

## Mother's Experiences Confirmed Positive for Covid-19 in the Delivery Process at UGM Academic Hospital

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**Abstract. Background:** The new Corona virus (SARS-CoV-2) that originated in Wuhan was found to be spreading rapidly throughout the world and caused a pandemic in world history. Pregnant women are at risk of various psychological and social stresses, especially after the implementation of large-scale social distancing policies. **Objectives:** To find out the experience of maternity mothers who were confirmed to be Covid-19 in dealing with the delivery process at the UGM Academic Hospital. **Methods:** This qualitative research used a descriptive-narrative design. The subjects in the study were 5 mothers who had given birth and were treated at the Academic Hospital of UGM with a confirmed history of Covid-19 as main informants, 2 husbands, and one midwife as supporting informants. **Result:** Mother knew about her covid-19 infection, but did not understand the risk of covid-19 to mother and fetus. The experience of Covid-19 confirmed maternity mothers in dealing with the delivery process is based on personal and family experiences. Support for pregnant women with confirmed positive for COVID-19 includes support for education, communication, and psychological support from husbands, families, and health workers. **Conclusion:** Mothers should be more aware of the risk of Covid-19 infection in pregnant women and fetuses by enriching knowledge about Covid- 19, always implementing health protocols and vaccinations as an effort to prevent infection.

**Key words:** Mother's experience, Covid-19 confirmed delivery, UGM Academic Hospital

**Administrative Information.** Ethical Clearance Registration Number KE/FK/0963/EC/2021

## INTRODUCTION

The current COVID-19 pandemic is a global health disaster that is very crucial in this century as well as the biggest challenge that humanity has had to face since World War II<sup>1</sup>. On January 30, 2020, the World Health Organization (WHO) registered the coronavirus pneumonia epidemic as a public health emergency and thus of international concern. The disease caused by infection with the corona virus has been named by WHO as Corona Virus Disease 2019 (COVID-19)<sup>2</sup>.

The new coronavirus (SARS-CoV-2) initially started in Wuhan and spread rapidly throughout the world until it eventually became a pandemic event in world history. The cumulative number of Covid-19 cases as of May 17, 2020, has reached 3.5 million, including 250,000 deaths. The disease COVID-19 has strong infectivity and severe pathogenicity<sup>3</sup>. The disease (COVID-19) is rapidly becoming the most important health burden globally due to the pandemic<sup>4</sup>.

Generally, pandemics are not only a serious public health problem but can also trigger socio-economic and political crises and even destroy infected countries<sup>1</sup>. Coronavirus disease 2019 (COVID-19) has also been shown to cause systemic complications such as high blood pressure, kidney disease, thrombocytopenia, and liver injury. The number of COVID-19 cases is increasing rapidly in various countries, including Indonesia. Indonesia reported its first positive case of COVID-19 on March 2, 2020<sup>5</sup>. Since the Indonesian government declared coronavirus disease 2019 (COVID-19) a national disaster on March 2, 2020, drastic changes have occurred in every aspect of people's lives. Indonesians generally feel that the emergence of the virus has threatened their lives and feel that the government's late response has made them vulnerable to a pandemic<sup>6</sup>.

The 2019 Coronavirus Disease Outbreak (COVID-19) caused by SARS-CoV-2 attracted considerable attention from countries around the world. Pregnant women and their fetuses are considered a population at high risk for this disease. Pregnant women are susceptible to coronavirus in the form of adaptive changes in physiological conditions and the immune system during pregnancy, and explain the relationship between maternal clinical symptoms, perinatal outcomes, and corona virus infection<sup>7</sup>. Much is not known about the impact of COVID-19 disease on pregnancy, differences in clinical course, and outcomes in the pregnant female population, and the risk of vertical mother-to-fetal transmission. Physiological changes during pregnancy include reduced functional residual volume, increased diaphragm, and changes in cell immunity which ultimately lead to increased susceptibility to viral infections. Several cases of pregnant women with the novel coronavirus 2019 (COVID-19) in the literature, most of them occur with mild symptoms<sup>8</sup>.

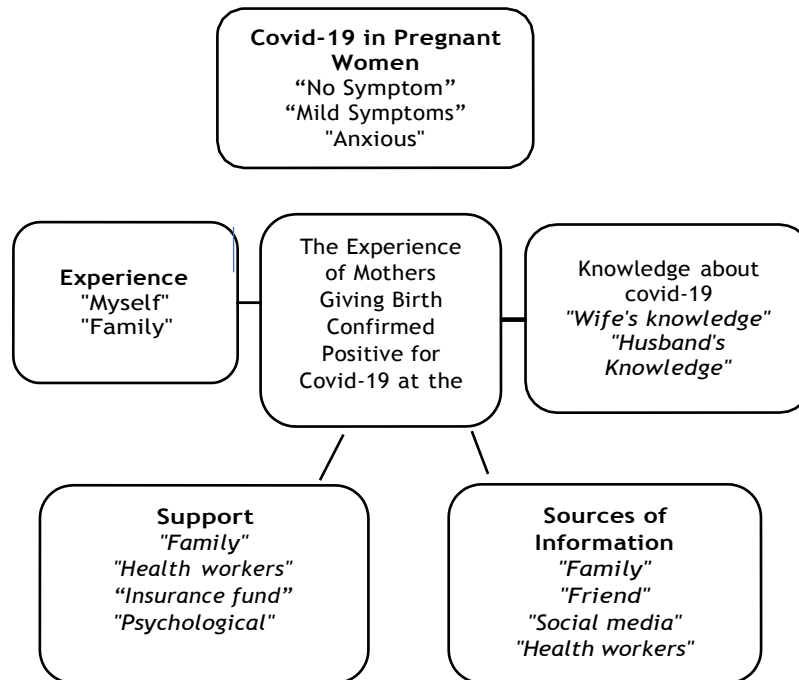
In the effort to prevent the spread of the COVID-19 Viral Disease, health authorities have made regulations requiring everyone to reorganize their lives, work, and personal lives and avoid open and public spaces as much as possible. It also occurs and occurs in women during pregnancy and after delivery<sup>9</sup>. Pneumonia is a major cause of morbidity and mortality in pregnant women. Maternal pneumonia is associated with several adverse events, including premature rupture of membranes (PROM), preterm delivery, fetal death (IUFD), impaired intrauterine growth (IUGR), and neonatal death<sup>10</sup>. The COVID-19 pandemic has also affected mental and psychosocial health in pregnant women. Pregnant women are at risk of various psychological and social stresses, especially after the implementation of large-scale social distancing policies<sup>11</sup>. However, the impact of COVID-19 on pregnancy is still largely unknown. Most cases of COVID-19 infection reported in pregnant patients are mild or asymptomatic, whereas only a few cases require treatment in the intensive care unit and require mechanical ventilation<sup>12</sup>. The purpose of this research is to find out the experience of maternity mothers who were confirmed to be Covid-19 in dealing with the delivery process at the UGM Academic Hospital.

## METHOD

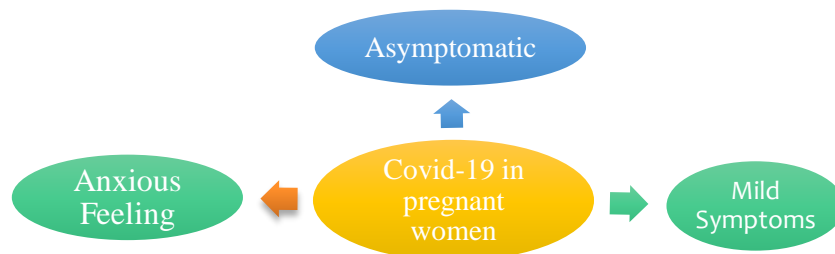
This qualitative research used a descriptive-narrative design. This research was conducted from April 2021 to June 2021. The subjects in the study were 5 mothers who had given birth and were treated at the Academic Hospital of UGM with a confirmed history of Covid-19 as main informants, 2 husbands, and one midwife as supporting informants. In-depth interviews were conducted using interview guidelines related to the Experience of Mothers Giving Birth Confirmed Positive for Covid-19 at the UGM Academic Hospital. This in-depth interview is included in the semi-structured interview. Data was collected through in-depth interviews to explore and expand the information obtained by using open-ended questions. The in-depth interview process was recorded using a voice recorder with an interview guide sheet guide. The data obtained were then processed into an interview report and an interview guide sheet, including field notes, obtained. The data obtained were reduced to provide a detailed explanation. The data in this study are presented in charts and explained in the narrative. At the final stage, verification and conclusions are drawn so that the results presented are credible findings<sup>7</sup>.

## RESULTS

The diagram below describes the themes and sub-themes regarding the Experience of Mothers Giving Birth Confirmed Positive for Covid-19:

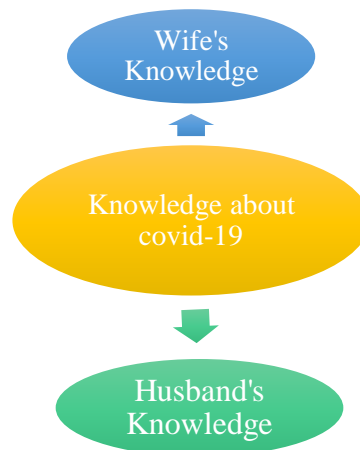


The theme of Covid-19 in pregnant women in this study includes the sub-themes "no symptoms", "mild symptoms", and "feeling anxious".



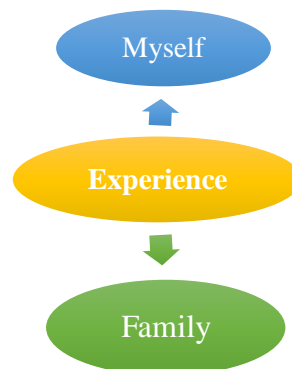
1. The sub-theme "COVID-19 with no symptoms" describes the symptoms experienced by informants confirmed for COVID-19 during delivery, as stated by informants 1 and 3 as follows : *"I...(silent) had no symptoms at all, At first I (silently) felt that everything was normal.. such as my sense of taste, smell, my body was okay, I didn't have a cold or cough at all. I was just shocked when the test result was positive"*(Inf 1). *"Because I don't have any complaints"*(Inf 3).
2. The sub-theme "COVID-19 with mild symptoms" describes the symptoms experienced by informants who were confirmed to have COVID-19 during delivery, as stated by informants 2 and 5 as follows: *"I had a cold for 4 days before I was hospitalized"* (Inf 2). *"The initial symptoms I felt were fever and pain on this site (while holding her leg), but I didn't know that the complaint was due to a virus. After the fever subsided, then I had a cough"* (Inf 5).
3. The sub-theme "COVID-19 causes feelings of anxiety" describes the feelings experienced by informants who were confirmed to have COVID-19 during childbirth as stated by Informants 1, 2, 6, and 7 as follows: *"Everyone is anxious (laughs), I just cried. I was sad. I felt my body was okay, but how come it was said to be positive"* (Inf 1). *"Yes, definitely worried"* (Inf 2). *"I also had no clue. I was confused about what I should do. Then what is the solution. I was worried for sure"* (Inf 6). *"I was also worried, I was pregnant at age with high risks, I didn't know what might happen in the future"* (Inf 7).

The theme of knowledge in this study includes the sub-themes "knowledge of the wife" and "knowledge of the husband".



1. The sub-theme "knowledge of the wife" describes the knowledge of informants about the risk of COVID-19 in pregnant or maternity women, as stated by informants 1 and 3 as follows : *"As far as I know, the experience of people who are positive for COVID-19 is achy aches, flu, and cough, anosmia, loss of sense of taste"* (Inf 1). *"I was browsing and found that Covid can make premature babies and make babies breath stress"*(Inf 3).
2. The sub-theme "husband's knowledge" describes informant 7 (husband) who revealed Covid-19 as follows: *"I didn't know anything before, because I found no literacy related to COVID and its relationship to pregnant women"* (Inf 7 ).

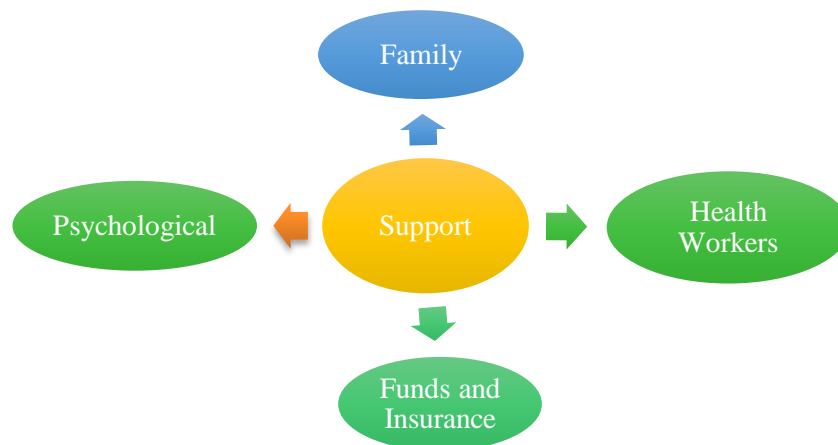
The theme of the mother's experience during childbirth with confirmed positive for Covid-19 at the Academic Hospital of UGM with the sub-themes "myself" and "family".



1. The sub-theme "myself" describes the difference between past birth experiences and delivery experiences with confirmed positive for Covid-19 based on mother's experiences, as stated by informants 1, 2, and 3 as follows: *"The difference (while laughing)...the difference is, now is more complicated. What makes it complicated is that we have to test for SWAB and rapid. Everything is completely strict for the sake of safety. Besides, what makes the atmosphere different is that we who are in the same room want to adapt to each other, but we feel that we are all in quarantine. Thus, if we talk to each other, we are worried that we will infect each other, even though we are all confirmed positive. So, we think we just have to take care of each other"* (Inf 1). *"Alhamdulillah, doctors and midwives here are all good in providing services and treatment. I was explained about my blood clotting and infection rate. When doing ANC at the Puskesmas, unfortunately, I was not informed what to do for pregnant women during the pandemic. At that time, I underwent a SWAB test when I was about to give birth, so my quarantine was longer here. Unlike the mother there, she has been quarantined at home and was here only to give birth. After that, the mother was allowed to go home. It's not the same as me who has to quarantine here longer"* (Inf 2). *"I am happy because it is also comfortable here. However, I'm also sad because I don't have any family to accompany me. The building of this hospital is also new and clean"* (Inf 3).
2. The sub-theme "family" describes the differences when their family/wife gives birth during the pandemic as conveyed by informants 6 and 7 (husband) as follows: *"The only difference is that I can't accompany my wife here. As for service, everything is still the same. Doctors and nurses were very responsive and answered all questions well.... then for the recovery of the mother after giving birth and the baby, I also don't know. In the past, mothers who gave birth by*

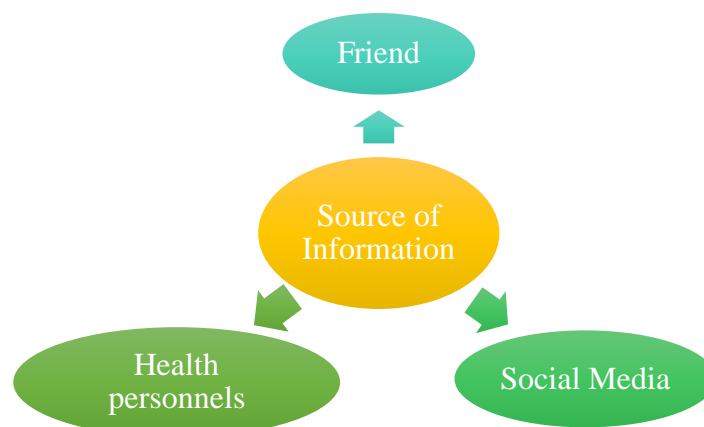
*Caesarean section would usually be assisted by nurses to learn to turn their bodies while sleeping and learn to walk, but now my wife is doing all that herself. Of course, I was worried, I thought how my wife could do everything herself" (Inf 6). "During the pregnancy, we've tried to reduce the mobilization to go somewhere if it's not urgent. For the difference, I think the treatment here is more concerned than at the Puskesmas. For example, we will be explained medical actions are carried out. That way, I can ask about the effect of the actions taken" (Inf 7).*

The theme of support here relates to support for mothers who gave birth during a pandemic and were confirmed positive for Covid-19. The themes were categorized into sub-themes consisting of "family", "funds and insurance", "health workers" and "psychological support".



1. The sub-theme "family" describes family support for mothers during delivery with confirmed COVID-19 where during the delivery process, the mother must be in a special care room and cannot be accompanied by the family, as stated by informants 2, 4, and 5 as follows: "My family is always there when they have to take me to somewhere or when I need something" (Inf 2). "They always send me things I need as their supports" (Inf 4). "My sister and my aunt live next door to me are very caring and always be there if I need anything" (Inf 5).
2. The sub-theme "health personnel" here illustrates that the support of health workers is also an assessment of satisfaction when the informant is confirmed to have COVID-19. This was expressed by informants 2 and 3 as follows: "Alhamdulillah, I am very happy to be here, everyone is alert and I feel very cared for. Every day they check and check on my condition. I am lucky that I was treated here" (Inf 2). "I like it here because of the convenience. However, I am also sad because I have no family to accompany me. This hospital is also clean because it is still new" (Inf 3).
3. The sub-theme "funds" describes the preparation of maternity funds other than insurance, where some informants also know if insurance cannot be used at any time in some conditions. This is as stated by informants 1 and 2 as follows: "I have savings although not much (laughs). If it's for childbirth, there will be enough savings to be made" (Inf 1). "I have savings in preparation for childbirth," (Inf 2).
4. The sub-theme "psychological support" describes family support in calming anxious and worried informants when confirmed positive for COVID-19 and must be hospitalized as expressed by informants 6 and 7 as follows: "I as a husband certainly calms my wife. The important thing is that he must believe and trust the doctor." (Inf 6). "The support that I have given includes telling my wife to avoid stress, considering that isolation when positive for Covid-19 tends to increase stress. I asked my wife to focus only on the baby in the womb" (Inf 7).

The theme of "information sources" describes where the informants get information about COVID-19 and its symptoms. This theme is divided into several sub-themes which include "Friends", "Social Media", and "Health Personnel".



1. The sub-theme “friends” describes the information obtained by informants about COVID-19 and its symptoms from social media, as stated by informants 1 and 3 as follows: *“Neighbours, many friends told me that information. Besides, I read a lot of information on google,” (Inf 1).* *“Yes, I asked a friend and she said that being positive for COVID-19 in pregnant women can cause premature babies and stress the baby's breath” (Inf 3).*
2. The sub-theme “social media” was also expressed by a supporting informant who said that information about covid-19 was obtained from the internet, as expressed by one of the informants as follows: *“Some information I obtained online from sites such as hello doctor and other literature” (Inf 7)*
3. The sub-theme “health personnel” describes information on COVID-19 and its symptoms from health workers, as stated by informants 2, 3, 4, 6, and 8 as follows: *“I only received information from the doctor and midwife during pregnancy control here. (Inf 2).* The need for information about covid-19 and the risks to the mother and fetus is should be known by the informants. In this case, several informants revealed that information could be obtained through lectures, leaflets, booklets, or through video media, as stated by several informants as follows: *“I get information directly from booklets and leaflets. If I'm not sure about the information I get, then I'll ask it directly with a health worker during a pregnancy check-up” (Inf 2).* *“I prefer to use books or leaflets so that if I forget some information, I can open them again and reread them” (Inf 3).* *“I prefer to receive information from lectures during education, not from books or leaflets because not everyone likes reading, including me” (Inf 4).* *“I prefer to receive information via chat. So, I like it when other people tell me about Covid-19 information instead of reading because I don't like reading. But when I talk, the information given is easier for me to accept. Video is also more suitable for me in receiving information than reading” (Inf 6).* *“In my opinion, all media can complement each other, such as leaflets, books, posters, booklets, or visual forms. However, for the preparation of pregnant women who are about to give birth, it may be more concise if the information is given in the form of leaflets” (Inf 8).*

## DISCUSSION

Several informants in this study revealed that they did not feel any symptoms when they were confirmed positive for COVID-19. However, some of them still feel mild symptoms such as cough, runny nose, and fever. This information is in line with what is described in the journal which reveals that in some positive cases of COVID-19, it can be asymptomatic or with mild symptoms such as fever and cough. Other journals also revealed that the same thing, where Covid-19 infection has signs and symptoms that are divided into four groups. The first group was asymptomatic infections with positive real-time PCR test results but no symptoms. The second is an upper respiratory tract infection with symptoms of fever, cough, pharyngeal pain, nasal obstruction, fatigue, headache, and myalgia. Other journals also revealed that most infections in pregnancy have no symptoms or mild symptoms, except for pregnant women who have additional risk factors such as diabetes, hypertension, cardiorespiratory disease, and obesity. Another study also found the same thing that the majority of pregnant women diagnosed with COVID-19 disease had mild symptoms of illness and would recover without having to undergo the process of giving birth prematurely. However, pregnant women at risk for critical illness and the need for mechanical ventilation have an increased likelihood of immediate delivery compared to the general population. Risk factors for death, in this case, include obesity, diabetes, and maternal age >40 years<sup>13</sup>.

Several informants revealed that they lacked knowledge about COVID-19 during pregnancy and its risks. The importance of increasing knowledge is not only for women, but also for husbands where the decision making for every action involves husband, wife, and family. Literature studies on cases of pregnant women with COVID-19 are still few. However, most cases are accompanied by mild symptoms. The knowledge that effectively addresses pregnant women and their complications is not yet available. Data showing that symptoms in pregnant women are similar to those in nonpregnant persons and there is no evidence for a higher maternal or fetal risk are very limited<sup>14</sup>.

Several informants said that many differences were felt during childbirth during the COVID-19 pandemic. A journal article revealed that all patients who come to the delivery room should be tested for SWAB or Rapid to confirm whether they are infected with Covid-19. Patients who are negative for Covid-19 are treated routinely by wearing masks, maintaining distance, and hand hygiene. Pregnant patients with positive symptoms of Covid-19 must be treated in an isolation room with

a negative pressure room<sup>15</sup>.

The difference in giving birth during the pandemic was expressed by the informant's family who said that they could not wait for their wife during the delivery process and the postpartum period. This is following the journal which revealed that the pandemic situation prevented mothers who gave birth to receive visits from any relatives, including husbands and family. Other journals also revealed that the low number of partners/relatives who helped deliver in the delivery room was a consequence of the screening carried out on pregnant women when they entered the delivery room<sup>16</sup>.

In this study, several informants said that support from their husbands, families, and health personnel was very helpful during childbirth during the pandemic time. The support provided by the husband and family includes providing a sense of calm, meeting the needs needed when undergoing childbirth in an isolation room, and communicating regularly so that informants are not anxious and worried. Health workers at the hospital also provide support to informants so that they are calmer when facing the delivery process. According to the journal of Dereje Bayissa Demissie and Zebenay Workneh Bitew, it is stated that maternal mental health is one of the international and national public health priority agendas to improve the welfare of pregnant and lactating mothers. In addition, providing psychological support to pregnant and lactating mothers can reduce the long-term negative effects of this pandemic time. In line with the journal, it was found that midwives and nurses not only need to pay attention to the physical health of pregnant women, but also their mental health, and cooperate with mental health professionals when necessary<sup>17</sup>.

Several informants in this study revealed that they knew information about COVID-19 from friends, social media, and health workers. The need for information is the right of everyone. Some of the obstacles in society that affect their level of knowledge about COVID-19 are differences in access to information, where some have better access while the rest do not. Sources of information, in this case, can be in written form, for example, books, newspapers, magazines, and others, while other sources of information can be in the form of electronic sources, for example, internet sites and TV<sup>18</sup>.

#### 1. The Power of Research

- a. This study used a qualitative descriptive-narrative design because the aim of the research was to dig in depth about the Experience of Confirmed Covid-19 Maternity Facing the Childbirth Process at the UGM Academic Hospital, so that it is in accordance with the method used.
- b. This research explores the experience of confirmed Covid-19 birth mothers in dealing with the delivery process, starting from knowledge about Covid-19, mother's experience, support, and sources of information about covid-19

#### 2. Research Weaknesses

- a. The Covid-19 pandemic affected the health conditions of pregnant and giving birth women, so that in this study pregnant or giving birth women with moderate and severe symptoms could not be included in the study.
- b. The implication for midwives providing education about Covid-19 infection, both to mothers, husbands or families, especially the risk of Covid-19 in pregnant women, women in childbirth, postpartum, and how to implement health protocols and prepare for delivery with confirmed Covid-19. To hospital for making educational videos, booklets, leaflets or posters really helps mothers, husbands or families to increase knowledge and prevent Covid-19 infection, and for further researchers can be carried out using different research methods on the readiness of mothers to face a confirmed Covid-19 pregnancy and delivery.

## CONCLUSION

Mothers giving birth in this study had fairly good knowledge about the Covid-19 infection they experienced but lacked knowledge about the risk of COVID-19 to the mother and fetus. The experience of maternity mothers who are positively confirmed by Covid-19 in facing the delivery process is based on personal and family experiences. Support for pregnant women who are positively confirmed by Covid-19 is supported in the form of education, communication, and psychological support from husbands, families, and health workers.

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## REFERENCES

1. Abdullah I. COVID-19: Threat and Fear in Indonesia. *Psychol Trauma Theory, Res Pract Policy*. 2020;12(5):488-490. doi:10.1037/tra0000878
2. Aditya R, Fitria Y. Hubungan Tingkat Kecemasan dan Pengetahuan Ibu Hamil Tentang Antenatal Care Saat Pandemi Covid-19. *Semin Nas Psikol UM*. 2021;(April):437-443.
3. Aditya R, Fitria Y. Hubungan Tingkat Kecemasan dan Pengetahuan Ibu Hamil Tentang Antenatal Care Saat Pandemi Covid-19. *Semin Nas Psikol UM*. 2021;(April):437-443. <http://conference.um.ac.id/index.php/psi/article/view/1167>.
4. Ali I, Alharbi OML. COVID-19: Disease, management, treatment, and social impact. *Sci Total Environ*. 2020;728:138861. doi:10.1016/j.scitotenv.2020.138861
5. Alzamora MC, Paredes T, Caceres D, Webb CM, Valdez LM, Rosa LM. Severe COVID-19 during Pregnancy and Possible Vertical Transmission. *Natl Cent Biotechnol Inf*. 2020;37:861-865. doi:10.1055/s-0040-1710050
6. Alzamora MC, Paredes T, Caceres D, Webb CM, Valdez LM, Rosa LM. Severe COVID-19 during Pregnancy and Possible Vertical Transmission. *Natl Cent Biotechnol Inf*. 2020;37:861-865.
7. Aryaniti. Pengaruh Langsung dan Tidak Langsung Beberapa Faktor terhadap Keputusan Pemilihan Penolong Persalinan di Kecamatan Gunung Sari Lombok Barat. Published online 2014.
8. Azmi Abdurrahim M, Budi Himawan A, WiyatiSekar P. FAKTOR-FAKTOR YANG BERHUBUNGAN DENGAN PEMLIHAN TEMPAT BERSALIN PADA IBU HAMIL (STUDI KASUS DI KELURAHAN ROWOSARI, KECAMATAN TEMBALANG, KOTA SEMARANG). *JKD*. 2016;5.
9. Azwar S. *Reliabilitas Dan Validitas. Pustaka Pelajar*. Pustaka Pelajar; 2011.
10. Boushra MN, MDa, Alex Koyfman Md, Brit Long Md. COVID-19 in pregnancy and the puerperium: A review for emergency physicians. *Am J Emerg Med*. 2020;40:193-198. doi:https://doi.org/10.1016/j.ajem.2020.10.055
11. Cesano N, D'Ambrosi F, Cetera GE, et al. Maternity ward management and COVID-19 pandemic: Experience of a single center in Northern Italy during the lockdown. *Eur J Midwifery*. 2021;5:1-5. doi:10.18332/ejm/137605
12. Chakraborty I, Maity P. COVID-19 outbreak: Migration, effects on society, global environment, and prevention. *Sci Total Environ*. 2020;728:138882. doi:10.1016/j.scitotenv.2020.138882
13. Fikadu Y, Yeshaneh A, Melis T, Mesele M, Anmut W, Argaw1 M. COVID-19 Preventive Measure Practices and Knowledge of Pregnant Women in Guraghe Zone Hospitals. *Int J Women's Heal*. 2020;13:39-50.
14. Dong H, Hu R, Lu C, et al. Investigation on the mental health status of pregnant women in China during the Pandemic of COVID-19. *Gen Gynecol*. Published online 2020. <https://doi.org/10.1007/s00404-020-05805-x>
15. Kemenkes. *Profil Kesehatan Indonesia 2016*. Kemenkes; 2016.
16. Mercedes BR, Serwat A, Naffaa L, et al. New-onset myocardial injury in pregnant patients with coronavirus disease 2019: a case series of 15 patients. *Am J Obstet Gynecol*. 2021;387:1-9. doi:a 2020 Elsevier <https://doi.org/10.1016/j.ajog.2020.10.031>
17. Permenkes No.4. *Kewajiban Rumah Sakit Dan Kewajiban Pasien*.; 2018.
18. Phoswa WN, Khaliq OP. Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID- 19 resource centre is hosted on Elsevier Connect, the company's public news and information. 2020;(January).
19. PP POGI. Rekomendasi Penanganan Infeksi Virus Corona (Covid-19). *Maret*. Published online 2020:1-28.
20. Rahmawati A, Nurmawati T, Permata Sari L. Faktor yang Berhubungan dengan Pengetahuan Orang Tua tentang Stunting pada Balita. *J Ners Dan Kebidanan (Journal Ners Midwifery)*. 2019;6(3):389-395. doi:https://doi.org/10.26699/jnk.v6i3.art.p389-395
21. Rohmah MK, Nurdianto AR. Corona Virus Disease 2019 (COVID-19) pada Wanita Hamil dan Bayi: Sebuah Tinjauan Literatur. *Medica Hosp J Clin Med*. 2020;7(1A):329-336. doi:10.36408/mhjcm.v7i1a.476
22. Saimin J, Ridwan S, Purnamasari NI. Anxiety among pregnant women during the covid-19 pandemic in Southeast Sulawesi : a cross-sectional study. *J Crit Rev*. 2020;7(13):4156-4162.
23. Saimin J, Ridwan S, Purnamasari NI. Anxiety among pregnant women during the covid-19 pandemic in Southeast Sulawesi : a cross-sectional study. *J Crit Rev*. 2020;7(13):4156-4162. <http://www.jcreview.com/index.php?mno=135877>.
24. Salma U. Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the



- company's public news and information. 2020;(January).
25. Setiati S, Azwar MK. COVID-19 and Indonesia. 2020;(April).
  26. Shah N, Hossain N, Shoaib R, Hussain A, Gillani R, Khan NH. Socio- demographic characteristics and the three delays of maternal mortality. *Journal of The College of Physicians and Surgeons Pakistan*. *NCBI*. 2009;19.
  27. Shayganfard M, Mahdavi F, Haghighi M, Bahmani DS, Brand S. Health anxiety predicts postponing or cancelling routine medical health care appointments among women in perinatal stage during the covid-19 lockdown. *Int J Environ Res Public Health*. 2020;17(21):1-13. doi:10.3390/ijerph17218272
  28. Sinaci S, Ozden Tokalioglu E, Ocal D, et al. Does having a high-risk pregnancy influence anxiety level during the COVID-19 pandemic? *Eur J Obstet Gynecol Reprod Biol*. 2020;255:190-196. doi:10.1016/j.ejogrb.2020.10.055
  29. Treacy L, Sagbakken M. Exploration of perceptions and decision-making processes related to childbirth in rural Sierra Leone. *BMC Pregnancy Childbirth*. 2015;15(1):87.
  30. Dunkel Schetter C, Tanner L. Anxiety, depression and stress in pregnancy: Implications for mothers, children, research, and practice. *Curr Opin Psychiatry*. 2012;25(2):141-148. doi:10.1097/YCO.0b013e3283503680
  31. Erica M. Lokken P, Walker CL, Delaney S, et al. Disease severity, pregnancy outcomes, and maternal deaths among pregnant patients with severe acute respiratory syndrome coronavirus 2 infection in Washington State. *Am J Obstet Gynecol*. 2021;77:1-14. doi:https://doi.org/10.1016/j.ajog.2020.12.1221
  32. Euser A, Hammes A, Ahrendsen J, et al. Gestational Diabetes Prevalence at Moderate and High Altitude. *High Alt Med Biol*. 2018;16(4):367-372. doi:10.1089/ham.2018.0012
  33. Fikadu Y, Yeshaneh A, Melis T, Mesele M, Anmut W, Argaw1 M. COVID-19 Preventive Measure Practices and Knowledge of Pregnant Women in Guraghe Zone Hospitals. *Int J Women's Heal*. 2020;13:39–50.
  34. Gheysarzadeh A, Sadeghifard N, Safari M, Rashidian T, Mohammadyari E, Tavan H. Case series of four pregnant women with COVID-19 in Ilam, Iran. *New Microbes New Infect*. 2020;38:100783. doi:10.1016/j.nmni.2020.100783
  35. Grigg C, Tracy S, Schmied V, Daellenbach R, Kensington M. Women's birthplace decision-making, the role of confidence: Part of the Evaluating Maternity Units study, New Zealand. *Midwifery*. 2015;31(6):597-605. doi:10.1016/j.midw.2015.02.006

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