

Impact Of The Covid-19 Pandemic On Pregnant Mother's Anxiety: A Systematic Review

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ABSTRACT

The COVID-19 pandemic has impacted all aspects of life. Lockdown policies, poverty due to layoffs, and a lot of information about deaths have disrupted people's mental health. This study aims to prove the effect of the COVID-19 pandemic on the anxiety of pregnant women. The research method is a systematic review with 4 (four) stages of work: identification, screening, feasibility, and input. Search articles using three databases: Proquest, PubMed, and Google Scholar during the covid-19 pandemic period (2019-2021). The article is an English and Bahasa journal. The results of the study found 1,712 articles. After screening the eligibility criteria articles are 29 articles then reviewed. The results of the study show that the COVID-19 pandemic causes anxiety in pregnant women. The poverty factor makes the anxiety level higher. Special policies are needed for health services for pregnant women and economic support for families who have pregnant women.

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1. Introduction

On 12 January 2020, the World Health Organization (WHO) officially announced the coronavirus disease 2019 (COVID-19), originating in Wuhan in December 2019, as a pandemic (Ahmad, 2021). The last update on August 31, 2021, the Covid-19 pandemic has spread to 224 countries. The number of confirmed infections was 216,303,376 people, died 4,498,451. In Indonesia, 4,089,801 were confirmed to be infected and 133,023 people died (COVID-19, 2021).

Covid-19 or other names Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) is a new virus that can cause lung disease and death. The disease is more common in the elderly and in individuals with cardiologic, respiratory, renal, and metabolic comorbidities. SARS-CoV-2 infection may increase the risk of pneumonia in pregnant women compared to non-pregnant women. As of March 2020 there were more than 180,000 confirmed cases of COVID-19 worldwide, with over 7000 associated deaths. Pregnant women and their fetuses represent a high-risk population during an infectious disease outbreak (WHO, 2020).

Pregnant women and their fetuses constitute a high-risk population during outbreaks of infectious diseases. Physiological and mechanical changes in pregnancy generally increase susceptibility to infection, especially if the cardiorespiratory system is affected, and can lead to respiratory failure in pregnant women (Dashraath et al., 2020). The COVID19 pandemic has an effect in various sectors. In addition to the effect on public health system and world economy, actions implemented can have a negative impact on health soul society. Pregnant women are a vulnerable group to Mental Health Problems in Pregnant Women emotional disturbance or disturbance psychological. Physical changes and hormone function can trigger emotional instability of pregnant women. Pregnancy can be a risk factor which can deepen the negative effects from the COVID-19 pandemic so that women pregnancy can increase depression, negative influences and influences clearer than women who are not pregnant. Emotional disturbance such as depression, anxiety, and maternal stress during pregnancy can have an impact on fetus including fetal development bad, premature birth, and LBW (Arinda & Herdayati, 2021). Several studies have reported that the perinatal period is a time characterized by increased risk for emotional disorders such as depression, anxiety, and trauma-related disorders, especially in the presence of stress conditions (George et al., 2013). This is also true for pregnant and postpartum women and their infants in the face of emergencies or natural disasters (Dennis et al., 2017).

The impact of the Covid-19 pandemic has spread widely in society. More and more people are feeling anxious and even depressed due to this pandemic. Great concern also occurs in the majority of mothers. This study was conducted to determine the impact of the COVID-19 pandemic on the anxiety of pregnant women.

2. Material and Methode

This research was conducted a systematic reviews. Articles searched through database The ProQuest, Pubmed, Google Scholar. Databases were searched using the terms COVID-19, mental health, anxiety, depression, and pregnancy. Article searches were carried out from 23 to 30 August 2021. Articles were included if they fulfilled the following PICOS (population, intervention or exposure, comparison, outcomes, study design) eligibility criteria. Population are women who were pregnant at the time of the first wave of COVID-19 outbreak in their country. Intervention is the COVID-19 pandemic. Comparison, this is not applicable for the aim of this rapid review. Outcomes, we looked at the following outcomes: anxiety and stress disorder. Study, design we included studies with quantitative research.

The inclusion criteria were being published in English and Bahasa. reporting primary data and having the full-length text available, being original articles, being about coronavirus pandemic (COVID-19), and referring exclusively to its psychological consequences for women who were pregnant during the outbreak. The exclusion criteria were articles that did not consider psychological aspects during pregnancy and abstracts without the full text available. A total of 1.712 articles were found in the initial search. After duplicates and papers without full texts available were removed, 29 full texts of possibly pertinent studies were assessed for eligibility and were independently screened by author. The study selection process is illustrated by the PRISMA flow chart shown in figure.

TABLE 1.
STUDIES OF IMPACT OF THE COVID-19 PANDEMIC ON ANXIETY PREGNANT WOMEN

	Inclusion	Exclusion
Source	ProQuest, PubMed, Google Scholar	Other database
Dates	August 2019-August 2021	Reviews publised before or after this periode
Review type/study	Quantitative research	Systematic literatur review, qualytatif research
Language	English and Bahasa	Other language
Intervention	Covid-19 Pandemic	Other
Outcome measure	Anxiety	Other
Population	Pregnant female	Other
Type of publication	Academic journal anference	Other publication and paid

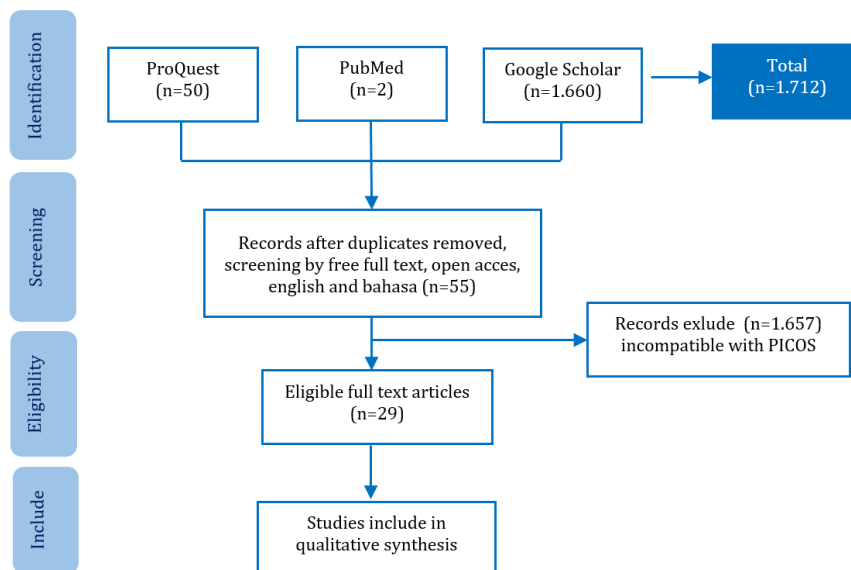


Figure 1. Prisma flowchart of data collection process

TABLE 1.
STUDIES OF OF IMPACT OF THE COVID-19 PANDEMIC ON ANXIETY PREGNANT WOMEN

No	First author and publication year	First author country	Design	Population	Main Findings
1	Mirzaei, (Mirzaei et al., 2021a)	Iran	Cross-sectional study	657	The COVID-19 epidemic increases the risk of depression, anxiety, female sexual dysfunction, and lowers QoL in pregnant and lactating women, with the general population. This suggests the urgent need for psychological intervention in the maternal population during the epidemic.
2	Çolak, (Çolak et al., 2021)	Turkey	Cross-sectional study	149	This study showed that the COVID-19 pandemic can cause depression, anxiety, and serious sleep disorders in pregnant women. The depression and anxiety scores of pregnant women in home quarantine were also found to be higher than the group not in quarantine. As the week of gestation progresses, mental health symptoms worsen and sleep quality deteriorates.
3	Ceulemans, (Ceulemans et al., 2021)	Belgium	Cross-sectional study	9.041	This multinational study found high levels of depressive symptoms and generalized anxiety among pregnant and breastfeeding women during the COVID-19 outbreak.
4	Nowacka, (Nowacka et al., 2021)	Poland	Cross-sectional study	439	The COVID-19 pandemic and related restrictions substantially altered daily lives of pregnant women, exaggerating the prevalence of anxiety compared with the pre-COVID-19 studies.
5	Stampini, (Stampini et al., 2021)	Italy	Cross-sectional study	861	The high prevalence of anxiety and depressive symptoms in pregnant women and new mothers should be a public health issue.
6	Dule, (Dule, 2021)	Ethiopia	Cross-sectional study	384	The presence of anxiety, depressive symptoms, and pandemic-related fears were identified as positive predictors.
7	Colli, (Colli et al., 2021)	Italy	Cross-sectional study	258	The pandemic onset contributed to poor mental health, especially anxiety, in a substantial portion of Italian pregnant women.
8	Esteban-Gonzalo, (Esteban-Gonzalo et al., 2021)	Spanyol	Cross-sectional study	353	The most vulnerable future mothers in terms of anxiety levels are those with reduced working hours and income due to the COVID-19 pandemic
9	Cigăran,	Romania	Cross-	559	The main anxiety of pregnant women

10	(Cigăran et al., 2021) Maharlouei, (Maharlouei et al., 2021)	Iran	sectional study Cross-sectional study	540	were related to threats to their lives and their baby's health because of the uncertainty caused by pandemic. The results revealed that an abnormal level of depression was associated with self-rated health (SRH) and medical insurance status. Moreover, the number of comorbidities and poor SRH significantly increased the chance of achieving abnormal anxiety levels in pregnant mothers during the COVID-19 pandemic.
11	Nwafor, (Nwafor et al., 2021)	Nigeria	Cross-sectional study	456	Symptoms of depression, anxiety, and stress were relatively common among pregnant women during the COVID-19 lockdown in Abakaliki, Nigeria.
12	Aly, (Aly et al., 2021)	Malaysia	Cross-sectional study	415	The majority of our women reported good practice and adequate knowledge, which contributed to a positive perception of Movement Control Order (MCO) and better maternal obstetric experience. First-time mothers may benefit from extra support and reassurance during the pandemic to alleviate maternal anxiety.
13	Wang, (Wang et al., 2021)	China	Cross-sectional study	15.428	The mental health and preventive behaviours of pregnant women during COVID-19 outbreak was associated with a range of socio-demographic, pregnancy-related, contextual, cognitive and social factors.
14	Ge, (Ge et al., 2021)	China	Cross-sectional study	446	Pregnant women who had an annual household income of less than \$7,000, were primiparous, went out for prenatal examination, wanted to self-monitor during pregnancy but did not know how to do it, believed that they should be strictly isolated at home and cancel prenatal examinations, and expected to receive pregnancy healthcare through teleconsultation services showed a higher risk of anxiety.
15	Hamzehgardeshi, (Hamzehgardeshi et al., 2021)	Iran	Cross-sectional study	318	Depression and COVID-19 anxiety increased the odds of pregnancy-related anxiety (PRA) by respectively four times and 13%, while good practice regarding COVID-19 decreased the odds by 62%.
16	Saadati, (Saadati et al., 2021)	Iran	Cross-sectional study	300	At the time of the COVID-19 pandemic, women in the second and third trimesters of pregnancy were more worried about consequences of

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17	Ding, (Ding et al., 2021)	China	Cross-sectional study	817	disease, but total health anxiety scores were significantly higher among women in the third trimester of pregnancy. The influential factors for prenatal anxiety included previous children in the family, knowledge score, media trust, worry of contracting the COVID-19 infection and worry about getting infected with COVID-19 from the ultrasound probe antenatal care (ANC) schedule.
18	Zhang, (Zhang et al., 2020)	China	Cross-sectional study	1.891	Anxiousness of miscarriage and preterm birth were prevalent (>75%). Conclusions High prevalence of PND and PTSD and high levels of anxiety suggest profound impacts of the present outbreak on mental health
19	Salehi, (Salehi et al., 2020)	Iran	Cross-sectional study	222	Moreover, fear of COVID-19 through the mediating concerns of pregnancy experiences was shown to have a significant positive relationship with mental health through an indirect path.
20	Ben-Ari, (Ben-Ari et al., 2020)	Israel	Cross-sectional study	403	Arab women reported higher level of COVID-19-related childbirth anxiety and COVID-19-related fears of being infected and concern for the foetus. In addition, poorer health, being an Arab woman, being in the third trimester, lower self-compassion, and higher COVID-19-related fears contributed significantly to greater COVID-19-related childbirth anxiety.
21	Ben-Ari, (Ben-Ari et al., 2020)	Israel	Cross-sectional study	336	Although COVID-19-related anxieties were shared by pregnant women characterised by diverse sociodemographic variables, with very small nuances, Arab women were more anxious about each of the issues than Jewish women
22	Berthelot, (Berthelot et al., 2020)	Canada	A longitudinal study	1.754	Pregnant women assessed during the COVID-19 pandemic reported more distress and psychiatric symptoms than pregnant women assessed before the pandemic, mainly in the form of depression and anxiety symptoms.
23	Durankuş, (Durankuş & Aksu, 2020)	Turkey	Cross-sectional study	92	This study illustrated the effects of the COVID-19 pandemic on the depression and anxiety levels of pregnant women. Our results point to an urgent need to provide psychosocial support to this population during the crisis.

24	Stepowicz, (Stepowicz et al., 2020)	Poland	Cross-sectional study	210	Otherwise, adverse events may occur during pregnancy and thus affect both mother and fetus. We demonstrated that women with mental treatment history, those in the first trimester of pregnancy and the ones that are single or in an informal relationship tend to experience higher levels of psychological distress and anxiety. Such factors as age, education, parity, eventful obstetric history, comorbidities, and the number of hospital stays proved to be statistically insignificant in the analysis.
25	Effati-Daryani, (Effati-Daryani et al., 2020)	Iran	Cross-sectional study	205	Variables of spouse's education level, spouse's support, marital life satisfaction and the number of pregnancies were the predictive factors of anxiety symptoms and the variables of spouse's education level, household income sufficiency, spouse's support and marital life satisfaction were predictors of stress symptoms
26	Li, (Li et al., 2020)	China	Cross-sectional study	398	Participants working in Hubei province with heavy income losses, especially pregnant women, were found to have a high risk of developing unfavorable mental health symptoms and may need psychological support or interventions.
27	Oncel, (Oncel et al., 2020)	Turkey	cohort study	125	COVID-19 in pregnant women has important impacts on perinatal and neonatal outcomes.
28	Angesti Nugraheni, (Hubaedah, 2020)	Indonesia	correlational quantitative research with a cross sectional approach	69	This study showed that the majority of respondents had good knowledge about COVID-19 (76%), experienced moderate levels of anxiety (69%), and had motivation to monitor pregnancy (93%)
29	Islami, (Islami et al., 2021)	Indonesia	Cross-sectional study	70	The results showed that the anxiety scores of pregnant women were different during the pandemic, from the condition of not being anxious, mild anxiety, moderate or severe. The results of statistical tests showed $p > 0.005$, there was no difference in anxiety scores among pregnant women based on their delivery experience.

3. Results and Discussion

3.1 Method

The majority of research uses the cross-sectional study method. There are 27 articles using the cross-sectional study out of a total of 29 articles.

3.2 Maternal Mental Health

All research articles have a relationship between the COVID-19 pandemic and the anxiety of pregnant women.

3.3 Countries

The articles included in the review consider participants from Iran, rkey, Belgium, China, Poland, Italy, Ethopia, Spanyol, Romania, Malaysia, Nigeria, Israel, China, Canada, and Indonesia.

3.4 Discussion

This study examines the database based on the inclusion criteria of accessible journals, full text, English and Indonesian, published in 2020-2021, and uses quantitative research methods. Based on a review of the abstract, 29 eligible articles were obtained. The 29 articles were then analyzed.

COVID 19 is a new infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS CoV 2) (Capobianco et al., 2020). The COVID-19 pandemic can cause depression, anxiety, and serious sleep disturbances in pregnant women (Çolak et al., 2021). The COVID-19 pandemic increases the risk of depression, anxiety, female sexual dysfunction FSD, and decreases quality of life in pregnant and lactating women, with the general population (Mirzaei et al., 2021b).

The COVID-19 pandemic and related restrictions substantially altered daily lives of pregnant women, exaggerating the prevalence of anxiety compared with the pre-COVID-19 studies (38% vs. 15%). The influential factors for prenatal anxiety included previous children in the family, knowledge score, media trust, worry of contracting the COVID-19 infection and worry about getting infected with COVID-19 from the ultrasound probe antenatal care (ANC) schedule (Ding et al., 2021). COVID-19 infection during pregnancy was associated with increased levels of generalized anxiety scores. Patient-tailored psychological support should be a mainstay of comprehensive antenatal medical care in order to avoid anxiety- and stress-related complications (Nowacka et al., 2021). The study findings underline the importance of monitoring perinatal mental health during pandemics and other societal crises to safeguard maternal and infant mental health (Ceulemans et al., 2021).

The high prevalence of anxiety and depressive symptoms in pregnant women and new mothers should be a public health issue. Clinicians might also recommend and encourage "home" physical exercise. On the other hand, about half of the sample improved their approach towards healthy eating and a very high breastfeeding rate was reported soon after birth: these data are an interesting starting point to develop new strategies for public health (Stampini et al., 2021). The results indicate that the current pandemic has imposed severe psychological distress among pregnant women. The presence of anxiety, depressive symptoms, and pandemic-related fears were identified as positive predictors. In contrast, better self-efficacy of the pregnant women was linked to lower psychological distress. For health-care professionals, broadening the focus and collaboration among service-delivering units are important in halting undesirable outcomes of the pandemic (Dule, 2021).

The mental health and preventive behaviours of pregnant women during COVID-19 outbreak was associated with a range of socio-demographic, pregnancy-related, contextual, cognitive and social factors. Interventions to mitigate their mental health problems and to promote preventive behaviours are highly warranted (Wang et al., 2021). Pregnant women who had an annual household income of less than \$7,000, were primiparous, went out for prenatal examination, wanted to self-monitor during pregnancy but did not know how to do it, believed that they should be strictly isolated at home and cancel prenatal examinations, and expected to receive pregnancy healthcare through teleconsultation services showed a higher risk of anxiety (Ge et al., 2021). Health care providers should pay more attention to the mental health of pregnant women in times of crises such as the COVID-19 pandemic (Saadati et al., 2021). Poorer health, being primiparous,

at-risk pregnancy, lower self-compassion and higher fear of being infected contributed significantly to greater fear of childbirth (FOC) (Ben-Ari et al., 2020).

Sustainable Development Goals (SDGs) points 10th aims to prevent the occurrence of injustice and impartiality that can happens to those who are in vulnerable groups. World government participation has not fully shown the results significant in supporting well-being vulnerable groups through regulations and programs which in the end led to impartiality and injustice to them, although demographically the number vulnerable groups reach a significant level if you look at the percentage of the population (Anung Ahadi Pradana, Casman, 2020). Special policies are needed to protect pregnant women during the Covid-19 pandemic lockdown period in the form of intensive health services and economic support for poor families.

4. Conclusion

The Covid-19 pandemic where there was a lockdown, lots of information on deaths, and limited health facilities caused mental health problems for pregnant women, namely anxiety. Economic factors, namely poverty, are factors that increase the occurrence of anxiety in pregnant women. Health services and economic assistance are needed for families who have pregnant women during the lockdown period so that pregnant women can avoid anxiety.

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