



Covid-19 risk perception and anxiety of third-semester pregnant mothers in facing childbirth during the time of covid-19 pandemic in 2022

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ABSTRACT

Pregnant women have the most anxiety during the COVID-19 pandemic because they are vulnerable and at high risk. Excessive anxiety raises stress hormone levels in the body, which inhibits cervical dilatation and causes labor to take longer. Long delivery is one of the causes of Indonesia's high maternal mortality rate. The purpose of this study is to identify the factors that influence third-trimester pregnant women's worry about childbirth during the COVID-19 pandemic at the Kasihan I Community Health Center in 2022. The research design used was Cross-Sectional with an analytical survey method. Sampling was done by purposive sampling technique where the sample amounted to 74 respondents. Data were analyzed using univariate, bivariate, and multivariate logistic regression. The findings revealed a link between the perceived risk of COVID-19 and the anxiety of pregnant women in their third trimester about giving birth at the Kasihan I Community Health Center in 2022. The study's result was the varying perception of COVID-19 risk and the anxiety of pregnant women in their third trimester.

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Kata kunci:

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ABSTRAK

Kecemasan yang dirasakan paling akut pada populasi rentan dan berisiko tinggi dimasa pandemi COVID-19 yaitu pada ibu hamil. Kecemasan yang berlebihan menyebabkan kadar hormon stres dalam tubuh meningkat dan menghambat dilatasi serviks, mengakibatkan persalinan lama. Persalinan lama merupakan salah satu penyebab tingginya angka kematian Ibu di Indonesia. Penelitian ini bertujuan untuk mengetahui faktor-faktor yang mempengaruhi kecemasan ibu hamil trimester III dalam menghadapi persalinan di masa pandemi COVID-19 di Puskesmas Kasihan I tahun 2022. Desain penelitian yang digunakan adalah Cross-Sectional dengan metode survey analitik. Pengambilan sampel dengan teknik purposive sampling, sampel berjumlah 74 responden. Data dianalisis secara univariat, bivariat dan multivariat menggunakan regresi logistik berganda. Hasil penelitian terdapat hubungan antara persepsi risiko COVID-19 dengan kecemasan ibu hamil Trimester III dalam menghadapi persalinan di Puskesmas Kasihan I Tahun 2022. Simpulan penelitian ini variabel persepsi risiko COVID-19 dengan kecemasan ibu hamil trimester III

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INTRODUCTION

COVID-19 is a highly contagious respiratory disease that is causing an unprecedented pandemic (Provenzi *et al.*, 2020). COVID-19 infected more than 300 million people worldwide in December 2021, leading to death, a lack of medical resources, unemployment, economic hardship, and changes in daily life (WHO, 2021). By January 2022, more than 4 million people in Indonesia had been infected (Johns Hopkins University, 2022). The first COVID-19 case in Yogyakarta happened in March 2020, prompting several existing programs and efforts aimed at rescuing the people of Yogyakarta by limiting the spread of COVID-19 (Dinas Kesehatan Yogyakarta, 2021).

The virus's impact causes health and economic consequences (Serafini *et al.*, 2020). Many workers have been laid off, and employers have been impacted by COVID-19, causing financial hardships (Xie *et al.*, 2021). The COVID-19 pandemic is not only an epidemiological catastrophe but also a psychological crisis, with worry being one of the negative psychological crises (Yassa *et al.*, 2020). Pregnant women are a vulnerable and high-risk demographic for anxiety (Hessami *et al.*, 2020). Pregnant women's worry and panic intensified during the COVID-19 epidemic (Mortazavi *et al.*, 2021). Pregnancy and childbirth are physiological events that can become pathological (Putri & Kurniati, 2021). Pregnant women's anxiety is a new complication of the pandemic, with major ramifications for the mother's physical health (Timircan *et al.*, 2021).

Adjustment to motherhood is one of the causes of anxiety during pregnancy (Ravaldi *et al.*, 2021). Pregnant women in their third trimester are more likely to suffer from anxiety problems than those in their first and second trimesters (Saadati *et al.*, 2021). Third-trimester pregnant women become more protective of the baby they are carrying; mothers avoid crowds they believe would be dangerous; they experience physical discomfort; and they feel awkward, ugly, and untidy (Walyani, 2015).

Third-trimester pregnancy is an alert period for pregnant women because they are impatient to have a baby, concerned that the baby will be born improperly, and tormented by the fear of agony throughout the delivery process (Dewi & Sunarsih, 2014). If untreated, antenatal anxiety can result in postpartum depression, suicidal behavior, preeclampsia, early birth, low birth weight, and impaired neurobehavioral and socioemotional development in children (Tikka *et al.*, 2021). Mothers who are not prepared to give birth will be more worried (Putri & Kurniati, 2021).

Excessive anxiety in the mother causes stress hormone levels in the body to rise, inhibiting cervical dilatation and leading to protracted labor, tiredness, and Fetal Distress to IUDF (Intra Uterine Fetal Death) (Putri & Kurniati, 2021). Excessive anxiety raises blood pressure and may be a factor in the development of hypertension in pregnant women (Dewi & Sunarsih, 2014). Anxiety disorders affect around 264 million people globally (WHO, 2022). In the United States, 36% of pregnant women suffer from anxiety disorders (Liu *et al.*, 2021). Anxiety was reported by 36.77% of pregnant women in Guangxi Zhuang, China (Ge *et al.*, 2021), 72% of pregnant women in Canada (Ahmad & Vismara, 2021), 43.6% of pregnant women in China (Wang *et al.*, 2021), and 42.4% of pregnant women in Indonesia (Putri & Kurniati, 2021). According to these findings, the prevalence of anxiety disorders among pregnant women remains relatively high.

Social support, anticipated risk of COVID-19, education level, maternal age, maternal parity, and family income are

all factors that can influence anxiety (Grumi *et al.*, 2021; Kajdy *et al.*, 2020; Mei *et al.*, 2021; Mortazavi *et al.*, 2021; Racine *et al.*, 2021; Wang *et al.*, 2021; Yue *et al.*, 2021). Most people still believe that a pregnancy would progress properly and result in a healthy baby born at full term through the birth canal; yet, many unexpected events occur. It is tough to understand that pregnancy can be a risk problem that cannot be foreseen to be problematic until the birth procedure. The dread of catching the virus in healthcare settings has raised public fear during this COVID-19 outbreak. As a result, the availability of antenatal services helps to monitor and maintain the health of pregnant women, discover early difficulties in pregnancy, and check the mother's psychology (Saifuddin, 2017).

The Yogyakarta Health Office has prepared a Strategic Plan (Renstra) program "Improving the Degree of Public Health" by improving the quality of health facilities and increasing healthy families, namely increasing basic and referral health services, increasing health service efforts, regulation and development of health resources, community health improvement, and disease prevention and control, including maintaining maternal health in the form of physical and mental health (Dinas Kesehatan Yogyakarta, 2021).

The 5S approach by the midwife is an effort for maternal mental health during the COVID-19 pandemic, namely self-care (yoga and relaxation exercises), Social support (social support/husband), stepped care (collaborative care steps with health workers), systems integration and smartphone enable service (activation of mobile-based health services) (Shidhaye *et al.*, 2020). Midwives must address pregnant women's requirements in terms of birth preparedness. This is stated in the decision of the Minister of Health of the Republic of Indonesia (Kepmenkes RI) No. 369/MENKES/III/2007 concerning the professional standards of midwives in carrying out their profession. In 2007, the government launched the P4K program, namely the delivery planning program in the prevention of complications, which aims to improve coverage of deliveries by midwives, form a blood donor group in case of bleeding at any time, and plan for deliveries (Depkes RI, 2016). With the holding of these programs, it is hoped that pregnant women will be helped in their pregnancy until the delivery process, including reducing the anxiety of third-trimester pregnant women in dealing with childbirth.

Based on the results of a preliminary study conducted at the Bantul Regency Health Office on January 19, 2022, data obtained from January to November 2021 the number of pregnant women in Bantul Regency was 14,234 pregnant women. The Puskesmas with the highest number of pregnant women is the Kasihan I Community Health Center (Dinas Kesehatan Kabupaten Bantul, 2021). According to the findings of a survey conducted on January 31, 2022, at the Kasihan I Community Health Center in Bantul Regency, the number of pregnant women covered in 2021 was 819, with 216 pregnant women in the third trimester in March. Researchers conducted additional preliminary studies on March 7 and 10, 2022, using direct interviews with 5 third-trimester pregnant women at the Kasihan I Community Health Center in Bantul Regency. During the COVID-19 pandemic, mothers were afraid of contracting COVID-19, especially if the mother was positive for COVID-19, the mother did not want to give birth alone without being accompanied by their husbands, mothers were afraid of the birth process, and mothers were worried that bad things would happen during delivery.

METHOD

Characteristics of Sample and Research Design

This study employed a method, namely a cross-sectional method. The total number of responders was 74. Healthy pregnant women (no comorbidities/complications in pregnancy, third-trimester pregnant women (28-40 weeks) being assessed at the Kasihan I Community Health Center, Bantul Regency. Mothers who could read and write well and were willing to be respondents were sample inclusion criteria. Pregnant women who experience problems during pregnancy at the Kasihan I Community Health Center in Bantul Regency are excluded.

Sampling procedure

Data was collected from third-trimester pregnant women who had pregnancy check-ups at the Kasihan I Community Health Center, beginning at the start of the study and continuing until there were a sufficient number of responders. The researcher will then explain to the responder the purpose, benefits, title, and confidentiality of the respondent. After getting an explanation and pregnant women agreeing to be research subjects, the researcher offered the responder a page in the form of an Informed Consent to sign before filling out the questionnaire. Completeness of data will be checked on questionnaires completed by respondents. If it is unfinished, the researcher invites the respondent to finish it. Following the completion of the questionnaire, the researcher collected the questionnaire and compensated the responders.

Sample size, power, and precision

Sampling for this research was conducted using a purposive sampling technique. The formula for calculating the sample size is the sample size formula for testing the one-proportion hypothesis (Lemeshow, et al., 1997), namely:

$$n = \frac{N \cdot Z^2 \alpha / 2 \cdot P (1-P)}{d^2 (N-1) + Z^2 \alpha / 2 \cdot P (1-P)}$$

$$n = \frac{216 \cdot (1,96)^2 \cdot 0,5 (1-0,5)}{(0,1)^2 \cdot (216-1) + (1,96)^2 \cdot 0,5 \cdot 0,5}$$

$$n = \frac{216 \cdot (3,8416) \cdot 0,25}{0,01 (215) + 3,8416 \cdot 0,25}$$

$$n = \frac{207,4}{3,11}$$

$$n = 66,68$$

$$n = 67$$

The minimum sample size is 67 respondents. To anticipate the possibility of dropouts, an additional 10% was added so that the total number of samples became 74 respondents.

Measurements and Covariates

In this study, primary data were collected using the COVID-19 perception questionnaire, which was adapted from (Yue *et al.*, 2021) and validated for validity. The valid test on 50 respondents Cronbach's α achieved in their research is 0.867, indicating good reliability results. Meanwhile, the Perinatal Anxiety Screening Scale (PASS) scale is used in the third-trimester pregnant women's anxiety questionnaire in dealing with childbirth during the COVID-19 pandemic, which already has consistent criteria with high-reliability values (Cronbach's α ranges from 0. 86-0.90), namely (Cronbach's α 0.96), the sensitivity value is 0.7, and the specificity is 0.3 (Somerville *et al.*, 2014).

Data analysis

Chi-Square is the statistical test, which tests the correlation between two categorical variables at a significant level of 95% with the conclusion condition if the p-value is < 0.05.

RESULTS AND DISCUSSION

The highest percentage of the 74 responders experiencing anxiety was 43 (58.1%), and the perception of moderate COVID-19 risk was 48 (68.9%) (Table 1). Furthermore, pregnant women who had greater anxiety were discovered in the moderate perception of COVID-19 risk group with a total of 32 people (43.2%), whereas pregnant women with a low perception of COVID-19 risk were more likely to feel no anxiety with a total of 10 people (13.5%). The results of statistical tests using Chi-Square yielded p-value = 0.040 < 0.05, indicating that there is a correlation between the perception of COVID-19 risk and the anxiety of pregnant women in their third trimester about delivering during the COVID-19 pandemic at the Kasihan I Community Health Center in 2022. C = 0.283 was found to be the value contingency coefficient. As a result, the contingency coefficient correlation is low (0.20-0.399). (Table 2).

Table 1
Frequency Distribution of Pregnant Women's Anxiety in the Third Trimester and COVID-19 Risk Perception at Kasihan I Community Health Center in 2022

No	Variable	Frequency (f)	Percentage (%)
1.	Anxiety		
	Not experiencing anxiety	31	41,9
	Experiencing anxiety	43	58,1
2.	Perception of COVID-19 Risk		
	Low	14	18,9
	Medium	48	64,9
	High	12	16,2

Table 2
The Correlation between COVID-19 Risk Perception and Anxiety of Third Trimester Pregnant Women Facing Childbirth during the COVID-19 Pandemic Period at Kasihan I Community Health Center in 2022

Perception of COVID-19 Risk	Anxiety				f	Total %	p- value	C
	Not experiencing anxiety		Experiencing anxiety					
	f	%	f	%				
Low	10	13,5	4	5,4	14	18,9	0,040	0,283
Medium	16	21,6	32	43,2	48	64,9		
High	5	6,8	7	9,5	12	16,2		
Total	31	41,9	43	58,1	74	100		

COVID-19 risk perception refers to a mother's assessment or comprehension of the COVID-19 danger. In the continuation of the current pandemic, it causes various anxiety in pregnant women, particularly about the impact of the risk of COVID-19. A lot of news circulating about the impact of COVID-19 makes pregnant women feel uncomfortable, afraid, and worried about the mother's health all at the same time. Adrenocortical hormone secretion rises, causing pregnant women to suffer anxiety (Yue *et al.*, 2021).

Anxiety is more common in third-trimester pregnant women, especially during the pandemic, because of lifestyle changes that occur suddenly during the lockdown policy, forcing pregnant women to stay at home by leaving activities outside the home that pregnant women normally do, causing pregnant women to constantly think about the impact of COVID-19 as a result, causing high anxiety in pregnant women (Mei *et al.*, 2021).

Knowing or thinking about the effects of COVID-19 regularly will affect the anxiety of pregnant women in their third trimester (Wang *et al.*, 2021). Although the probability of vertical transmission has not been confirmed with clear evidence, especially during the present pandemic, the mother will feel apprehensive about the risk of being exposed to the COVID-19 virus to herself and her unborn baby when performing all activities (Kajdy *et al.*, 2020).

The increased anxiety about the consequences of COVID-19 is the trigger for anxiety in pregnant women. Previously, pregnant women suffered a lot of anxiety in the absence of a pandemic due to mothers' views of pregnancy difficulties; but, during the pandemic, anxiety rose due to dread of the impact of COVID-19 (Mortazavi *et al.*, 2021).

Anxiety is associated with the stress of daily events. Individuals learn to be aware, which leads to an increase in perception and creative learning. Pregnant women who suffer from anxiety have a higher perception of stress in everyday life (Asmariyah. *et al.*, 2021).

LIMITATION OF THE STUDY

One disadvantage of this study is that numerous pregnant women declined to fill out the questionnaire because of the COVID-19 outbreak during the time of the investigation. Another constraint is that data collection occurs three times a week, on Monday, Wednesday, and Thursday, yet what researchers experience frequently occurs on the same day, coinciding with national holidays, when the time for data collection is less than optimal.

CONCLUSIONS AND SUGGESTIONS

The study concludes that there is a correlation between pregnant women in their third trimester's anxiety about childbirth during the COVID-19 pandemic at the Kasihan I Community Health Center in 2022 and their perception of the risk of COVID-19. Midwives are expected to be able to encourage mothers to include their husbands or families in pregnancy checks for pregnant women, as well as provide information about factors that cause anxiety so that pregnant women can prepare for their physical and psychological health as early as possible prevent anxiety.

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ETHICAL CONSIDERATIONS

Approval to conduct this study from the institution's research ethics committee. This research was conducted an ethical worthy test at the ethics commission of the University of "Aisyiyah Yogyakarta with the results of an ethical worthy statement, with No. 1463/KEP-UNISA/IV/2022.

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Conflict of Interest

No conflict of interest.

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