

## ANXIETY EXPERIENCES AMONG PREGNANT WOMEN DURING COVID-19 PANDEMIC

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### Abstract

*Pregnant women are a group at risk of contracting COVID-19. This condition makes pregnant women often feel anxious about the possibility of exposure to COVID-19 infection. Anxiety that cannot be overcome will have a negative impact on the pregnant woman herself, such as preeclampsia and even miscarriage and the fetus, such as premature birth and low birth weight. This study aims to explore the anxiety experiences of pregnant women during the COVID-19 pandemic. This research was conducted in the North Minahasa area using a qualitative method with a phenomenological approach. Informants in this study amounted to 11 people. Methods of data collection using semi-structured video and face-to-face interviews. Anxiety experienced 4 themes that emerged, namely: 1) Anxiety about contracting, 2) Anxiety about other people's health, 3) Anxiety about doing antenatal care, and 4) Anxiety about childbirth. Health workers need to overcome anxiety in pregnant women so that negative impacts on pregnant women and the fetus can be avoided. Telehealth can be an alternative option to help pregnant women deal with anxiety during the COVID-19 pandemic.*

**Keywords:** Anxiety, COVID-19, Pregnant Women

### Abstrak

Ibu hamil merupakan kelompok yang berisiko tertular COVID-19. Kondisi ini membuat ibu hamil kerap merasa cemas akan kemungkinan terpapar infeksi COVID-19. Kecemasan yang tidak bisa diatasi akan berdampak buruk pada ibu hamil itu sendiri seperti preeklampsia bahkan keguguran dan janin seperti lahir prematur dan berat badan bayi baru lahir rendah. Penelitian ini bertujuan untuk mengeksplorasi pengalaman kecemasan ibu hamil selama pandemi COVID-19. Penelitian ini dilakukan di daerah Minahasa Utara dengan menggunakan metode kualitatif dengan pendekatan fenomenologis. Informan dalam penelitian ini berjumlah 11 orang. Metode pengumpulan data menggunakan video semi terstruktur dan wawancara tatap muka. Kecemasan mengalami 4 tema yang muncul yaitu: 1) Kecemasan tertular, 2) Kecemasan terhadap kesehatan orang lain, 3) Kecemasan melakukan antenatal care, dan 4) Kecemasan terhadap persalinan. Tenaga kesehatan perlu mengatasi kecemasan pada ibu hamil sehingga dampak negatif pada ibu hamil maupun janin bisa dihindari. Telehealth dapat menjadi pilihan alternatif untuk membantu ibu hamil mengatasi kecemasan selama masa pandemi COVID-19.

**Keywords:** COVID-19, Ibu hamil, Kecemasan,

### Background

Pregnant women may be more likely to contract COVID-19 and experience more severe clinical events because of the changes in maternal physiology and immune function during pregnancy (Wang et al., 2021). Preeclampsia,

premature birth, preeclampsia, gestational diabetes, and low birth weight were related to COVID-19 infection among pregnant women (Wei et al., 2021). Furthermore, anxiety and fear were experienced by more than half

of the pregnant women (Wei et al., 2021). During the COVID-19 pandemic, anxiety among pregnant women increased considerably (Fan et al., 2021). A meta-analysis reveals Western countries (38%) had a higher prevalence of anxiety than Asian countries (7.8%), as well as the prevalence of anxiety in Italy (38%), Canada (56%), Pakistan (14%), Greece (53%), Sri Lanka (17.5%), and China (0.3-29%) and Iran (3.8%) (Ghazanfarpour et al., 2022). Compared to pre COVID-19 study, anxiety was more common (38% vs. 15%) (Nowacka et al., 2021).

The anxiety of pregnant women during the COVID-19 pandemic is caused by several factors. A study meta-analysis found that perception of overall support and financial hardships, undereducation, working while pregnant, having a chronic physical, working while pregnant, isolation, and smoking during pregnancy were some of the contributing variables. (Kajdy et al., 2023; Luo et al., 2022). The mental issue among pregnant women, if it has not been resolved, might have an impact on the fetus, the infant, and the expectant mother (Howard & Khalifeh, 2020). Premature birth, low birth weight, low APGAR scores, recurrent respiratory tract infections, impaired fetal neurodevelopment, and cognitive, behavioral, and self-regulatory problems in children in the future were the adverse effects in fetuses or newborns (Korhonen et al., 2019; Korja et al., 2017; Lautarescu et al., 2022; Madigan et al., 2018; Mongan et al., 2019). Preeclampsia, miscarriage, cesarean birth, and increased postnatal depression or anxiety are just a few of the negative impacts that can affect women (Hartman et al., 2020; Hu et al., 2015; Wesselhoeft et al., 2021).

The Sustainable Development Goals (SDGs) target for maternal is to reduce maternal mortality to less than 70 per 100,000 live births globally by 2030 (UN, 2023). Nurses play an important role in supporting the success of the SDGs program. Information about the patient's unique physiological, psychological, sociological, and spiritual needs is gathered as part of the nursing assessment to identify the patient's present and future care requirements by enabling the development of a nursing diagnosis (Toney-Butler & Unison-Pace, 2022). Numerous studies have quantified anxiety. However, no one has conducted a comprehensive study on pregnant women's anxiety. The goal of this study was to explore how pregnant women felt anxious during the COVID-19 pandemic.

## **Method**

### ***Study Design***

Husserl's philosophical foundation served as the foundation for the descriptive phenomenological approach used in his investigation. By outlining characteristics that are shared by everyone who has the experience, Husserl's philosophy seeks to reach a fundamental understanding of human experience (Husserl, 2013). Phenomenological studies strive to disclose the participants' lived experiences. In the end, they seek to unite the objective and subjective aspects of actual lived experiences rather than constructing abstract conceptions or assumptions (Peoples, 2020).

### ***Informants***

Between November 2021 and January 2022, this study was carried out at the North Minahasa Regional. A purposive sample method was employed to select the informants. The inclusion criteria for

this study were informants from the original North Minahasa and informants who adhered to the Minahasa culture, totaling 11 pregnant women. The pregnant women's gestational ages, educational levels, and religious affiliations varied, as did their trimester I, II, and III gestational ages. While study participants with any ailments were disqualified.

### ***Data collection***

To directly tell the informants about the objectives, study processes, and informed consent, the researcher had previously communicated with them. In this study, semi-structured interviews were used. Specialists in maternity care such as doctors, nurses, and midwives have approved the interview guidelines. The time and place of the in-person and video interviews are chosen based on the informant's planned appointment. The researchers collaborated with nurses or midwives at the health facility in the North Minahasa district to acquire data about pregnant women who agreed to participate in this study. Once the researcher had the informant's contact information, she immediately set up an interview. The researcher obtained assistance from nursing students trained in interviewing and who had expertise in informant culture. However, all in-person interviews were only recorded in audio. All interviews conducted over video calls were recorded in both audio and video. By observing the informants' movements and facial expressions, field observations concerning the surrounding circumstances are directly recorded in field notes.

### ***Data analysis***

After conducting the interviews, the researchers immediately conducted transcripts based on verbatim and field

notes obtained from the informants. The process of data processing and data analysis is carried out simultaneously. Meanwhile, data analysis uses the stages of Colaizzi in (Sundler et al., 2019): 1) compilation transcript, researchers write down or verbatim the findings of interviews and field notes to gather correct information, the transcript-writing process involves frequently listening to and watching the interview footage. To eliminate data bias on their part, the researcher requested friends and team to watch and listen to video interviews after generating a transcript to match the current data. e) Transcript reading, in which the researcher reads the transcripts that have been repeatedly prepared to glean insightful information from each informant. The researcher creates keywords based on the research objectives while rereading, 3) categorization: the researcher reads the previous transcription several times before classifying each meaning that has the same or a very similar sentence. The researcher employed both internal and external validation and 4) theme formulation. To examine the primary themes that arose, the researcher developed data coding and grouping categories using NVIVO 12 Plus software.

### ***Trustworthiness***

When conducting qualitative research, validity, and reliability are used to show the extent to which data from informants have been interpreted in line with the researchers' descriptions of an event. In this type of research, the data's dependability is often multiple, continually changing, and inconsistent. Researchers have evaluated the validity and reliability of their findings by confirming information and assuring the quality of their data in qualitative research. These techniques include 1)

credibility (building relationships with informants, member checking, and consulting with experts), 2) transferability (researchers make clear, detailed reports and decompose methodically and can be trusted so that readers can understand that the results of the research can be applied to other places), 3) dependability (the team analyzed the researchers' study techniques and examined them to ensure the accuracy of the data acquired), and 4) Confirmability is the re-examination of that data. Boosting persistence, triangulation, peer discussion, and the utilization of reference materials are just a few of the processes that were used to acquire the data to prevent bias.

### ***Ethical consideration***

The Health Research Ethics Committee of Aisyiyah University, Yogyakarta has

approved this study with the ethical exemption number 1362/KEP-UNISA/I/2021.

### **Result**

This study was conducted in Airmadidi Health Center, which has a working area of six sub-districts and three villages which are located near urban areas. Meanwhile, the Kauditan and Kema health centers are quite far from urban areas with the respective working areas of the Kauditan Health Center 11 Villages and the Kema Health Center 10 Villages. This research location was chosen because the area is often in the red zone area for the spread of COVID-19 and is still thick with culture, especially for pregnant women, and still provides research permits during the COVID-19 pandemic. Characteristics of informants can be seen table 1.

Table 1. Participant's characteristic

Participant	Age	Education	Gestational Age	Religion	Occupation
I1	26	Bachelor	24	Non-Muslim	Housewife
I2	25	Bachelor	13	Muslim	Housewife
I3	26	Bachelor	16	Non-Muslim	Employee
I4	21	High School	26	Non-Muslim	Housewife
I5	33	High School	24	Non-Muslim	Housewife
I6	32	Bachelor	16	Non-Muslim	Teacher
I7	27	Bachelor	19	Non-Muslim	Housewife
I8	30	Bachelor	29	Non-Muslim	Teacher
I9	27	High School	3	Non-Muslim	Housewife
I10	27	High School	24	Non-Muslim	Housewife
I11	25	High School	12	Non-Muslim	Housewife

### ***Theme 1: Anxiety about getting infected***

All the pregnant women interviewed said that infection exposure was their biggest concern. When exposed to COVID-19, pregnant women experience a variety of negative effects. There are several subthemes related to this theme: 1) Anxiety about being infected by others, 2) Worry to meet other, and 3) Hesitant to go to public spaces.

#### ***1.1 Anxiety of being infected by others***

All pregnant women know the transmission of COVID-19 infection primarily because of contact with other people. The following statements of two informants:

*"I heard that many doctors and nurses were infected with COVID-19, so I was afraid to do the antenatal care. I also heard that my neighbor*



*was infected, so I was very afraid to go out” (I10).*

*“I’m afraid that my husband working outside will bring the virus, while I’m here quietly being aware of the virus” (I7)*

### *1.2 Avoid spending time with other people*

Women who are expecting frequently require social support from friends and relatives. Pregnant women, however, truly wish to be able to gather with friends and family as before due to the COVID-19 pandemic's conditions, but I must maintain a safe distance to avoid being exposed to other people. One informant said:

*“Sometimes I want to go out with friends, or sometimes there is an invitation to a family gathering, or friends and family are coming, I refuse their invitation but in a subtle way so that they act offended because I am afraid of being exposed.” (I7)*

### *1.3 Worry to go to public spaces*

During a pandemic, one of the health protocols implemented is to avoid assemblage. Some pregnant women fear using public transportation and going to shopping centers. One informant said:

*“This pregnancy is highly anticipated so very enthusiastic about preparing for pregnancy. I want to prepare baby equipment but I’m afraid to buy it at the shopping center, afraid of being exposed.” (I4)*

### **Theme 2: Anxiety about the well-being of others’ health**

This theme explores how pregnant women during the COVID-19 epidemic

consider not just their health but also the health of their families and the unborn child they are carrying. Apart from that, this theme has the following sub-themes: Anxiety over the health of the fetus and Anxiety about the husband.

#### *2.1 Anxiety over the health of the fetus*

When there is a chance that they could be exposed to COVID-19, pregnant women worry about the health of their unborn children. As a result, they always try to maintain their health to the best of their ability so that it won't affect the unborn child they are carrying. One informant said:

*“I am very worried that my baby will be harmed if I become exposed to a covid infection. Later, I’m worried that I could miscarry. I worry a lot about it.” (I8)*

#### *2.2 Anxiety about husband*

Husband, who serves as the family's head and is responsible for providing for the family's needs. This during the COVID-19 pandemic caused expectant wives to worry about their husbands' presence at work. One informant said:

*“To make a living, my husband works outside. I am quite concerned that he may be infected by COVID-19 while at work. How will I care for him if he is sick and how will we save money for the birth later.” (I3)*

### **Theme 3: Anxiety to do antenatal care**

Antenatal care is crucial and should be provided at health facilities. Pregnant women's access to antenatal care services has been impacted by the COVID-19 pandemic, and many are reluctant to visit medical facilities for checkups, including hospitals, public health center, and practicing physicians.

Table 2. Theme and subtheme anxiety experiences among pregnant women

No	Theme	Subtheme
1	Anxiety about getting infected	1) Anxiety about being infected by others 2) Worry to meet other 3) Hesitant to go to public spaces. Anxiety over the health of the fetus
2	Anxiety about the well-being of others' health	1) Husband being infected
3	Anxiety to do antenatal care	1) Apprehension of the test-related equipment. 2) Health facilities are not safe
4	Anxiety about childbirth	1) Fear of choosing a delivery place 2) Concern about the birth assistant 3) Worry to kinds of delivery method

### 3.1 Apprehension of the test-related equipment

The biggest fear of pregnant women, when they go to health facilities, is exposure to infection because a lot of equipment is used interchangeably with other pregnant women. One informant said:

*"I'm just at home all day. I am afraid to carry out examinations at health facilities for fear of being contaminated with the virus with equipment that is used alternately with other people, for example, blood pressure." (I7)*

### 3.2 Health facilities are not safe

According to our research, pregnant women are hesitant to go for antenatal care appointments because they think there will be a long line of people waiting to get checked. One informant said:

*"I'm afraid to do antenatal care examinations at the posyandu (Integrated Healthcare Center) because there are many people who don't comply with health protocols, don't use masks, then the service also coincides with toddlers and there is elderly too, so I'm a pregnant woman worried if I must go." (I8)*

### Theme 4: Anxiety about childbirth

#### 4.1 Fear of choosing a delivery place

The location of the delivery is a crucial preparation that pregnant women and their families must think about ever since conception. Pregnant women are apprehensive about choosing where to give birth because they believe that health facilities are unsafe for them due to their fear of contracting the COVID-19 pandemic. One informant said:

*"When I consider about the delivery place, I'm afraid of going to a public hospital to give birth during this pandemic, because over there all kinds of illnesses, including COVID, are present." (I8)*

#### 4.2 Concern about the birth assistant

The large number of reports of health workers being infected with covid-19 many pregnant women feel anxious about giving birth. One informant said:

*"I have received notification that the doctor at the public health center is temporarily in self-isolation or quarantine. I want the doctor's birth attendant because the doctor is the one who handled my first child, but because of the temporary quarantine I'm afraid about it." (I10)*

#### 4.2 Worry to kinds of delivery method

This sub-theme demonstrates how pregnant women worry about whether a caesarean delivery will be used as they are getting ready to give birth during COVID-19 Pandemic. One informant said:

*"Since this was my first pregnancy, I was anxious as I prepared to give birth as I had wished. However, because I was weak and could already feel the pain, I ultimately needed surgery." (16)*

## Discussion

The globe is concerned about the COVID-19 pandemic outbreak. A lot of people are terrified of encountering the coronavirus, especially pregnant women who are one of the virus's most susceptible populations. The findings of this study showed some pregnant women experience anxiety over being exposed to COVID-19 as they are ready to give birth. Another studies also showed the COVID-19 pandemic significantly impacted pregnant women's mental health by raising anxiety levels due to fear the virus transmission (Muñoz-Vela et al., 2023; Yeşilçinar et al., 2022).

In this study, we find pregnant women experience anxiety when they meet other people and feel nervous when they must be in public places because they are aware be a susceptible to transmission COVID-19. Pregnancy related physiological and physical changes make a person more vulnerable to infections in general, especially when the cardiorespiratory system is impacted, and they also hasten the gravida's path to respiratory failure (Dashraath et al., 2020).

The present study showed pregnant women often feel anxious about the

condition of their babies. Another study showed the overwhelming majority of pregnant mothers feared contracting COVID-19 and passing it on to their unborn children (Yeşilçinar et al., 2022). Systematic research shows that the impact of pregnant women who are positively infected with COVID-19 had negative impact to babies such born prematurely, the baby's condition is critical, and the worst is infant death (Mirbeyk et al., 2021).

One of the findings in this study was pregnant women are worried about their husbands. The previous study found more pregnant women expressed serious concerns about their husbands or partners as a result of the COVID-19 restrictions (Fan et al., 2021). The important role of health care providers in pregnant couples will provide appropriate support to promote health behavior as an effort to reduce the anxiety of pregnant women (Kim & Kang, 2022).

The results of this study indicate that pregnant women feel anxious when they must carry out antenatal care at health facilities, such as worrying about the equipment used and the health workers who handle it. Several previous studies have shown that the frequency of antenatal care visits for pregnant women has (Gamberini et al., 2023; Landrian et al., 2022). The most common reasons for missing the appointments respectively, were fear of infection, facility not working usual, fear of infection to child (Hamadneh et al., 2022). Antenatal care is crucial for women who are pregnant. To facilitate safe prenatal care checkups, several medical facilities have adopted telehealth (Tendean et al., 2021).

According to present studies, pregnant women are feeling anxiety to visit

antenatal care because they are concerned about potential COVID-19 exposure among health professionals. The findings of other research indicate pregnant women are afraid of contracting to health workers because their job is to be at the forefront, which is very vulnerable to infection, starting from using tools from other patients and direct contact with patients.(Gholami et al., 2021).

Our research findings show that pregnant women are anxious when they think about how they will give birth during the COVID-19 pandemic. There are three things that pregnant women worry about, namely: fear of choosing a delivery place, concern about the birth assistant, and worry to kinds of delivery method. The previous study statistically significant mediator of the association between perceived stress and anxiety of labor was fear of COVID-19. The COVID-19 pandemic may negatively affect pregnant women's emotional well-being by producing stress, anxiety, and heightened labor anxiety. Women feel that giving birth during the COVID-19 pandemic poses a harm to their health and well-being (Dymecka et al., 2021). According to a qualitative study, hospital safety during a pandemic is crucial for preventing the spread of COVID-19 during childbirth (Cruz-Ramos et al., 2023).

The limitations of this research include the fact that some of the informants were questioned through video call, which prevented carrying out precise observations or observations, as well as the fact that some interview transcripts were unclear due to network issues.

## Conclusion

One of the groups most susceptible to Covid-19 infection is pregnant women. According to the results of the qualitative study, there are four themes that worry pregnant women during the Covid-19 pandemic. Health professionals must try to explain the transfer of Covid-19 in a way that pregnant women can understand. In addition, it's critical to treat mental health issues that affect pregnant women, including anxiety, to protect their health and that of the fetus. The usage of telehealth, which has been successfully used to support antenatal care checks and overcome mental health issues for pregnant women, is an alternate option that can be considered as a support.

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