Anxiety in Pregnant Women During Coronavirus (Covid-19) Pandemic in East Java, Indonesia

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Abstract

The 2019 coronavirus pandemic has been recognized as a trigger for anxiety, especially in pregnant women. Pregnant women are among those with a high-risk for contracting coronavirus, not only for themselves but also for the unborn child. Continuous information is needed for pregnant women to avoid anxiety because anxiety will result in complications for both mother and child, such as low birth weight baby and postpartum psychological disorder. The purpose of this study was to identify the prevalence of anxiety in pregnant women during the Coronavirus pandemic in Madura, East Java, Indonesia. This study was a cross-sectional descriptive study conducted from April 13 to May 8, 2020. Data were collected using a Google form distributed to all pregnant women in the Madura Region based on the list of pregnant women from the midwives in each city in this region. Seventy pregnant women returned the completed form, and data were analyzed using frequency tables and percentages. Results showed that 31.4% of pregnant women experienced very severe anxiety, 12.9% experienced severe anxiety, and the remainings did not experience anxiety. In conclusion, the coronavirus pandemic indeed increases anxiety in pregnant women which will need to be addressed to avoid negative impacts on the mother and unborn child. Counseling is needed to reduce anxiety by asking the women to stay at home, wash their hands, wear masks, eat nutritious food, have their pregnancy checked, perform exercise for pregnant women at home, and seek for help when facing emergencies.

Key words: Anxiety, Coronavirus (Covid-19), pandemic, pregnancy

Tingkat Kecemasan Ibu Hamil pada Masa Pandemi Virus Corona (Covid-19) di Jawa Timur, Indonesia

Abstrak

Pandemi virus corona 2019 ini menyebabkan kecemasan, terutama pada ibu hamil, karena ibu hamil merupakan kelompok risiko tinggi untuk tertular virus corona, terutama pada janin yang dikandungnya, sehingga diperlukan informasi secara terus menerus kepada ibu hamil supaya tidak terjadi kecemasan, karena kecemasan ini akan berakibat komplikasi pada ibu dan janinnya. Dampak kecemasan pada ibu hamil dan janin adalah berat badan lahir rendah dan gangguan psikologis pada ibu setelah melahirkan. Tujuan penelitian ini mengidentifikasi tingkat kecemasan ibu hamil di masa pandemi virus corona di wilayah Madura, Jawa Timur. Penelitian ini dilakukan tanggal 13 April sampai dengan 8 Mei 2020 dan merupakan penelitian deskriptif dengan menggunakan google form yang disebarkan ke seluruh ibu hamil di Wilayah Madura melalui bidan yang ditunjuk setiap kota yang ada di Madura. Tujuh puluh lima ibu hamil mengembalikan formulir yang telah diisi dan data dianalisis menggunakan tabel frekuensi dan persentase. Hasil penelitian menunjukkan bahwa 31.4% mengalami kecemasan sangat berat, 12.9% mengalami kecemasan berat, dan sisanya ibu tidak mengalami kecemasan atau dalam keadaan normal. Simpulan, pandemi virus corona memang meningkatkan kecemasan pada ibu hamil yang perlu diatasi untuk menghindari dampak negatif pada ibu dan janinnya. Konseling diperlukan untuk mengurangi kecemasan dengan meminta ibu-ibu untuk tinggal di rumah, mencuci tangan, memakai masker, makan makanan bergizi, memeriksa kehamilannya, melakukan senam ibu hamil di rumah, dan mencari pertolongan saat menghadapi keadaan darurat.

Kata kunci: Kecemasan, kehamilan, pandemi, viruscorona (covid-19)

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Introduction

“COVID-19, more commonly known as simply Coronavirus, is an airborne viral respiratory disease that spreads rapidly and can cause death since its first identification in Wuhan, China, in December 2019”. “There is very limited data on the impacts of COVID-19 on pregnant women, however, it is assumed that it can increase the risk of pregnancy complications, management must be optimized, especially in health care facilities by always monitoring the mother and fetus.1

Pregnancy is a condition in which partial immunity and physiological changes that often occur in pregnant women are thus more susceptible to viral infections, and morbidity is higher even with seasonal influenza events. Therefore, the COVID-19 epidemic can have a serious impact on pregnant women. Transmission of the virus from human to human is proven to occur, so pregnant women need to know about the coronavirus the anxiety of the mother going to physically affect her child.2,3

The physiological changes of a pregnant woman during pregnancy are a result of the normal adaptations experienced by a woman to better accommodate the embryo or fetus and ensure that the fetus grows well and receives adequate nutrition. Often in pregnant women will experience excessive stress and anxiety 4,5. Anxiety, as a kind of psychological pressure, will trigger a physiological state and cause a decrease in immunity to the body.6,7

Psychological stress, such as fear and anxiety, increases some of the production of stress hormones, including adrenaline and cortisol. if pregnant women can cope with stress and anxiety and physical changes that occur as a normal part of pregnancy so stress is considered to be physiological when stress is mild. because the anxiety experienced by pregnant women is influenced by hormonal changes caused by their pregnancy. “In contrast, high-stress levels can cause hypertension and other complications, which can harm the mother or fetus.5

Depression and anxiety in pregnant women are very significantly related, especially affecting fetal and neonatal growth. However, the apparent effect of maternal depression and anxiety on fetal-neonatal growth remains unclear. Also, research has found that similar effects of depression and anxiety in the mother during pregnancy will have an impact on neonatal growth, behavior, and maturation outcomes. Neonates from mothers who experience prenatal depression or anxiety show a higher risk for preterm birth and low body weight, both of which are major health problems for the baby 8,9. Prenatal anxiety and depression are also associated with changes in brain structure and function in infants and children.

Depression during pregnancy is associated with many complications, such as premature birth 4, low birth weight, fetal growth disorder 5, and postnatal complications. It has also been linked to hypertension, preeclampsia, and gestational diabetes 4. Anxiety, depression, and stress during pregnancy are serious health problems. However, the findings revealed the effects of psychological problems in pregnant women, suggesting the possibility of long-term mental complications from the COVID-19 pandemic that will occur in pregnant women 1.

The purpose of this study was to determine the level of anxiety in pregnant women in the Madura Region, East Java. The population was taken in Madura because previous research on the anxiety of the Covid-19 pandemic, and unique characteristics in the Madura population had never been done before. characteristics difficult to receive input or change behavior, many high-risk pregnancies and must be forced to do the examination many pregnant women at a young age and old age, so that many pregnant women who are prone to anxiety because they are not ready to accept the pregnancy.

Methods

This research used descriptive research design. The population researched in this study were all pregnant women in the Madura region who can read, have an android phone, can use Whatsapp, and are willing to be respondents. The study was conducted from April 13th to May 8th, 2020. Whereas many 70 pregnant women were collected from the Google form results because of the COVID-19 virus pandemic, researchers could not directly face-to-face with respondents and most of the most of them could not or would not fill out. Sampling was carried out through Google Form because of the COVID-19 pandemic outbreak, Where it was distributed to all pregnant women in the Madura Region through local midwives who carried out independent practice. This research took place from June 13 to May 8, 2020. Google Form is distributed randomly to midwives everywhere there is a midwife representative, and the population was taken based on the Google form filled in by
pregnant women for a specified time limit. The midwives selected were those who were familiar with researchers in each district, and the number of samples in each district in Madura varied, from 10 applications in Sumenep, 10 in Pamekasan, 15 in Sampang, and 35 in Bangkalan. The data were collected according to the links distributed from each district, midwives gave information on how to fill the shared link, which included variables that are studied in the characteristics of pregnant women (age, education, occupation, gestational age) anxiety. The questionnaire uses Indonesian. Google form contains questions about anxiety that are tailored to DASS (Depression, Anxiety, Stress Scale) which contained 11 questions. The material used was using Google Form by using language that is easily understood by pregnant women, and reliability and validity tests have been done on the questionnaire on Google Form. Scoring 0 1 2 3 with the Likert scale, validity and reliability tests were not carried out because they already used the existing anxiety questionnaire.

The study protocol has been approved by the Institute of Health Science Ngudia Husada Madura Ethics Commission with No. 611 / KEPK/STIKES-NHM / EC / IV / 2020.

Data that has been collected and later will also be recapitulated from Google Form taken from Excel in Google Form, the data is recapped and given a score then coded to categorize of several variables, after it will be recapitulated and tabulation of the data will be followed by counting data through SPSS version 24.0 for windows with univariate cross-tabulation and frequency tables. Categorized as anxious with a score of 6-7, weight 8-9 and very heavy more than 10 and this score has been determined from DASS.

**Result**

Based on the analysis of data on the characteristics of pregnant women in the Madura region, seen from the age of pregnant women 84% aged 20-35 years and including productive and safe ages to get pregnant, education 52% junior school, employment 42.9% private, 71.4 2–4 pregnant and 38.6 gestational age % entered in trimester III (>28 weeks).

Data analysis showed that pregnant women in the Madura region during the coronavirus pandemic (COVID-19) 31.4% experienced very severe anxiety in the presence of coronavirus. Qualitative results were filled out from the questionnaire with open questions, whether

### Table 1. Characteristics of Pregnant Women in the Madura Region

| Variable                | (n=70) | %  |
|-------------------------|--------|----|
| Age (years)             |        |    |
| <20                     | 3      | 4.3|
| 20–35                   | 59     | 84.3|
| >35                     | 8      | 11.4|
| Total                   | 70     | 100|
| Education               |        |    |
| No education            | 2      | 2.9|
| Elementary School       | 17     | 24.3|
| Junior High School      | 37     | 52.9|
| Higher education        | 14     | 20 |
| Occupation              |        |    |
| No occupation           | 24     | 34.3|
| Government officer      | 10     | 15.7|
| Self-employed           | 35     | 42.9|
| Farmers                 | 5      | 7.1|
| Parity                  |        |    |
| 1                       | 17     | 24.3|
| 2–4                     | 50     | 71.4|
| >4                      | 3      | 4.3|
| Gestational Age (weeks) |        |    |
| 0–12                    | 22     | 31.4|
| 13–28                   | 21     | 30 |
| >28                     | 27     | 38.6|

### Table 2 Anxiety In Pregnant During Coronavirus (Covid-19) Pandemic: Madura, East Java Case

| Variable | (n=70) | %  |
|----------|--------|----|
| Anxiety  |        |    |
| No Anxiety | 14 | 20 |
| Low Anxiety | 13 | 18.6|
| Moderate  | 12     | 17.1|
| Severe    | 31     | 44.3|
Discussion

Based on the analysis of data on pregnant women about anxiety most experienced very severe anxiety in the presence of a coronavirus pandemic, this anxiety uses the DASS 21 assessment, and a small portion there was severe anxiety 44.3%. This finding was supported by the WHO, which reported that about 10% of pregnant women experience a mental disorder, primarily depression. In developing countries, the prevalence of this condition was higher, reaching 15.6% during pregnancy and 19.8% after childbirth (WHO). Something unexpected, other than that fear of something happening to yourself causes someone to become anxious. Physiologically in pregnant women, psychic changes occur both in trimesters 1, 2, and 3 and this was considered physiological because of hormonal changes in pregnant women. Husband and family support was needed during pregnancy. Social support can buffer the effects of prenatal stress and has been shown to mitigate the impacts of prenatal anxiety and depression symptoms on maternal and infant stress response systems. Physical activity is also associated with reduced depressive and anxiety symptoms in pregnant individuals excessive anxiety in pregnant women will cause pathological anxiety and will cause complications for the mother and the fetus she is carrying, the presence of this coronavirus pandemic increases anxiety and excessive fear in pregnant women. This was influenced by the lack of information and often reads unclear information.10,12

Hormonal changes experienced by pregnant women will cause emotional changes and cause several reactions to mood swings.11

Pregnant women who often have such anxiety and fear cause an increase in the work of the sympathetic nervous system. The sympathetic nervous system then activates the adrenal glands which affect the system on the hormone epinephrine. Increased hormones adrenaline. Cause biochemical dysregulation of the body, resulting in physical tension in the pregnant woman and increasing overall emotional intensity.11 Based on several studies many effects on pregnant women when experiencing psychological stress such as depression, anxiety, and/or stress during pregnancy can increase the risk of birth such as premature, lack of familial bonds/attachment between mother and child, psychological disorders in the mother after giving birth, growth disorders in low birth weight.13,14

The study conducted by Durankus, 2020, from the results of his research, illustrates the effects of the COVID-19 pandemic causing depression increased anxiety levels in pregnant women. The results of his research show a very urgent need for counseling and assistance to pregnant women. If not, there will be side effects that occur during pregnancy and thus affect the mother and fetus 4. Emotional expressions arising from the results of perceptions of pregnant women can be in the form of mood swings.15

Correct counseling and information, especially for pregnant women about the coronavirus, with midwife by visiting a pregnant woman's home or creating a WhatsApp group to control her pregnancy and reduce excessive anxiety which will have fatal consequences for the mother and her fetus. Research limitations research using Google form weaknesses pregnancy does not fill in themselves and there is no control from the researcher, so whether the questionnaire can be filled in as expected by researchers or not. Most pregnant women do not charge because they do not use an android phone installed with WhatsApp.

In conclusion. Pregnant women in the Madura region during the coronavirus pandemic (COVID-19) 31.4% experienced very severe anxiety in the presence of coronavirus. Correct counseling and information, especially for pregnant women about the coronavirus, by visiting a pregnant woman’s house or creating a WhatsApp group to control her pregnancy and reduce excessive anxiety which will have fatal consequences for the mother and her fetus. Pregnant women did not need to visit a midwife except in emergencies, such as bleeding, rupture of membranes, seizures, and signs of childbirth, when visiting a midwife they must pay attention to the COVID-19 prevention protocol by wearing a mask/face shield, washing hands or using a hand sanitizer and keep doing light exercise or
pregnancy exercises at home. Some limitations of this study were, with a sample of 70 pregnant women less representative to represent all the anxiety of pregnant women in Madura, it was necessary to carry out further research with larger sample size.

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