety, which are associated with poor outcomes for both the mother and the child, and generates conditions that are not favorable for mothers' personal growth or a child's full development.<sup>40,41</sup> The pandemic changes daily routines, working circumstances, childcare and home-schooling responsibilities, and other adaptations which should fit a new world of virtual and physical/social distancing requirements. Women's participation in some of the most fundamental health behaviors, like physical activity, nutrition, and sleep,

may have been hampered by a pervasive sense of isolation and high levels of worry, sadness, and stress. It could consequently worsen maternal mental health, with long-lasting repercussions on the development of fetal and newborn health.<sup>5,38</sup> However, some people felt otherwise due to the intimate time they spent with their families, equal distribution of household responsibility, and enhanced social relationships amidst the quarantine or lockdown.<sup>37</sup> This study provides both negative and positive impacts on mothers during the pandemic.

The creation of a customized plan for early assistance for a woman's mental health requirements, as well as the establishment of an accessible mental health provider, including medical personnel and medical facilities, is advised for pregnant and postpartum women. A better adjustment was predicted by mindfulness, social support, and meaning-focused coping, which shows resilience. Social support from loved ones, close friends, and medical experts was a crucial coping mechanism while social support is a well-known crucial system for good mental health.

## Conclusions

The current scoping review identifies the type of mental health problems during the pandemic, risk factors, experience, and the impact of the mother's mental health issues. Worry, loneliness, irritability, stress, anxiety, and depression are the most common issues suffered by postpartum mothers. Mothers who had premature infants, those in low-income households, and those who commuted to work were at risk of psychological issues. Studies reported that mothers experience more equal household chores because fathers spent more time at home. A better physical health care and breastfeeding support group is also reported to be a system to support mental health.

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