

Original Research

Being Exposed to COVID-19 During Pregnancy: A Qualitative Study in North Halmahera, Indonesia



Kristiani Desimina Tauho^{1*} & Jane Angelita Diba²

¹Satya Wacana Christian University, Salatiga, Indonesia

¹Satya Wacana Christian University, Salatiga, Indonesia

Article Info	Abstract
Article history: Received: 14 April 2024 Accepted: 16 July 2024	<i>Introduction:</i> Pregnant women are vulnerable to COVID-19 due to reduced partial immunity commonly occurring during pregnancy. Rarely has research reported how pregnant women deal with COVID-19. This study explores the experiences of pregnant women confirmed with COVID-19. <i>Methods:</i> This quantitative research, using a cross-sectional design approach, obtained 80 pregnant women at Bandungrejosari Malang from January 19th to February 9th, 2023. <i>Results:</i> This qualitative study utilized a phenomenological approach. Six postpartum mothers living in North Halmahera, Mollucas, participated in the research. Data analysis was carried out using the Colaizzi method. <i>Conclusion:</i> To improve their healing, the research participants tried to remain strong, adhere to health protocols, maintain a healthy diet, take medicine, think positively, and practice dhikr and sholawat. These findings can be used to improve the quality of care.
Keywords: coronavirus; immunity; pregnancy	

*Corresponding Author:

e-mail: enni.tauho@uksw.edu



This work is licensed under a Creative Commons Attribution 4.0 International License.

INTRODUCTION

One of the groups at significant risk of being infected by COVID-19 is pregnant women. A systematic review showed that up to a tenth of pregnant women admitted to the hospital are estimated to have COVID-19 [1]. Pregnant women are vulnerable to COVID-19 due to physiological changes during pregnancy that result in a partial decrease in immunity, which can have severe consequences for pregnancy [2]. COVID-19 has been associated with higher rates of adverse outcomes, including maternal mortality, preeclampsia, and preterm birth [3], [4].

Based on data from the Indonesian Obstetrics and Gynecology (POGI), 536 pregnant women were exposed to COVID-19 from April 2020 to April 2021, with a 3% mortality rate. In a rural hospital, 429 maternal cases related to COVID-19 resulted in four deaths from March to December 2020 [5]. In Jakarta, an urban area, COVID-19 was identified as the cause of four maternal deaths. These data indicate that COVID-19 is a significant cause of maternal death [6]. In North Halmahera Regency, located in North Maluku Province, there were 11 pregnant women infected with COVID-19 in the first year of the pandemic. In 2022, COVID-19 was one of the causes of maternal death in this region, according to the North Halmahera District Health Office report.

Many studies on COVID-19 in pregnancy are limited to clinical characteristics and do not explore the subjective experiences of pregnant women with COVID-19, especially those living in rural areas. A similar study was conducted in an urban area of Iran. To achieve

holistic nursing care, more in-depth research is needed regarding the conditions felt by pregnant women, as patient experience is an indicator of nursing quality care [7]. This study aims to improve prevention and promotive activities by nurses and other health professionals by exploring the experiences of pregnant women infected with COVID-19 in a rural area of Indonesia.

METHODS

Research Design

This qualitative study used a descriptive phenomenological approach to explore the experiences of pregnant women with COVID-19. The sampling technique was snowball sampling.

Procedures

Six postpartum women were chosen as research participants from 11 women who confirmed COVID-19 from January to June 2022. Data collection was conducted through unstructured, in-depth interviews. Interviews were conducted by one of the researchers directly with all participants. Data was collected from June to July 2022 in North Halmahera District. This research calls on participants' memories regarding their experiences with COVID-19 and how they coped with it. The study was conducted after participants had been declared cured of COVID-19. Health protocols such as wearing masks, washing hands, and maintaining social distancing were followed during data collection.

Data analysis

The data were analyzed using the Colaizzi method. The researchers read the interview transcripts multiple times, extracted

significant statements, interpreted the data, and built sub-themes and themes. Dependability and credibility were the criteria for achieving trustworthiness in this study. The interview guide and raw data were attached to the appendix to ensure dependability. To ensure credibility, researchers conducted member checking through follow-up interviews with participants to clarify data requiring further information.

Ethical consideration

Ethical clearance for this research was issued by the Universitas Kristen Satya Wacana's Ethics Commission with approval number 058/KOMISIETIK/EC/6/2022. Informed permission was obtained from every participant, ensuring that they were aware of the objectives and methods of the study, as well as their opportunity to withdraw from the study at any time without incurring any penalties. During the entirety of the research project, both confidentiality and anonymity were preserved.

RESULTS AND DISCUSSION

The research participants claimed they were hospitalized at gestational ages 28 to 38. Previous research shows that more pregnant women are treated for COVID-19 infection in the final trimester of pregnancy. However, there is no significant relationship between gestational age and Covid-19 [8]. Until now, no research has explained why pregnant women in the third trimester are more likely to experience Covid-19.

Physiologically, the most common symptoms found in this study were cough, fever, shortness of breath, headache, and nausea. This research qualitatively confirms

several previous quantitative studies, which showed that the symptoms felt included nasal decongestion and sneezing, headache, cough, diarrhea, sleeping problems, fatigue, and loss of smell and taste [9].

Symptoms of COVID-19 itself are divided into 3, namely general symptoms, uncommon symptoms, and severe symptoms. Common symptoms are cough, fever, fatigue, body aches, and shortness of breath. Common symptoms include headache, nasal congestion, loss of taste and smell, nausea and vomiting, and diarrhea. An individual with more severe disease will also show symptoms such as pneumonia, coughing up blood, leukopenia, and kidney failure [10]. Generally, in this study, perceived symptoms of COVID-19 during pregnancy are cough, shortness of breath, fever, loss of sense, and dizziness. In particular, two participants reported body aches, headaches, and nausea (Table 1). Furthermore, based on the analysis using the Colaizzi method, we found three themes related to women's experiences of COVID-19 during pregnancy, namely perceptions regarding the transmission and symptoms of COVID-19, feelings when infected with COVID-19 and supporting factors for recovery from COVID-19.

Perception about transmission and symptoms of Covid-19

It was found that participants did not think they could be infected with COVID-19. According to one participant, she had implemented a health protocol to prevent transmission of COVID-19, but she was still infected.

"I also do not understand because I am

a very conscientious person... I am very strict about caring for my health and my family." Mrs. F)

Other participants revealed that contracting COVID-19 was unknown beforehand because it showed no symptoms. When participants had a fever, one thought that the fever was not a symptom of COVID-19, but a fever related to pregnancy or what she said was "bawaan hamil."

"Earlier, I didn't know that I had COVID-19; one day before giving birth, I was sick but only had a normal illness, which is fever. I thought it was pregnancy related." Mrs. L).

The statements of the two participants showed a lack of awareness regarding the health problems they were experiencing. When a person is unaware that they have a health problem, it will affect how that person seeks medical help or carries out appropriate treatment for that health problem. Health-seeking behavior is any action or inaction carried out by individuals who feel they have a health problem or are sick to find appropriate treatment [11].

This study also found how participant evaluates their condition based on the perceived symptoms. Some research participants believe they are not in a serious condition because they judge that the symptoms are not severe. Participants' perception of the transmission, severity, or prevention of COVID-19 is related to the information they get. Two participants said they got all the info about COVID-19 through mass media.

"I saw it on the television news because, at that time, there was an uproar about this virus, so I knew from there." Mrs. S

One participant admitted that he did not understand the transmission or symptoms of COVID-19 because he did not attend socialization meetings regarding this matter. He did not attend the meeting because, at that time, many people did not believe in COVID-19. The results of this research align with previous research in the United States and England that there are two conspiracy beliefs regarding the coronavirus pandemic, namely that COVID-19 is a hoax and is a human-made weapon [12]. Following are the participant statements.

"I wasn't present at the COVID-19 socialization meeting because, at that time, many people didn't believe in COVID, so I also didn't want to know... I don't know how, but suddenly, I had a cough, flu, and fever. The next day, I went to the hospital to see a doctor." Mrs. D

Feelings when confirmed for COVID-19

When infected by COVID-19, the perceived feeling differed from participant to participant. A participant expressed regret and disappointment for being unable to protect herself from the risk of transmission of COVID-19. One research participant tried to be strong even though she was afraid about the impact of COVID-19 on the fetus. The other participants felt like dying and worried about the effects of COVID-19 on the fetus.

"...It turns out like this: if you get COVID-19, you want to die." Mrs. MR

"I was just afraid, afraid because, at that time, I was pregnant with my first child, afraid that something would happen to my child." Mrs. D

This finding is similar to previous studies abroad that pregnant women are often anxious and stressed about the conditions experienced or felt during the COVID-19 pandemic [13]–[15]. Opposite to those findings, the Health Ministry of Indonesia reports that the number of mothers worried about contracting COVID-19 in North Halmahera is less than nationally [16]. Other than anxiety, regret can also be found in the results of this study. Participants regret being unable to maintain their health, so they were infected. It can happen because the participant cannot accept the situation. As pregnant women, participants should not be surprised or blame themselves, which leads to stress because research has shown that pregnancy is at risk of viral infection.

Another reason is the knowledge about the symptoms and the impacts of COVID-19 on both mother and fetus. COVID-19 during pregnancy increases the risk of preterm delivery. It is associated with higher fetal death rates before or during delivery (stillbirth). However, it is only 1,26% of all deliveries [17], and the risk of vertical transmission, even though their publication shows the possibility of COVID-19 detectable in the placenta or vaginal secretions of pregnant women [18].

There is an exciting finding in this study that up to 2 years after COVID-19 was discovered, certain groups of people still do not believe in the presence of COVID-19. It must be influenced by the sources of information they access, most of which come from social media. Social media negatively impacts a woman's perception of risk for COVID-19; therefore, policymakers should develop effective communication with all community groups to understand COVID-19, especially during pregnancy [19]. The last finding concerns pregnant women's strategies to cope with the perceived impacts of COVID-19. Dzikir is one of the complementary therapies proven to be effective in reducing anxiety levels [20]. This study found another variable besides anxiety that can be overcome using dhikr therapy: shortness of breath. Further research is needed to objectively test the effectiveness of dhikr therapy in reducing the patient's shortness of breath.

Healing support factors

Three factors supporting participants' healing, spirituality, self-motivation, and family support, were discovered during the data collection. All the participants agree that family support is the most important for healing. The husband is the one who cared for the mother at the time of hospitalization. Family support makes the mother more enthusiastic so that she recovers faster.

"Because of the support from my family, I can be strong and enthusiastic until I can recover." Mrs. M

Previous research shows that people with COVID-19 who feel high family support are 33.74 times more likely to have high coping strategy capacity [21]. Another study in Indonesia found a statistically significant relationship between family support and patient recovery [22]. This result shows that family support is significant for pregnant women infected with COVID-19 in dealing with these health problems.

“... I practiced dhikr and sholawat so that the tightness of breath slowly disappeared.” Mrs. MR

The significant role of spiritual practices in managing COVID-19 symptoms, particularly anxiety-induced breathlessness. Dhikr and sholawat are forms of Islamic devotional acts that involve the repetition of phrases and prayers. Spiritual practices can induce a state of calm and mental clarity, which might contribute to alleviating symptoms exacerbated by stress and anxiety [23]. Engaging in these spiritual rituals provided a sense of peace and a tangible relief from physical discomfort [24]. This underscores the potential psychosomatic benefits of spirituality in medical conditions, where mental well-being directly impacts physical health.

Table 1
Perceived Symptoms of COVID-19 during Pregnancy

Initial	Age (y. o)	Gestational age (weeks)	Perceived symptom/s
Mrs. S	27	32	Cough, runny nose, fever, and loss of taste
Mrs. M	38	38	Shortness of breath
Mrs. L	32	38	Fever
Mrs. D	18	38	Cough, flu, shortness of breath, fever, body aches, loss of smell
Mrs. F	34	36	Dizziness and nausea
Mrs. MR	21	28	Headaches, dizziness, fever, loss of smell, and also loss of taste

CONCLUSION

This study implies that every pregnant woman has experienced living with COVID-19 during pregnancy. There are three themes found from this study: 1) perception about transmission and symptoms, 2) feelings when confirmed for COVID-19, and 3) healing support factors. The results of this study have implications for the nursing care for pregnant women. By understanding what pregnant women feel when infected with COVID-19,

including how pregnant women perceive COVID-19 as a health problem, nurses can provide more effective measures according to the conditions felt by the patient because every patient is a different person. Because patient experience is an indicator of the quality of nursing services, the results of this research can be used as a reference in providing nursing care to pregnant women experiencing COVID-19 by paying attention to their expectations and satisfaction with the conditions and the results of the service.

The limitation of this research is subjectivity because it was conducted qualitatively; therefore, for objectivity, this study must be followed by another study using the quantitative research method because it is limited in the number of participants. Consequently, it needs to be developed further using a quantitative research design in a significant and different population and a different geographical area. Populations in urban areas and populations of lower-income capacity should be provided to provide a deeper understanding of the experience of living with COVID-19.

ACKNOWLEDGMENTS

We want to express our highest gratitude to all parties who have supported and facilitated this research. In particular, we thank all participants, the North Halmahera Health Service, and the Faculty of Medicine and Health Sciences, Satya Wacana Christian University.

CONFLICT OF INTEREST

The authors have no conflicts of interest to declare. All co-authors have seen and agree with the manuscript's contents, and there is no financial interest to report.

REFERENCES

[1] G. S. Manasova, V. V Artomenko, Y. O. Radchenko, and O. V Zhovtenko, "COVID-19 and pregnancy: epidemiology, clinical features, maternal and perinatal outcomes. A systematic review," *Reprod. Endocrinol.*, no. 65, pp. 29–37, Feb. 2022,

doi: 10.18370/2309-4117.2022.65.29-37.

- [2] H. Liang and G. Acharya, "Novel corona virus disease (COVID-19) in pregnancy: What clinical recommendations to follow?," *Acta Obstet. Gynecol. Scand.*, vol. 99, no. 4, pp. 439–442, Jan. 2020, doi: 10.1111/aogs.13836.
- [3] A. Slomski, "Maternal Death Rate Increased During Early COVID-19 Pandemic," *JAMA*, vol. 328, no. 5, p. 415, Jan. 2022, doi: 10.1001/jama.2022.12729.
- [4] J. Villar *et al.*, "Maternal and Neonatal Morbidity and Mortality Among Pregnant Women With and Without COVID-19 Infection: The INTERCOVID Multinational Cohort Study," *JAMA Pediatr.*, vol. 175, no. 8, p. 817, Jan. 2021, doi: 10.1001/jamapediatrics.2021.1050.
- [5] D. Kurniawati, B. Prasetyo, H. Pandu, and A. R. Nurdianto, "Clinical presentation of maternal death with COVID-19 in rural tertiary care center: A retrospective-descriptive Study," *Bali Med. J.*, vol. 11, no. 1, pp. 87–90, Jan. 2022, doi: 10.15562/bmj.v11i1.3158.
- [6] S. Djusad *et al.*, "Maternal Death Caused by Severe-Critical COVID-19 in Jakarta: Case Series: Case Series," *Open Access Maced. J. Med. Sci.*, vol. 9, no. C, pp. 103–108, Jan. 2021, doi: 10.3889/oamjms.2021.6250.
- [7] S. Shale, "Patient experience as an indicator of clinical quality in emergency care," *Clin. Gov. An Int. J.*, vol. 18, no. 4, pp. 285–292, Feb. 2013, doi: 10.1108/CGIJ-03-2012-0008.

- [8] C. Leung, A. C. Simões e Silva, and E. A. Oliveira, "Are in-hospital COVID-19-related mortality and morbidity in pregnancy associated with gestational age?," *Ultrasound Obstet. Gynecol.*, vol. 60, no. 2, pp. 234–242, Aug. 2022, doi: <https://doi.org/10.1002/uog.24931>.
- [9] E. Krzystanek, A. Jurczak, K. Kocur, J. Jurkiewicz, and A. Kaczmarczyk, "Awareness of COVID-19 Symptoms, Risk Factors, and Vaccinations in Patients with Multiple Sclerosis," *Int. J. Environ. Res. Public Health*, vol. 19, no. 6, 2022, doi: 10.3390/ijerph19063366.
- [10] H. Esakandari, M. Nabi-Afjadi, J. Fakkari-Afjadi, N. Farahmandian, S.-M. Miresmaeili, and E. Bahreini, "A comprehensive review of COVID-19 characteristics," *Biol. Proced. Online*, vol. 22, p. 19, 2020, doi: 10.1186/s12575-020-00128-2.
- [11] D. A. Egbunu and E. Yunusa, "Factors Determining the Health Seeking Behaviour of Rural Dwellers in Dekina Local Government Area of Kogi State, Nigeria," *Int. Med. Sci. Res. J.*, vol. 2, no. 1, pp. 1–20, 2022, doi: 10.51594/imsrj.v2i1.416.
- [12] R. Imhoff and P. Lamberty, "A Bioweapon or a Hoax? The Link Between Distinct Conspiracy Beliefs About the Coronavirus Disease (COVID-19) Outbreak and Pandemic Behavior," *Soc. Psychol. Personal. Sci.*, vol. 11, no. 8, pp. 1110–1118, 2020, doi: 10.1177/1948550620934692.
- [13] X. Benarous *et al.*, "Postpartum maternal anxiety and depression during COVID-19 pandemic: Rates, risk factors and relations with maternal bonding," *Neuropsychiatr. Enfance. Adolesc.*, p. S0222961722001945, Jan. 2022, doi: 10.1016/j.neurenf.2022.12.001.
- [14] Y. Wu *et al.*, "Perinatal depressive and anxiety symptoms of pregnant women during the coronavirus disease 2019 outbreak in China," *Am. J. Obstet. Gynecol.*, vol. 223, no. 2, pp. 240.e1–240.e9, Jan. 2020, doi: 10.1016/j.ajog.2020.05.009.
- [15] Y. Aunguroch, I. G. Juanamasta, and J. Gunawan, "Experiences of patients with coronavirus in the covid-19 pandemic era in Indonesia," *Asian J. Public Opin. Res.*, vol. 8, no. 3, pp. 377–392, 2020, doi: 10.15206/ajpor.2020.8.3.377.
- [16] M. of Health, "Laporan Kinerja Kementerian Kesehatan 2021," Republik Indonesia Ministry of Health, Jakarta, 2022.
- [17] K. Walter, "COVID-19 and Pregnancy," *JAMA*, vol. 327, no. 8, p. 790, Jan. 2022, doi: 10.1001/jama.2021.22679.
- [18] S. Sinaci *et al.*, "Vertical transmission of SARS-CoV-2: A prospective cross-sectional study from a tertiary center," *J. Med. Virol.*, vol. 93, no. 10, pp. 5864–5872, Jan. 2021, doi: 10.1002/jmv.27128.
- [19] K. Angawi and M. Albugmi, "The impact of social media on risk perceptions during COVID-19 in Saudi Arabia," *Front. Public Heal.*, vol. 10, p. 898041, Jan. 2022, doi: 10.3389/fpubh.2022.898041.
- [20] F. Andriani, "Pemberdayaan Masyarakat Berbasis Psikologi Islam Melalui Implementasi Terapi Dzikir Dalam Pengembangan Kesehatan Mental

- Masyarakat Eks Pasien Covid-19," *Community Dev. J. Pengemb. Masy. Islam*, vol. 5, no. 1, p. 1, Feb. 2021, doi: 10.21043/cdjpmi.v5i1.9463.
- [21] A. M. Chilon-Huaman, Á. Camposano-Ninahuanca, J. V. Chávez-Sosa, S. Huancahuire-Vega, and W. De Borba, "Association Between Family Support and Coping Strategies of People With Covid-19: A Cross-Sectional Study," *Psychol. Res. Behav. Manag.*, vol. 16, no. June, pp. 2747–2754, 2023, doi: 10.2147/PRBM.S410068.
- [22] D. S. Wardani and S. Arifin, "The role of family support in the recovery of corona virus disease-19 patients," *Open Access Maced. J. Med. Sci.*, vol. 9, no. E, pp. 1005–1009, 2021, doi: 10.3889/oamjms.2021.6025.
- [23] I. G. Juanamasta, N. M. N. Wati, and A. A. G. O. G. O. Widana, "Covid-19: A balinese viewpoint," *Belitung Nurs. J.*, vol. 6, no. 4, pp. 143–144, 2020, doi: 10.33546/BNJ.1133.
- [24] I. W. Suardana, A. Yusuf, R. Hargono, and I. G. Juanamasta, "Spiritual Coping 'Tri Hita Karana' among Older Adults during Pandemic COVID-19: A Perspective of Balinese Culture," *Univers. J. Public Heal.*, vol. 11, no. 3, pp. 297–304, Jun. 2023, doi: 10.13189/ujph.2023.110303.