

Defining Factor of Pregnant Women's Anxiety in Pandemic Of COVID-19 at East Java Region: Logistic Regression Analysis

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Abstract---Introduction: The condition of the COVID-19 pandemic will affect the mental health of Pregnant Women's, so that the emotions of Pregnant Women's during the COVID-19 pandemic should not be ignored as a health worker because maternal mental health can be associated with short-term and long-term risks to the pregnant and fetus physical bodies. The purpose of this study was to analyze the determinants of the anxiety of Pregnant Women's in the COVID-19 pandemic in East Java Region. **Materials and Methods:** Analytical research design with the cross-sectional approach, the subjects of this study were Pregnant Women's in the East Java Region, collecting data using Google Form distributed to all Pregnant Women's in the Madura region, for 1 month and 76 Pregnant Women's were collected, the data were analyzed using Spearman Rank statistical tests and Logistic Regression. **Results:** The results of the study found the results of age, gestational age, parity affected the anxiety of Pregnant Women's during the pandemic based on the test Spearman Rank (p-value <0.05), while the distance of health service location does not affect (p-value > 0.05), logistic regression test obtained results that directly affect the age of the pregnancy and the distance to the place of health care (p-value <0.05). 6233 times the gestational age will increase the occurrence of anxiety and the distance to the place of health services will increase 5989 times the occurrence of anxiety. **Conclusion:** gestational age and the distance where the health service is a very significant influence with anxiety, anxiety occurs in the early gestational age and a distance that increases anxiety.

Keywords---Age, Age of Pregnancy, Parity, Distance, Anxiety, Pregnancy.

I. Introduction

Coronavirus is a non-segmented positive RNA virus that belongs to the Coronaviridae and Nidovirales family and is widely distributed in Indonesia in humans and other mammals [1]. Coronavirus 2019 (COVID-19) was the first to occur in China and developed into a threat to global health [2]. The disease then spread to all regions of China on January 30, 2020. After the spread of COVID-19 disease, World Health Organization (WHO) declared the COVID-19 outbreak as a public health emergency of international concern [3]. and finally increased its classification into a global pandemic on March 11, 2020 [4]. Especially in the mental health of Pregnant Women's with the condition of the COVID-19 pandemic, this will affect their health so as a health worker the importance of not ignoring the emotions of Pregnant Women's

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pandemics during COVID-19 because maternal mental health can be associated with short-term and long-term risks to the physical pregnant mother, fetus pregnancy and psychological health [5], [6].

To date, epidemiological data on mental health problems in the general population during the COVID-19 outbreak have not been available and how best to respond to challenges during an outbreak is still unknown. Those in quarantine often experience boredom, loneliness, and anger and on social media, this virus has repeatedly been described as a killer virus and is very dangerous. For people who come in contact with the COVID-19 virus, they must carry out a 14-day quarantine or independent isolation, so this will increase the negative response to the COVID-19 outbreak because it will increase anxiety, feelings of isolation and bad stigma from the community [7].

Based on what Yanting revealed, 2020, Pregnant Women's who were underweight before pregnancy, primiparous, <35 years old, working full time, middle income, high-risk Women's have increased anxiety symptoms during the outbreak [7]. Research conducted by Corbett, 2020 from the 16th to the 27th of March 2020, on 71 women revealed in the first two weeks before the pandemic. Most women (83.1%, 59/71) did not often worry about their previous health. During the delay phase, more than half of the women (50.7%, 36/71) often worry about their health or all the time. Pregnant Women's have high anxiety in the health of older families (83.3%, 55/66), concerns about other children (66.7%, 28/42), and then unborn babies (63.4%, 45/71). So the existence of this pandemic has a psychological impact on Pregnant Women's [8].

Based on existing data in the East Java Region COVID-19 incidence is increasingly increasing and is ranked 2nd after DKI Jakarta, and although until now there has been no data on anxiety levels in Pregnant Women's found, the researchers are interested in researching anxiety in Pregnant Women's Around Pandemic COVID-19. Pregnancy anxiety affects pregnancy, fetal development, genetic growth and subsequent psychopathology [9], [10].

Accurate information from reliable sources is very important in accelerating a global health crisis such as Covid-19, with incorrect information adding to fear and anxiety. Anxiety also influences the success factor in the strategy of managing a COVID-19 pandemic for public health [8]. The Covid-19 pandemic has caused anxiety among an increasing population of Pregnant Women's. Women care mostly about older relatives, then their children, followed by unborn babies. It turns out that Pregnant Women's do not care about their health, but even so more than half of women have significant health anxiety.

So that the government advises about keeping a distance between patients with one another. Pregnant Women's who have a higher burden will have an indirect adverse effect on their physical and mental health. It is important to recognize this and support patients through the provision of accurate and up-to-date information, with simple strategies such as in this study leading to increased patient satisfaction and empowerment through education with social media about COVID-19 prevention procedures, such as keeping a distance, washing hands, use a hand sanitizer, use a mask when leaving the house, increase nutrition intake and continue to carry out pregnancy checks by way of an agreement with health workers.

II. Materials & Methods

The research design used was analytic with the cross-sectional approach, research variables age, gestational age, distance, parity and anxiety, the number of research subjects were 76 Pregnant Women's in the East Java Region,

collecting data using Google form online through midwives local practice because many respondents did not understand filling out the questionnaire via google form, anxiety assessment method with DASS, this research was conducted from 18 April to 08 May 2020, and 76 Pregnant Women's were collected, data was recapitulated by scoring to assess anxiety and coding all variables, after that the data is carried out statistical tests through SPSS 24.0 for windows with the correlation test and logistic regression of the four variables.

III. Results & Discussion

After the statistical test, the results of the study were obtained from 4 variables associated with anxiety.

Table 1. Relationship Characteristics of Pregnant Women's with Anxiety in Pregnant Women's in the COVID-19 pandemic in East Java Region

No	Variable	F	%	p-value
1	Age			
	Age at Risk	29	38.2	0.000
	Reproductive Age	47	61.8	
2	Pregnancy Age			
	1-3.9 months	32	42.1	0,000
	4-6.9 months	37	48.7	
	7-9 months	7	9.2	
4	Parity			
	Primigravida	50	65.8	0,000
	Multigravida / Grandemultigravida	26	34.2	
5	Distance Health Services			
	Distance	43	56.6	0.269
	Near	33	43.4	

Based on Rank-Spearman statistical test results from the four variables analyzed that are determinants of Pregnant Women's 's anxiety during the COVID-19 pandemic, variables of age, gestational age and parity have a significant relationship with the anxiety of Pregnant Women's, while the results of anxiety research obtained the results of 3.9 % moderate and 6.6% severe anxiety, although most are normal and mild.

Table 2. Logistic Regression Statistical Test

No	Variable	Wald	Lower	Upper	p-value
1	Age				
	Age Risk	1,384	-4743	1,185	0239
	Reproductive Age				
2	Age Pregnancy				
	1-3.9 months	0,5290,0		4,397	*
	134-6.9				
	6,233months				
	7-9 months				
4	Parity				
	primigravidae	0317	- 4.077	2,257	0.573
	Multigravida / Grandemultigravida				
5	The distance of Health Services				
	Distance	5,989	0,300	2,711	0.014*
	Near				

The results of the study showed that of the four variables studied there were only gestational age variables and the distance to health services was very significant concerning anxiety of Pregnant Women's, especially during the pandemic COVID-19 whereas age and parity had no relationship with the anxiety of Pregnant Women's. Pregnancy 6,233 times will increase the occurrence of anxiety and the distance to the place of health services will increase 5989 times the occurrence of anxiety.

This research was first carried out in the East Java Region by assessing anxiety in Pregnant Women's, especially during the COVID-19 pandemic. The results of table 1 show that the characteristics of Pregnant Women's in the East Java region were obtained most of the reproductive age and some are at risk, while the majority of primigravida parity and gestational age are mostly in trimester 1 and 2, and after statistical tests, there is a significant relationship between age, gestational age, and parity, while the results of anxiety research obtained 3.9 results % moderate and 6.6% severe anxiety, although most are normal and mild. Age is one of the factors that influence anxiety in Pregnant Women's, especially at high-risk ages. Age of high risk of the tendency to complications will occur during pregnancy and childbirth so it needs special attention during pregnancy, whereas in pregnancy there is a psychological change and it is natural but these psychological changes if not maintained and considered pathological psychological disorders will occur, but also during pregnancy hormonal changes so it's easy to change the mood of Pregnant Women's, especially now with the COVID-19 pandemic. Following Previous findings from this study of non-pregnant populations, younger women (under 19 years of age) showed greater symptoms of anxiety in this case than adult people (over 25 years of age) [11], this is also in line with this research that some age groups are at risk of experiencing anxiety.

This research is a lot of anxiety occurs at the age of 20-35 years, this study is in line with research by Sargado, 2020, revealed the age group with the highest frequency of depression and anxiety is 30 to 39 years (2.5%) and followed by 20 to 29 years (2%) [12]. Anxiety disorders are the most common psychiatric disorders throughout the world, where most are Pregnant Women's [13]. Mood disorders increase in reproductive age, depression, and anxiety are common during pregnancy and 12 months postpartum [14]. The impact of anxiety on Pregnant Women's is very risky for the fetus they contain. Mother's anxiety has major consequences for fetal wellbeing. Animal experiments indicate that motherly stress influences the development of the fetus in the presence of hypothalamus-pituitary-adrenal disturbance accompanied by an rise in stress reactions during life[15]. Fetal and maternal endocrine levels are strongly correlated; when the mother experiences anxiety and stress directly influencing glucocorticoid receptors in the fetal brain, high maternal cortisol levels are released[16].

Pregnancy is mostly in trimester 1 and 2, seen from the data that most experienced anxiety occurred in trimester 2 but trimesters 1 and 3 also experienced anxiety with the presence of this COVID-19 pandemic, the results of the logistic regression statistical test were also very significantly influential 6,233 increases anxiety of Pregnant Women's during the COVID-19 pandemic, based on the theory that many experience mood changes or anxiety early in pregnancy because Pregnant Women's have to adapt to their pregnancy, chances are that Pregnant Women's have not heard much about COVID-19 and information that has been received incorrectly from the media social so this can cause anxiety levels to increase. Pregnant Women's undergoing research during the COVID-19 pandemic reported more stress and psychiatric symptoms than Pregnant Women's assessed before the pandemic, especially in the form of depression and anxiety symptoms [9]. Anxiety is associated with an early gestational age below 12 weeks and an increased risk of preterm birth among African-American women [17].

Distance between health services and health workers also contributes to anxiety in Pregnant Women's, the results of logistic regression research show that 5,989 times Women's who far away have anxiety while those close to anxiety do not experience anxiety the regression results are also very significant with anxiety in Women's pregnant during the COVID-19 pandemic. The farther the distance from the health facility from the place of residence of Pregnant Women's and the more difficult access to health facilities will reduce the motivation of Pregnant Women's to make ANC visits. The distance will make the mother think twice about visiting because it will take a lot of energy and time for each visit.

Women's who do not use transportation and must walk to the majority of health services have a visit rate of fewer than 4 times during pregnancy [18], [19], just as anxiety increases the mother not getting good and correct information will increase her anxiety. Anxiety is caused by several things including learning new tasks about pregnancy, losing autonomy, losing control, distance from the hospital away from the hospital, feeling lost of allure, and ability to manage yourself [20].

It is necessary to educate all Pregnant Women's to reduce anxiety by providing counseling about the importance of preventing transmission of COVID-19, staying at home, keeping a distance, maintaining nutritional intake, wearing a mask when leaving the house, washing hands, and checking pregnancy through an agreement with health workers. Education through the media is usually one of the ways carried out by the government to change people's behavior with low knowledge. The media used can be in the form of print media, such as leaflets, posters, newspapers, magazines, etc. Or electronic media such as television, internet, and others.

IV. Conclusion

The distance of health services and gestational age have a very significant effect on anxiety In pregnant Women's around pandemic COVID-19, so the farther distance with health workers there will be an increase in anxiety because they rarely receive information about COVID-19, while gestational age often occurs in early pregnancy trimesters 1 and 2, because at this time the mother experiences psychological changes naturally and the process of adaptation to her pregnancy is coupled with the presence of a COVID-19 pandemic which increases the incidence of anxiety. It is necessary to educate all Pregnant Women's to reduce anxiety by providing counseling about the importance of preventing transmission of COVID-19, staying at home, keeping a distance, maintaining nutritional intake, wearing a mask when leaving the house, washing hands, and checking pregnancy through an agreement with health workers.

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