

# Analysis of the Factors Influencing Pregnant Women's Anxiety During the COVID-19 Pandemic

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## ABSTRACT

Anxiety is one a mental health problem as a result of the COVID-19 pandemic. In pregnant women, anxiety has the potential to trigger changes in physical activity, nutrition and sleep of pregnant women, which in turn can affect pregnancy. In fact, many pregnant women experience anxiety psychological disorders during the COVID-19 pandemic. This study aims to analyze the relationship between preparedness for the pandemic, knowledge about COVID-19 and family support with anxiety in pregnant women. This research is correlational design with approach *cross sectional*. The population of all pregnant women in kesamben village, ngajum district, malang regency. With *purposive sampling technique*, the inclusion criteria of pregnant women are willing to be research subjects. Exclusion can not participate in activities and is sick. The sample size is 27 people.

**Keywords:** anxiety, family support, health, knowledge, pandemic, pregnant, pregnant women

## BACKGROUND

A mental health problem that often arises as a result of the COVID-19 pandemic in pregnant women is anxiety. Prenatal anxiety has the potential to lead to changes in a pregnant woman's physical activity, diet, and sleep patterns, which can then affect the mother's mood, affect foetal development, raise the risk of miscarriage, preterm birth, low birth weight, and lower test scores. APGAR at birth. In fact, several studies have shown that many pregnant women experience psychological anxiety disorders during the pandemic (Herliandry *et al.*, 2020).

Psychological disorders during the pandemic are a global problem that does not only occur in Indonesia. An Irish study conducted by Corbett *et al.* (2020), from the *Department of Obstetrics and Gynecology, Coombe Women and Infants University Hospital* Ireland revealed that, more than 50% of pregnant women have experienced concerns about their health since the COVID-19 pandemic. Including concerns about pregnancy 66.7% and infant care as much as 35%. According to the results of the *Literature Review* conducted by Purwaningsih (2020), concluded that during the COVID-19 pandemic, most pregnant women experienced psychological changes in the form of anxiety. These conditions are related to the fear of threats to the health of pregnant women and their babies, not getting optimal prenatal care, and social isolation. Another study conducted by Yuliani and Aini, (2020), in Baturraden District, concluded that the majority of pregnant and postpartum women during the COVID-19 pandemic experienced mild to moderate anxiety.

Anxiety in pregnant women can be caused by several factors. According to the results of the *Literature Review* Isnaini *et al.* (2020), risk factors that can affect maternal anxiety include age, parity, history of miscarriage, education, social support, marital status, gestational age, positive history of mental illness, unplanned pregnancy, comorbidities. depression, relationships with partners and interactions with the health care system. Physiologically, individuals who

experience anxiety will secrete stress hormones, including *corticotrophin-releasing hormone* (CRH), *adrenocorticotrophic hormone* (ACTH), *cortisol*, *catecholamines*, *Endorphins*, *Growth Hormone* (GH), *prolactin and Luteinizing Hormone* (LH)/*Follicle Stimulating Hormone* (FSH). The secretion of this hormone if excessive and occurs in a long time can harm the mother and fetus, because it causes the fetus to be restless, stunted growth, and weakens uterine muscle contractions. Pregnant women who endure frequent miscarriages and early births typically have significant levels of anxiety (Yuniarti *et al.*, 2016).

Efforts to reduce the anxiety of pregnant women can be done by increasing the dissemination of information and education regarding optimizing the prevention of COVID-19 transmission through electronic media and the role of community leaders, encouraging maternal and newborn health services according to the principles of preventing COVID-19 and using *Telemedicine* for MCH services, strengthening the ability of FKTP to detect complications/risk factors for pregnant women so that planned referrals can be made, strengthen collaboration in ensuring the continued implementation of complications and emergency services for mothers and newborns 24 hours/7 days during the COVID-19 pandemic (Mulati, 2020).

## METHODS

A correlational design study with approach was *cross sectional* conducted in kesamben village, ngajum district, malang regency, on 1-31 July 2021. Research variables, independent variables: awareness of and support from families for pregnant women in the event of a pandemic; dependent variable: pregnant women's worry during the pandemic COVID-19. There are 28 pregnant persons living in kesamben village, ngajum district, malang regency. The sample of some pregnant women in kesamben village, ngajum district, malang regency, who met the research criteria, amounted to 27 people. The sampling technique was *purposive sampling*, with the inclusion criteria of pregnant women in kesamben village, ngajum district, malang regency who were willing to be research subjects. Exclusion: unable to participate in research activities until completion, in a sick condition that does not allow data collection and currently undergoing self-isolation. The sample determined using the formula *size was Slovin* of 27 people. The instrument used in this study was a questionnaire. Before distributing the questionnaires, the researcher asked the Kesamben Village Head for permission to conduct research. After being approved, the researcher visited the respondent *door to door*, determined the subjects who met the research criteria, explained about the research activities to the research subjects. The researcher distributed the questionnaires and explained the filling procedure. Filling out the questionnaire which was done by the respondent him self. Data analysis using Spearman test. The research has passed the research ethics test at the KEPK Institute of Health Sciences Strada Indonesia and was declared ethically worthy.

## RESULTS

### Characteristics of respondents

Table 1. Distribution of respondents' characteristics

Characteristics	n	%
Education :		
Elementary	3	11.1
Junior High School	7	25.9
Senior High School	14	51.8
College	3	11.1
Pregnancy to:		
First	12	44,4
Second or more	15	55.6

Age :		
< 20 years	7	25.9
20-35 years	14	51.9
> 35 years	6	22.2
Comorbidities :		
None	23	85.2
Hypertension	3	11.1
Diabetes	1	3.7
Ever been given counseling on COVID-19 :		
Ever	23	85.2
Never	4	14.8
Sources of information about COVID-19 :		
Health workers	23	85.2
Internet	3	11.1
People other than health workers	1	3.7
Total	27	100

(Source: Research questionnaire primary data July 2021)

Table 1 describes the characteristics of the respondents. Most (85.2%) of those without concomitant conditions, most (85.2%) of those with at least two pregnancies, most (51.9%) of those over 35, most (85.2%) of those who had received COVID-19 counselling, and most (85.2%) of those who had learned about COVID-19 from health professionals.

### Characteristics of variables

Table 2. Characteristics of variables

Variable	Value (n = 27)
Maternal Preparedness for the pandemic:	
Median	3
Minimum	1
Maximum	5
Knowledge about COVID-19:	
Median	9
Minimum	4
Maximum	15
Family support :	
Median	52
Minimum	32
Maximum	68
Anxiety of pregnant women	
Median	60
Minimum	41
Maximum	73

(Source: Primary data for research questionnaire July 2021)

Table 2 explains the value of the variable factor for pregnant women: median = 3, minimum = 1, maximum = 5. Factors knowledge about COVID-19: median = 9, minimum = 4, maximum = 15. Family support factor: median = 52, minimum = 32, maximum = 68. Anxiety of pregnant women median = 60, minimum = 41, maximum = 73.

## Data analysis

Normality test

Tabel 3. Tests of normality

	Shapiro-Wilk		
	Statistic	df	Sig.
Preparedness for the pandemic	0.815	27	0.000
Knowledge of COVID-19	0.919	27	0.038
Family support	0.887	27	0.007
Pandemic anxiety	0.870	27	0.003

Table 3 describes the results of the data normality test using the *Shapiro-Wilk test* ( $n = 27$ ). The factor of preparedness for the pandemic ( $p$  value = 0.000), knowledge factor about COVID-19 ( $p$  value = 0.38), family support factor ( $p$  value = 0.007) pregnancy-related stress and anxiety ( $p$  value = 0.003), data not normally distributed. So that a non-correlation test parametric is the statistical test that may be utilised for data analysis. Spearman.

Preparedness for the pandemic of pregnant women and anxiety pregnant women

Table 4. Test spearman's of preparedness for the pandemic factors with anxiety

		Preparedness for the pandemic		Pandemic anxiety
Spearman's rho	Readiness of pregnant women	Correlation Coefficient	1.000	-0.813**
		Sig. (2-tailed)	-	0.000
		N	27	27
	Pandemic anxiety	Correlation Coefficient	-0.813**	1.000
		Sig. (2-tailed)	0.000	-
		N	27	27

Table 4 explains the results of the correlation test of the *Spearman* relationship between Preparedness for the pandemic factors and anxiety of pregnant women. Obtained  $p$  value = 0.000, with a negative correlation coefficient of -0.813. Thus the hypothesis is accepted, there is a relationship between the Preparedness for the pandemic of pregnant women and the anxiety of pregnant women during the COVID-19 pandemic. A negative correlation coefficient indicates that there is a relationship in a negative direction, which means that the higher the Preparedness for the pandemic, the lower the anxiety of pregnant women, and vice versa. The correlation coefficient value of 0.813 is included in the strength of the correlation with a very strong category.

## Knowledge of covid-19 and pregnant women's anxiety

Table 5. Test spearman's knowledge of covid-19 and anxiety

		Knowledge of COVID-19	Pandemic anxiety
Spearman's rho	Knowledge of COVID-19	Correlation Coefficient	1.000
		Sig. (2-tailed)	-
		N	27
	Pandemic anxiety	Correlation Coefficient	-0.698**
		Sig. (2-tailed)	0.000
		N	27

Table 5 illustrates the results of correlation test *Spearman* on knowledge of COVID-19 pregnant women with anxiety. Obtained  $p$  value = 0.000, with a negative correlation coefficient of -0.698. The association between the knowledge factor about COVID-19 and the worry of pregnant women during the COVID-19 pandemic is therefore recognised. The knowledge of COVID-19 and pregnant women's worry are inversely correlated, with a negative correlation coefficient indicating that the association is in the wrong direction. The correlation coefficient value of 0.698 is included in the strength of the correlation with the strong category.

#### Family support and pregnant women's anxiety

Table 6. Test spearman family support and pregnant women with anxiety

		Family Support	Pandemic anxiety
Spearman's rho	Family Support	Correlation Coefficient	1.000
		Sig. (2-tailed)	-
		N	27
Pandemic anxiety		Correlation Coefficient	-0.692**
		Sig. (2-tailed)	0.000
		N	27

Table 6 describes the results of correlation test *Spearman* anxiety support families with pregnant women. Obtained  $p$  value = 0.000, with a negative correlation coefficient of -0.692. The association between family support factors and pregnant women's worry during the COVID-19 pandemic is thus confirmed, supporting the theory. A negative correlation coefficient shows there is a negative association, therefore the more family support there is, the less anxious pregnant women are, and vice versa.. The correlation coefficient value of -0.692 is included in the strength of the correlation with the strong category.

## DISCUSSION

### Preparedness for the pandemic and anxiety pregnant women's anxiety

Based on the results of research on 27 pregnant women in Kesamben Village, Ngajum District, Malang Regency, from the results of the correlation test it is *Spearman* known that there is a relationship between Preparedness for the pandemic and anxiety of pregnant women. The relationship is negative where, the higher the Preparedness for the pandemic, the lower the anxiety of pregnant women. These results are in line with the results of Nurhasanah's research (2021), which revealed that the Preparedness for the pandemic of mothers in facing childbirth is one of the factors that affect anxiety in pregnant women during the Covid-19 pandemic.

Pregnant women may also suffer anxiety, which is a sensation of fear, uneasiness, or anxiety about something with uncertain effects. Depression is one of the issues brought on by the Covid-19 pandemic and is something that affects everyone. One of the consequences of moms having extreme concern is their preparedness for childbirth during the COVID-19 epidemic. This potential arises from the mother's excessive concern for the foetus' health, which increases the risk that the newborn may contract the Corona virus sickness after birth and suffer bad health (Tantona, 2020). The COVID-19 issue is that it is incredibly simple to spread the virus to anyone, including pregnant women. The virus's potential to kill people is another element that makes pregnant women anxious. The Corona virus does spread quickly and has a detrimental effect on the patient's health. The infection can spread, but there are several safeguards that can be taken. Pregnant women need to understand how COVID-19 spreads so they can correctly comprehend how the virus can be avoided by taking a number of precautions, including routine hand washing and wearing masks (Tandra, 2021).

There is a relationship between preparedness for the pandemic of pregnant women to undergo pregnancy during the COVID-19 pandemic with the anxiety of pregnant women in Kesamben Village, Ngajum District, Malang Regency, where the higher the Preparedness for the

pandemic, the lower the anxiety of pregnant women. Researchers argue that this anxiety is because pregnant women are very worried that their baby will be infected with COVID-19, as well as the threat of COVID-19 as a highly contagious disease and a threat of death. This phenomenon is an implication of Stuart's theory in Windarwati (2015), which states that the environment is the main factor that can affect individual anxiety, if these factors are not good, it will hinder the formation of personality, resulting in symptoms of anxiety. The COVID-19 pandemic with all its physical, social and economic impacts has become an unfavorable environment for pregnant women that triggers anxiety. The Preparedness for the pandemic of pregnant women to undergo pregnancy during a pandemic provides opportunities for pregnant women to modify the environment to be more conducive so as to reduce anxiety. From the results of analysis, it is *Spearman's* also known that the factor that is most strongly associated with the anxiety of pregnant women is the factor of Preparedness for the pandemic of pregnant women to undergo pregnancy during the COVID-19 pandemic, with the largest correlation coefficient value compared to the other two predictor variables. So it is recommended to the Village Midwife to be more intense in providing understanding to pregnant women about how to have a safe pregnancy during the pandemic. With these initiatives, it is hoped that individuals will be better equipped to handle pregnancy during the pandemic by routinely washing their hands, using masks, keeping their distance, avoiding crowds, and being physically mobile. Due to the increased pregnancy safety, the COVID-19 pandemic's maternal worry is decreased.

#### **Knowledge about COVID-19 and pregnant women's anxiety**

Based on the results of research on 27 pregnant women in Kesamben Village, Ngajum District, Malang Regency, from the results of the correlation test it is *Spearman* known that there is a relationship between knowledge about COVID-19 and anxiety of pregnant women during the COVID-19 pandemic. . The nature of the relationship is negative, where the higher the knowledge about COVID-19, the lower the anxiety of pregnant women. These results are in line with the research results of Septiasari dan Viandika (2021), who concluded that there is a significant relationship between knowledge and anxiety of pregnant women during the COVID-19 pandemic.

From the point of view of behavioral theory as a cause of anxiety, anxiety is something that is conditioned by fear of stimuli. specific environment. So anxiety here is seen as a conditioned response or a response obtained through the learning process. Anxiety is one of the most common negative emotions during pregnancy. While knowledge is the result of knowing, and this occurs after people sense a certain object (Novita, 2021). Anxiety arises because of specific environmental stimuli, wrong thinking patterns, or unproductive behavior that can cause maladaptive behavior. Overestimation of the presence of danger in certain situations and underestimating their ability to cope with threats is a cause of anxiety in a person (Claresta & Purwoko, 2017). The outcomes of information allow one to raise their level of understanding. Information won't lead to mistakes or issues if it is accepted through a process based on knowledge, awareness, and attitude. The information will lead to inaccuracies that will affect feelings of fear and worry or elevated anxiety, though, if it is not founded on knowledge and awareness. To maintain the health of pregnant women during the COVID-19 pandemic, it is necessary to make efforts to provide comprehensive information, including signs or symptoms, prognosis, treatment options, access to quick and appropriate services, and health protocol procedures that should be followed in daily life. With the right information, a pregnant woman can prevent stress and worry during her pregnancy, which can harm both her health and the health of her unborn child (Putri *et al.*, 2021).

There is a relationship between knowledge about COVID-19 and the anxiety of pregnant women in Kesamben Village, Ngajum District, Malang Regency, where the higher the knowledge, the lower their anxiety. Researchers argue that knowledge has an important role in the occurrence of anxiety levels. The knowledge possessed by pregnant women will determine

their way of thinking and their perspective on dealing with childbirth during a pandemic COVID-19. Pregnant women will have more positive views as a result of learning more about attempts to prevent COVID-19 by practising the 5M protocol, which includes frequent hand washing, wearing masks, keeping distance, avoiding crowds, and physical mobility.. These positive thoughts have the opportunity to reduce the risk of anxiety. Researchers recommend village midwives to be more intensive in providing health education to pregnant women regarding efforts to keep pregnancy safe during the COVID-19 pandemic, this effort is expected to increase knowledge of pregnant women, so as to minimize concerns about the impact of the pandemic on mothers and their unborn babies. , thereby lowering their level of anxiety.

### **Family support and pregnant women's anxiety**

Based on a study of 27 pregnant women in the village Kesamben ngajum District of Malang, correlation test results *Spearman* known that there is a relationship with the family support maternal anxiety during the pandemic COVID-19. The nature of the link is negative, with pregnant women's anxiety decreasing as family support increases. These findings are consistent with those of Ike et al.'s research from 2021, which found a connection between family support and pregnant women's anxiety levels when scheduling antenatal care (ANC) appointments during the Covid-19 pandemic in Sagatani Village.

Anxiety is an unpleasant affective situation followed by a physical sensation that warns a person of imminent danger. Anxiety is a negative mood condition characterized by bodily symptoms, physical tension and fear of things that will happen. One example of anxiety that is often encountered in everyday life is anxiety when dealing with traumatic events, such as anxiety about facing pregnancy during a pandemic (Hanifah *et al.*, 2020). Referring to the theory of *Buffering Hypothesis* which holds that social support affects health by protecting individuals from the negative effects of stress. Social support from the family is all the assistance provided by family members so that it will provide a sense of physical and psychological comfort for individuals who are feeling depressed or stressed. Families are two or more individuals who join because of blood relations, marriage or adoption which have a basic function in the form of an affective function, namely the internal function of the family to fulfill psychosocial needs, care for and give love, and accept and support each other. Family support, especially the support obtained from the husband will cause inner peace and feelings of pleasure in pregnant women (Zuhrotunida & Yudidarto, 2017).

There is a relationship between family support and anxiety of pregnant women in Kesamben Village, Ngajum District, Malang Regency, where the higher the family support, the lower the anxiety of pregnant women. Researchers argue that social support from the family, especially that provided by the husband will provide a sense of physical and psychological comfort for pregnant women who are experiencing anxiety. Family support creates inner peace and feelings of pleasure in pregnant women, thereby reducing the anxiety they experience. The researcher recommends the village midwife to involve the family in antenatal care activities. Midwives should provide understanding to families, especially husbands, to always provide support to pregnant women, especially during pregnancy as an effort to reduce the anxiety level of pregnant women during the COVID-19 pandemic.

### **CONCLUSION**

Based on the results of research on 27 pregnant women in Kesamben Village, Ngajum District, Malang Regency, it can be concluded that there is a relationship between factors of Preparedness for the pandemic for pregnant women, knowledge about COVID-19 and family support and anxiety of pregnant women. during the COVID-19 pandemic. It is recommended for pregnant women to increase their Preparedness for the pandemic to undergo pregnancy during the pandemic, increase knowledge about COVID-19 as part of efforts to reduce anxiety

during the pandemic. For the Village Midwife to increase the intensity of health education on how to have a safe pregnancy during the pandemic, as well as provide understanding to families about the importance of providing social support to pregnant women as an effort to reduce anxiety in pregnant women. Suggestions for further researchers to conduct experimental design research with treatment in the form of counseling, distraction techniques, and others as an effort to reduce anxiety in pregnant women during the pandemic COVID-19.

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