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Research Article

The anxiety level of pregnant women at Siti Khodijah Muhammadiyah Sepanjang Hospital during COVID-19 pandemic

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ABSTRACT

Pregnant women are one of the vulnerable groups who have to face the unpleasant effects of the COVID-19 pandemic. One of the effects is the psychological impact that is bad for both the mother and the fetus. This study aims to describe the level of anxiety experienced by pregnant women during the COVID-19 pandemic at Siti Khodijah Muhammadiyah Sepanjang Hospital. The results of this study are expected to be used as information to help overcome more serious mental health problems. This research uses using quantitative descriptive design with a cross-sectional approach. The sample of this study was 112 pregnant women who met the research criteria. This research was conducted by giving them questionnaires consisting of their age, job, parity, gestational age, history of COVID-19 illness, history of mental problems, knowledge about COVID-19, and level of anxiety. Statistical analysis showed 84.8%, 8.9% and 6.3% of pregnant women experience low, moderate, and concerning levels of anxiety, respectively. The majority of pregnant women are primigravida, aged 20-35 years, with a gestational age of 28-41 weeks, housewives, and the level of knowledge about COVID-19 is very good. Correlation analysis using Kendall's tau-b showed a significance value of 0.038 (<0.05), which means a relationship exists between the level of knowledge about COVID-19 and the level of anxiety of pregnant women. In conclusion, the level of anxiety of pregnant women the most is low anxiety, followed by moderate and concerning levels of anxiety.

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INTRODUCTION

The COVID-19 pandemic has been around since December 2019 and has spread rapidly to almost all parts of the world. People are forced to carry out Large-Scale Social Restrictions and quarantine at home to avoid being infected with COVID-19. As a result, health facilities are limited, schools are closed, workers are laid off and many have lost their jobs and income. Besides being able to endanger physical health, this pandemic also has an impact on human mental health due to mental stress and psychosocial burdens borne by each individual (Kontoangelos et al., 2020; Ustun, 2021a). Mental health problems in Indonesia have not become a priority when compared to other diseases. On the other hand, mental health is an important aspect that is also related to the physical health of an individual in living their life (Ustun, 2021a). Based on research conducted in China, 53.8% of respondents experienced moderate-severe psychological impacts due to the pandemic, with details of 28.8% moderate-severe anxiety symptoms, 16.5% moderate-severe depression symptoms, and 8.1% moderate-severe stress (Accortt et al., 2015; Ustun, 2021b).

Pregnant women are one of the vulnerable groups who have to face the unpleasant effects of the COVID-19 pandemic. Under normal circumstances, about 12-13% of pregnant women experience depression and anxiety (*Antenatal and Postnatal Mental Health: Clinical Management and Service Guidance Clinical Guideline*, 2014). Meanwhile, in pandemic conditions like this, a study was conducted in 1987 of pregnant women in Canada, and it was found that there was an increase in depression levels by 37%, moderate anxiety levels by 46.3%, and severe anxiety levels by 10.3% (Lebel et al., 2020). The impact of psychological stress on the mother is the disruption of physical activity, sleep quality, and nutrition which can indirectly affect fetal development (Coussons-Read, 2013). The predictive roles of anxiety and depression in future worry and anticipatory anxiety during pregnancy, contribute to our understanding of psychological processes underlying maternal concerns and preparations for childbirth (Blaize, D. R., & Pearson, R. M. 2020).

Psychological stress is not only bad for the mother, it is also bad for the unborn child (Dennis, et al, 2017). For example, depression and anxiety can increase the risk of low birth weight, premature birth, and miscarriage and decrease Apgar scores at birth (Accortt et al., 2015; Grigoriadis et al., 2018; Qu et al., 2017; Shahhosseini et al., 2015). The purpose of this study was to describe the level of anxiety experienced by pregnant women during the COVID-19 pandemic at the Siti Khodijah Muhammadiyah Sepanjang Hospital. With hope, the results of this study can help to prevent more serious mental health problems.

METHODS

This type of research uses a quantitative descriptive design with a cross-sectional approach and purposive sampling technique. This study aims to determine the level of anxiety experienced by pregnant women during the COVID-19 pandemic in Siti Khodijah Muhammadiyah Sepanjang Hospital. Sampling was carried out by distributing questionnaires which were already checked the validity and reliability, and shared with pregnant women who visited the obstetrics polyclinic for the period November 2021 - January 2022. Data collection begins in November 2021. Research Ethics Letter was 035/KET-KEPK/11-2021. The types of data taken include maternal age, occupation, parity, gestational age, having been infected with COVID-19/not, history of

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mental disorders, mother's knowledge about COVID-19, and anxiety levels of pregnant women.

The research instrument used in this study was the Beck Anxiety Inventory questionnaire to measure anxiety levels, the Pregnant Mother's Knowledge about COVID-19 questionnaire, the COVID-19 infection screening sheet, the history of mental disorders, and the patient identity questionnaire. Inclusion criteria in this study; pregnant women during the research period, mothers aged 19 - 45 years, have knowledge about COVID-19 which is measured using the questionnaire "Pregnant Mother's Knowledge about COVID-19". Exclusion criteria in this study; mother has been/is currently being diagnosed with COVID-19, mother with a history of mental disorders. The sample in this study was 112 pregnant women who met the criteria for the period November 2021 - January 2022.

RESULTS

The results of the analysis data on characteristics of pregnant women at Siti Khodijah Muhammadiyah Hospital showed that 74 pregnant women (66.1%) were primigravida and 38 pregnant women (33.9%) were multigravida. Based on maternal age, as many as 7 pregnant women (6.3%) aged <20 years, 103 pregnant women (92%) aged 20-35 years, and 2 pregnant women (1.8%) aged >35 years. Based on gestational age, 23 pregnant women (20.5%) are in the first trimester, 43 pregnant women (38.4%) are in the second trimester, and 46 pregnant women (41.1%) are in the third trimester of pregnancy. Respondents were housewives as many as 77 pregnant women (68.8%), while 20 pregnant women (17.9%) worked as entrepreneurs, 10 pregnant women (8.9%) worked as private employees, 3 pregnant women (2.7%) worked as government employees and 2 pregnant women (1.8%) work as others (laborers and factory employees). Most respondents have a very good level of knowledge about COVID-19, namely 83 pregnant women (74.1%), 26 pregnant women (23.2%) have a good level of knowledge and 3 pregnant women (2.7%) have a moderate level of knowledge.

The results revealed that as many as 95 pregnant women (84.8%) experienced low anxiety, 10 pregnant women (8.9%) experienced moderate anxiety and 7 pregnant women (6.3%) experienced severe levels of anxiety.

Correlation analysis using Kendall's tau-b showed a significance value of 0.038 (<0.05), which means that there is a relationship between the level of knowledge about COVID-19 and the level of anxiety of pregnant women. The correlation coefficient value of 0.191 indicates the strength of the correlation is very weak. If the value of the correlation coefficient is positive, then the direction of the relationship between variables is unidirectional. That is, the higher the mother's level of knowledge about COVID-19, the higher the level of anxiety experienced by pregnant women.

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Table 1. Characteristics of Pregnant Women at Siti Khodijah Muhammadiyah Hospital of Sepanjang

Characteristics	(n = 112)	%
Gravida		
Primigravida	74	66.1
Multigravida	38	33.9
Maternal age (years)		
<20	7	6.3
20-35	103	92
>35	2	1.8
Gestational age		
1st trimester	23	20.5
2nd trimester	43	38.4
3rd trimester	46	41.1
Occupation		
Government employees	3	2.7
Private employees	10	8.9
Entrepreneur	20	17.9
Housewife	77	68.8
Others	2	1.8
Knowledge of COVID-19		
Moderate	3	2.7
Good	26	23.2
Very good	83	74.1

Table 2. Anxiety Level in Pregnant Women Siti Khodijah Muhammadiyah Hospital of Sepanjang

Anxiety level	(n = 112)	%
Low anxiety	95	84.8
Moderate anxiety	10	8.9
Concerning levels of anxiety	7	6.3

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Characteristic	Anxiety Level		
	Low N (%)	Moderate N (%)	Concerning N (%)	Total N (%)
Gravida				
Primigravida	64 (57.1)	5 (4.5)	5 (4.5)	74 (66.1)
Multigravida	31 (27.7)	5 (4.5)	2 (1.8)	38 (33.9)
Maternal age				
<20	6 (5.4)	0 (0.0)	1 (0.9)	89 (6.3)
20-35	87 (77.7)	10 (8.9)	6 (5.4)	21 (92.0)
>35	41 (36.6)	3 (2.7)	2 (1.8)	46 (41.1)
Gestational age				
1st trimester	19 (17.0)	2 (1.8)	2 (1.8)	23 (20.5)
2nd trimester	35 (31.3)	5 (4.5)	3 (2.7)	43 (38.4)
3rd trimester	41 (36.6)	3 (2.7)	2 (1.8)	46 (41.1)
Occupation				
Gov. employees	3 (2.7)	0 (0.0)	0 (0.0)	3 (2.7)
Priv. employees	10 (8.9)	0 (0.0)	0 (0.0)	10 (8.9)
Entrepreneur	16 (14.3)	4 (3.6)	0 (0.0)	20 (17.9)
Housewife	64 (57.1)	6 (5.4)	7 (6.3)	77 (68.8)
Others	2 (1.8)	0 (0.0)	0 (0.0)	2 (1.8)
Knowledge of COVID-19				
Moderate	3 (2.7)	0 (0.0)	0 (0.0)	3 (2.7)
Good	25 (22.3)	1 (0.9)	0 (0.0)	26 (23.2)
Very good	67 (58.9)	9 (8.0)	7 (6.3)	83 (74.1)

Table 4. The Relationship between Knowledge Levels about COVID-19 and Anxiety Levels of Pregnant Women

Kendall's tau_b	Level of knowledge	
Anxiety level	Correlation coefficient	0.191*
	Sig. (2-tailed)	0.038
	N	112

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DISCUSSION

The results showed that as many as 84.8% (95 pregnant women) with anxiety low, 8.9% (10 pregnant women) with moderate anxiety, and 6.3% (7 pregnant women) with severe levels of anxiety. This is supported by a previous study of pregnant women in Baturraden District, as many as 75% of pregnant women experience mild-moderate anxiety (Saadati et al., 2021; Saloojee & Coovadia, 2015). These data prove that anxiety in pregnant women during a pandemic is an important thing to pay attention to. In a study in Turkey, some of the psychological effects of the COVID-19 pandemic are fear of being infected and infecting others, obsession with cleanliness, and sleep disturbances (Beck et al., 1988; Ustun, 2021b).

The percentage of anxiety level in primigravida is 57.1% experiencing low anxiety, 4.5% experiencing moderate anxiety and 4.5% experiencing a severe level of anxiety. Whereas in multigravida, 27.7% experienced low anxiety, 4.5% experienced moderate anxiety and 1.8% experienced severe level of anxiety. This is similar to a previous study conducted in Kendal Regency with the results of low anxiety being more experienced by primigravida (33.3%) than multigravida (25.5%) (Rozikhan & Sapartinah, 2021). Primigravida mothers often experience fear because they do not have an idea about childbirth, while multigravida mothers have experienced childbirth so they tend to be calm and ready mentally and psychologically (Rinata & Andayani, 2018).

Most of the pregnant women in this study were aged 20-35 years with low anxiety levels of 77.7%, moderate 8.9%, and concerning level 5.4%. The level of anxiety in mothers aged <20 years is low anxiety as much as 5.4% and severe level of anxiety as much as 0.9%. Meanwhile, 1.8% of mothers aged >35 years experienced low anxiety. Studies show that maternal age is a very influential factor in prenatal distress. The younger the age of pregnant women, the more psychosocial problems experienced by pregnant women, and vice versa[2]. This is in line with the theory that the safe age for pregnant women is 20-35 years. Meanwhile, ages <20 years and >35 years are included in the age at risk for pregnant women (Saloojee & Coovadia, 2015).

Based on gestational age, low anxiety is dominated by pregnant women in the third trimester with a percentage of 36.6%, while moderate anxiety is dominated by pregnant women in the second trimester with a percentage of 4.5%, and concerning level of anxiety is dominated by pregnant women in the second trimester with a percentage of 2.7%. This is similar to previous studies with the results of higher levels of anxiety in the third trimester (21%) than in the first trimester (9%) and in the second trimester (13%). In addition, pregnant women in the second and third trimesters had a higher "worried about the consequences of the disease" score than those in the first trimester (Saadati et al., 2021; Silva et al., 2017).

Based on occupation, the majority of pregnant women are housewives, 57.1%, 5,4%, and 6,3% experienced low, moderate, and concerning levels of anxiety, respectively. This shows that housewives dominate all levels of anxiety compared to other occupations. This is similar to previous research which showed that there was a significant relationship between the level of anxiety and the occupation of the mother (Coussons-Read, 2013). Pregnant women who do not work / housewives tend to experience anxiety more than pregnant women who work (Silva et al., 2017).

Based on the level of knowledge about COVID-19, the majority of pregnant women

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have very good knowledge with a percentage of 74.1% (Biaggi et al,2016). According to cross-tabulation data, pregnant women with very good knowledge dominate all levels of anxiety. In contrast to previous research which showed that the higher the mother's level of knowledge, the lower the level of anxiety she experienced (Ding et al., 2021). Along with a higher person's level of education, a higher quality of knowledge, and more mature intellectually. They tend to pay more attention to the health of themselves and their families (Rinata & Andayani, 2018).

Analysis of the relationship between the level of knowledge about COVID-19 and the level of anxiety of pregnant women showed that there was a significant relationship, unidirectional, even though the strength of the correlation was very weak. This is in contrast to previous research, the results show that most of the factors associated with a good level of knowledge are associated with lower levels of anxiety (Rinata & Andayani, 2018).

From the information that the researchers got when collecting data, it was found that 10 pregnant women said that most of them reduce the time of their antenatal visits to the hospital because they are afraid of contracting viruses. As a result, there are fewer queues of pregnant women at the obstetrics clinic and therefore, shorter waiting times. This is felt especially at times when the wave of COVID-19 transmission increases.

From 21 symptoms, a total of 102 pregnant women did not feel faint at all, 42 pregnant women felt horrified/fearful and anxious but not so disturbing, 33 pregnant women were afraid that something bad would happen and this was very unpleasant at times, while 17 pregnant women felt afraid of death and this is very disturbing. Given the serious consequences, if anxiety in pregnant women is left unchecked, interventions are needed to reduce symptoms and psychological stress during pregnancy. One simple intervention that is associated with reducing anxiety symptoms is increasing physical activity and social support from the environment around pregnant women (Lebel et al., 2020; Rinata & Andayani, 2018).

CONCLUSION

Based on research conducted on 112 pregnant women at Siti Khodijah Muhammadiyah Sepanjang Hospital, we can conclude that as many as 84.8% of pregnant women experience low, followed by 8,9% moderate and 6,3 % severe levels of anxiety. There is a significant, unidirectional but very weak correlation between the level of knowledge about COVID-19 and the level of anxiety of pregnant women during the COVID-19 pandemic. These data prove that anxiety in pregnant women during a pandemic is an important thing to pay attention to prevent more serious and prolonged mental health problems.

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