



Anxiety Levels of Pregnant Women During the Covid-19 Pandemic

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Abstract. The COVID-19 pandemic has brought about mental changes for every human being, including pregnant women worldwide. Anxiety will impact the mother and the growth and development of the fetus she is carrying. This study aimed to identify pregnant women's anxiety levels and the risk factors that can cause anxiety in pregnant women during the covid-19 pandemic. **Methods.** This study uses a quantitative approach. **Settings.** The location of this research is Jakarta, with a population of all pregnant women in the area. The sample of this study was pregnant women who made antenatal care visits at the independent midwife practice, with a large sample of 223 people. The sampling technique used is non-probability sampling (accidental sampling) **Designs.** This study used a cross-sectional study design. **Results.** This study's results indicate that most mothers experience mild anxiety, 38.6% of pregnant women who experience severe anxiety 17.5%, pregnant women who experience severe anxiety 9% and those who experience very severe anxiety or panic, 3.6% **Conclusions.** Many factors cause anxiety in pregnant women during the transition to the COVID-19 pandemic, such as maternal characteristics (age, education, and occupation) and obstetric characteristics (gestational age, gravida, and parity).

Keywords: Anxiety Levels · Pregnant Women · COVID-19 · Coronavirus · Pandemic

1 Introduction

Pregnancy is a natural process that occurs in a woman's body, but this situation can turn into an emergency complication that every pregnant woman can experience [1]. For some women, pregnancy can bring both happiness and anxiety. Mothers tend to worry about their health and the baby they are carrying, so they will increase anxiety about their pregnancy.

In the world, the causes of maternal death are still dominated by bleeding, pre-eclampsia/eclampsia, and postpartum infections [2], while in Indonesia in 2021, pre-eclampsia/eclampsia is the third highest cause of maternal death, namely, 1,077 cases [3]. Twenty-four percent of deaths that occur in mothers during pregnancy are caused

by complications of pre-eclampsia [4]. Anxiety is one of the factors that can cause an increase in blood pressure during pregnancy and can result in complications of pre-eclampsia [5].

COVID-19 is rapidly advancing in the world, and its mortality rate is increasing day by day [6]. During the high prevalence of pandemics, different groups of the population, including pregnant women, the vulnerable group, are exposed to high levels of psychological damage [7]. During pregnancy, with or without a pandemic, the mother's mental and psychological condition undergoes many changes. During the COVID-19 pandemic around the world, around 10% of pregnant women have had problems mentally. In developing countries, it is even higher; that is 15.6% during pregnancy [8].

The United Nations International Children's Emergency Fund (UNICEF) states that data on pregnant women experiencing problems around 12,230,142 million people, and 30% of them are anxious. According to data from the Anxiety and Depression Associations of America (ADAA), it is stated that 52% of pregnant women report experiencing increased anxiety during pregnancy [9]. Psychological disorders during pregnancy in existing literacy have been associated with a variety of complications, such as preterm birth, low birth weight, stunted fetal growth, and postnatal complications. Besides, this psychological disorder is also associated with the emergence of hypertension during pregnancy, pre-eclampsia, and gestational diabetes [10].

There are many factors behind the occurrence of anxiety in pregnant women apart from metabolic and hormonal influences, such as socio-demographic factors (age, education, occupation, economic status), obstetric factors (number of children, history of miscarriage, gestational age, pregnancy complications) and most importantly, support received by pregnant women from their families, partners, and health workers such as midwives. In addition, the experience received regarding violence perpetrated by those closest to them can also trigger anxiety in pregnant women [11]. Personality factors of pregnant women can also affect anxiety, such as being grumpy, introverted, shy, nervous, and having low self-esteem [12].

Based on the above background, the authors are interested in further researching the description of anxiety levels in pregnant women.

2 Method

This study uses a quantitative descriptive approach with a cross-sectional study design. The research was located in Jakarta, in several independent midwife practice places. The population in this study were all pregnant women in the Jakarta area, while the sample size was 223 pregnant women who were selected using inclusion and exclusion criteria. The sampling technique used was non-probability sampling (accidental sampling). Data collection was carried out from September to October 2021.

The questionnaire was adapted from the IDHS (Indonesian Health Demographic Survey) for questions covering socio-demographic and pregnancy characteristics. The questionnaire was made online using google Forms for the questionnaire that measures pregnant women's anxiety levels using the HARS (Hamilton Anxiety Rating Scale) questionnaire, which consists of 14 questions. Each question filled out and chosen by the respondent has a score as follows: 0 for no anxiety, 1 for mild anxiety, 2 for moderate

Table 1. Distribution of the Frequency of Pregnant Women's Anxiety Levels during the Covid-19 Pandemic

Level of Anxiety	Frequency (n)	Percentage (%)
Normal	61	27
Mild	80	36
Moderate	51	23
Severe	23	10
Extremely severe	8	4
Total	223	100

anxiety, 3 for severe anxiety, and 4 for very severe anxiety/panic. The total score is between 0–56 with details <14 no anxiety, 14–20 mild anxiety, 21–27 moderate anxiety, 28–41 severe anxiety, and 42–56 very anxious/panic.

The analysis is a univariate analysis obtained using the Microsoft Office version of SPSS 21. This research has passed the ethical clearance registration Health Research Ethics Committee, State Polytechnic of Health Malang with Description of Ethical Approval Reg. No: 159/KEPK-POLKESMA/2021.

3 Result

The majority of respondents, or 36% (80) pregnant women, suffer from mild anxiety, and 4% (8) pregnant women experience very severe anxiety (panic). The frequency of anxiety levels in pregnant women during the COVID-19 pandemic can be seen in Table 1.

The age of the respondents was in the age range of 20–35, with a percentage of 78.5%. The education level of the respondents is Senior High School, with a percentage of 57.4%. As many as 70% (156) of respondents were housewives, with the majority of gestational age >28 weeks. The frequency of respondents based on sociodemography can be seen in Table 2.

Most respondents' gestational age was >28 weeks, 52% (116). 52% (116) of respondents were primigravida, and the majority, 89.7% (200), had no history of miscarriage. The frequency of the respondent's pregnancy characteristics can be seen in Table 3.

4 Discussion

Anxiety felt by pregnant women is something that body changes during pregnancy can cause, and in some women, changes in body shape can trigger anxiety. The condition of the Covid-19 pandemic that has hit the whole world, including Indonesia, has also made pregnant women increasingly anxious about their pregnancy. Many pregnant women are worried that they will contract the disease, and it is not uncommon because this makes the mother overthink, which can hurt herself and the fetus she is carrying.

Table 2. Distribution of the Frequency of Socio-demographic Respondent

Characteristics	Frequency (n)	Percentage (%)
Age (year)		
<20	13	5,8
20–35	175	78,5
>35	35	15,7
Education Level		
Elementary School	9	4
Junior High School	29	13
Senior High School	128	57,4
University	57	25,6
Job		
Housewife	156	70
Employed	60	26,9
Other	7	3,1

Table 3. Distribution of the Frequency of Pregnancy Characteristics

Characteristics	Frequency (n)	Percentage (%)
Gestational Age (week)		
<14	53	23,8
14–28	54	24,2
>28	116	52
Number of pregnancy		
Primigravida	116	52
Multigravida	97	43,5
Grandemultigravida	10	4,5
History of Abortion		
Yes	23	10,3
No	200	89,7

The Covid-19 pandemic has changed the entire psychological condition of humans, including pregnant women. The period of pregnancy and childbirth places pregnant women into a group that is more vulnerable to experiencing mental disorders such as anxiety and depression [13]. Pregnant women are considered a high-risk population. Several studies have reported that pregnant women are vulnerable to emotional instability and stress, which will later trigger high levels of anxiety they experience [14].

Ibanez *et al.*, 2015 stated that emotional disorders such as depression, anxiety, and maternal stress during pregnancy would adversely affect the fetus, namely poor fetal development, preterm birth, and low birth weight babies (LBW). Children born prematurely and with birth weight are at increased risk of experiencing emotional and cognitive problems (hyperactivity, anxiety, and language delays).

Mother's age is allegedly one of the factors that can cause anxiety when pregnant. Pregnant women aged <20 years are more at risk of experiencing anxiety because of their emotional and psychological immaturity. Meanwhile, mothers over 35 also have a risk because, at that age, they are very susceptible to complications, so their anxiety level will be higher.

In addition, the mother's education level also has a role in accepting the conditions of the Covid-19 pandemic, which can cause anxiety. The level of education can affect a person's thinking and acting; people with high education will find it easier to reason so that it is easier to solve problems and know how to do positive coping mechanisms. In other words, someone with a high level of education will not experience anxiety [16]. Education can influence pregnant women in thinking, managing information, and making decisions in dealing with a problem. Knowledge is one factor that influences pregnant women's anxiety, where the higher the mother's education, the higher the level of knowledge. Highly educated pregnant women have more knowledge about pregnancy to anticipate themselves facing anxiety, which is inversely proportional to the mother's low education level [17].

The research conducted by Murdayah, Lilis, and Lovita, 2021 states a significant relationship between a mother's occupation and the anxiety she experiences (p-value 0.027). Mothers who do not work will feel powerless in various aspects and feel imprisoned in their own homes to take care of domestic work such as cooking, washing, and other domestic activities, which will trigger a feeling of boredom and fatigue, which, if pregnant women continuously feel it, will result in anxiety. Unlike the case with working mothers, they will interact more with the social environment, which allows sharing of information about their health and the fetus they contain [16].

Before the pandemic, the fear of childbirth was associated with most women's related constructions with the physical pain of labor and emotions when they can finally meet the baby, joy, happiness, serenity, and the impatience that allows women to prepare for the moment childbirth in the best possible way every possible way. During the pandemic, the response changes very surprisingly: sadness, loneliness, inadequacy, a sense of isolation, and narrowing. Though so, the physical pain persists, like the only feature in common with concept construction in the past. Construction is associated with these positive expectations of birth, including closeness with a partner, a sense of protection, security, and serenity. During a pandemic, this construction turned into feelings of anger, anxiety, and loneliness. Perceptions of childbirth changed, likely heavily influenced by social shifts and structural that happened to withstand the spread of Covid-19 during the pandemic [18].

We noticed some limitations of this study, including the type of research used, the research location, which was only centered in the exact location, and the social support variables received by pregnant women were not studied. However, they have not limited

the value found in this study. Further research is needed to disclose more risk factors of pregnant women's anxiety and prevention actions.

5 Conclusion

The COVID-19 pandemic can harm the psychological state of pregnant women (anxiety). Many factors that caused anxiety in pregnant women during the transition to the COVID-19 pandemic are maternal characteristics such as age, education, and occupation and obstetric characteristics such as gestational age, gravida, and parity.

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