COPING MECHANISMS DECREASE ANXIETY LEVELS OF PREGNANT WOMEN DURING THE COVID-19 PANDEMIC IN SOUTH KALIMANTAN

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Abstract

The Coronavirus outbreak (Covid-19) has taken the world by storm up to this day, and the effect is experienced around the world, including Indonesia. The current condition is especially risky for pregnant women due to various hormonal changes during pregnancy. Further, the pandemic situation creates anxiety that might result in negative effects on their pregnancies. This study aims to analyses the knowledge of Covid-19 and coping mechanisms for decrease the anxiety level of pregnant women during Covid-19. This study utilizes an observational design with a cross-sectional approach. 324 women with normal pregnancies residing in Banjarbaru city and Banjar district are involved as a sample in this study. This sample is taken through consecutive sampling. The study has found that 48,1% of pregnant women have moderate anxiety level. Among those numbers 85,2% exhibit adaptive coping mechanisms. Further, the data has shown that 44,4% of them exhibit sufficient knowledge of Covid-19. Therefore, it is indicated that a sufficient level of knowledge can help improve pregnant women's actions in protecting themselves from the possibility of being infected by Covid-19. A good level of knowledge creates an adaptive coping mechanism, and the result is a decrease in anxiety for pregnant women during the Covid-19 pandemic. Sufficient knowledge of Covid-19 results in adaptive coping mechanism exhibition and brings about the decline of anxiety level of pregnant women during the Covid-19 pandemic. It is advisable for a medical practitioner in public health services to identify anxiety levels and provide appropriate information, so that pregnant women can have adaptive coping mechanisms during Covid-19.

Keywords: Coping mechanism, knowledge, pregnant women, Covid-19 pandemic

1. Introduction

The coronavirus disease 2019 (Covid-19) experienced by people around the globe has created a lot of disasters since WHO announced it as a pandemic. This condition results in crisis in the majority of the community around the globe, and only a few countries succeed free from this virus.[1]

The Covid-19 pandemic triggers a lot of fear, anxiety, and worry especially for pregnant mothers around the world. Around 30% of mortality in pregnant women is due to severe respiratory infection dan 60% of them are required intensive care. [2] Pregnant women experience anxiety due to the risk and death rate of the pandemic. The negative effect of anxiety in pregnant women is that it can trigger a uterine contraction and a rise in blood pressure that can lead to preeclampsia, eclampsia, and miscarriage.[3] Further, anxiety might also results in the birth of an underweight baby (*Kelahiran bayi berat lahir rendah/BBLR*) and a premature baby.[4]

Covid-19 brings about a psychological impact on the public masses along with thespread of depression and anxiety, so, accountable information from a reliable source is needed. Information is vital to overcome the health global crisis, as misinformation and hoax might raise more fear and anxiety. Anxiety about health problems is one of the factors influencing the success of strategic public health management to overcome the pandemic.[5]

Anxiety can be defined as an emotional state in the form of a sense of discomfort that causes feelings of helplessness and uncertainty caused by something that is unclear.[6]   Feeling of anxiety for a pregnant woman is common as a normal psychological change due to pregnancy and the fear of facing childbirth.[7] During the current Covid-19 pandemic, pregnant women have experienced various psychological disorders, especially anxiety.

A study in Italy has discovered that 31% of respondents experienced anxiety, aside from it some respondents experienced mood swings, and eating disorders and some experience obsessive-compulsive disorder.[8] Another research from East Java Indonesia also reported that 31.4% of pregnant women experienced very severe anxiety during the Covid-19 pandemic. And qualitatively, most of the mothers said they felt afraid and anxious when doing a pregnancy check-up, so they chose to postpone their regular check-ups with the midwife.[9]

Anxiety and fear of pregnant women against Covid-19 infection also have an impact on increasing the incidence of depression in postpartum mothers, even postpartum depression which is considered to be related to stress experienced during pregnancy. For this reason, it is necessary to plan maternal care from the antenatal period with special interventions to reduce anxiety and fear in pregnant women.[10]

Coping mechanisms correlate with anxiety. When faced with difficult or stressful life events, one will have different strategies in responding to cognitive, emotional, or behavioral. [11] Coping mechanism is one way to adapt to stress. A person can deal with stress and anxiety by mobilizing coping resources in the form of problem-solving skills, social support, and cultural beliefs.[6] Coping mechanism is also defined as efforts made cognitively and behaviorally to overcome, relieve or tolerate internal and external demands caused by interactions between individuals and events that are considered stressful.[12] There are two classifications of coping, namely adaptive coping if it can solve problems effectively and constructively while maladaptive coping is behavior that tends to be destructive, unhealthy, and unable to solve problems.[13]

Knowledge about the Covid-19 pandemic plays an important role because it can be a factor that affects the behavior of mothers during pregnancy. Adequate knowledge about coronavirus infection has a positive impact on awareness to prevent transmission so it plays a role in determining community readiness to accept public health measures.[14,15]

Strategies to overcome the problem of anxiety need to be carried out by pregnant women by using adaptive coping mechanisms to be able to undergo pregnancy and face childbirth with good results during the Covid-19 pandemic. Health education must be carried out by health practitioners or public health service providers to increase knowledge and take preventive steps for Covid-19 infection.

This study focuses on the coping mechanism, knowledge about Covid-19, and anxiety levels during the pandemic which has not been widely investigated, thus this creates an opportunity for this study to provide further literature and information on the matter. This study aims to find a decrease in the level of anxiety of pregnant women during the Covid 19 pandemic by increasing knowledge and coping mechanisms of pregnant women.

2. Methods

This study utilizes descriptive-analytic with a cross-sectional approach. A sample of 234 pregnant women was selected using the consecutive sampling method with the criteria of being able to read, having an android phone, being able to use WhatsApp, and being willing to be respondents. The research was conducted in the Banjarbaru City and Banjar Regency, South Kalimantan. The dependent variable in this study was anxiety which was measured using the State-Trait Anxiety Inventory (STAI) questionnaire. The independent variable of coping mechanism, measured using Brief COPE Scale Questionnaire that consists of 28 question items with Likert Scale, and the reliability tested using Cronbach's alpha 0.868 and reliability coefficient 0.799. Whereas, the questionnaire used to measure knowledge with 10

question items to measure the extent to which respondents understand the ways of transmission, signs and symptoms, prevention, and the dangers or risks that occur in pregnant women who are infected with the corona virus. The questionnaire is administered online through the Google Form application due to the health protocol restricting face-to-face meetings. This study was conducted from June to October 2020.

The gathered data was then analyzed using ordinal regression. This is to prove the research hypothesis that anxiety levels are influenced by coping mechanisms and knowledge about Covid-19. This research has an ethical permit from the research ethics committee of the University of Muhammadiyah Banjarmasin with the number: 135/UMB/KE/VIII/2020.

3. Results

The characteristic of the research subject included different variables such as age, educational background, occupation, parity, and level of knowledge on Covid-19. The majority of the samples are aged between 20-35 years old (82,4%). In terms of educational background, most of them are high school graduates and stay-at-home wives. It is also identified that the majority of the subject is multiparity (64,8%) and has sufficient knowledge about Covid-19.

The study has discovered that most subjects exhibit adaptive coping mechanisms during the Covid-19 pandemic. It is reflected by the kind of activities carried out by most of the subjects. Most of them carried out the regular activities but mostly stayed at home, asking for advice and emotional support from others, as well as a positive attitude of looking at the brighter sight of things (85,2%). It is also reported that 48,1% of the subjects experience a moderate level of anxiety and 18,5% of them have severe anxiety (Table 1).

Table 1. Coping Mechanism and Anxiety Level in Pregnant Women (n = 324)

Categories	Σ (n)	%
Knowledge of Covid		
- Good	144	44,4
- Fair	180	55,6
Coping Mechanism:		
- Adaptive	276	85,2
- Maladaptive	48	14,8
Anxiety Level:		
- Mild Anxiety	108	33,3
- Moderate Anxiety	156	48,1
- Severe Anxiety	60	18,5

This study has also administered an ordinal regression test to prove the research hypothesis. The result is as follows:

Table 2. Parameter Estimates

		Estimate	Std. Error	Wald	Df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Cemas = 1]	-3.079	1.539	4.004	1	.045	-6.094	-.063
	[Cemas = 2]	.125	1.462	.007	1	.932	-2.740	2.990
Location	Coping Mechanism	.169	.730	.053	1	.017	-1.263	1.600
	Knowledge	.257	.235	1.197	1	.045	-.203	.716

This test serves the purpose to figure out which variable significantly influences the dependent variable. It is illustrated that coping mechanisms and existing knowledge strongly influenced the variable of the level of anxiety, which is indicated by significant the number of below 0,05 (CM 0,017 and Knowledge 0,045).

3. Discussion

Based on the presented data analysis, this section will further lead the discussion based on the purpose of the study in three aspects namely anxiety level, coping mechanism, and knowledge of Covid-19 as a means to prevent health problems occurring during pregnancy.

Anxiety Level of Pregnant Women during the Covid-19 Pandemic

This study has uncovered that the majority of respondents experienced moderate anxiety and a small proportion experienced severe anxiety due to the coronavirus pandemic (Covid-19). This anxiety was assessed using the State-Trait Anxiety Inventory (STAI) instrument with 20 question items for the State Anxiety Inventory (a list of signs of anxiety) and 20 items for the Trait Anxiety Inventory (a list of statements about anxiety), using a 5-point Likert scale, namely 1. Rarely, 2. Sometimes, 3. Often, and 4. Almost always.[16]

Analysis of the measurement results was categorized into mild anxiety, moderate anxiety, and severe anxiety. This measuring tool has provided an overview of the emotional condition of pregnant women during the Covid-19 pandemic which is subjectively felt as tension, fear, nervousness, and worry. This situation is of course individual, generated by stimuli according to the situation experienced, coupled with other factors such as reduced working hours and income

due to the Covid-19 pandemic, and an unfavorable socio-economic situation. This situation contributes to an increase in the prevalence of anxiety in vulnerable groups of pregnant women.[17,18]

This anxiety causes problems and further triggers ongoing disturbances in the health of pregnant women. This is because pregnancy and the postpartum period are sensitive periods in a woman's life with the main risk of psychiatric morbidity. Anxiety that occurs during pregnancy and postpartum often occurs, and if the coping mechanisms used are not appropriate and or do not serve their purpose, it can cause persistent anxiety after childbirth. The occurrence is repeated all the time, and the mother feels worried about her well-being. In addition, they are also concerned about the health of their other children and the well-being of the child they are carrying.[4,19]

This study found that the majority of respondents were within the category of moderate anxiety and a small proportion experienced severe anxiety with different gestational ages in different trimesters. Based on the anxiety instrument given related to the anxiety experienced during the Covid-19 pandemic, respondents experienced various anxiety in the form of fear, tension, anxiety, and worry. Anxiety that occurs in pregnant women is currently assumed to be tension and fear as well as concerns about the health problems of themselves and their fetuses against the threat of Covid-19.

Hasil penelitian sejenis yang dilakukan pada etnis Zhuang di China melaporkan adanya dampak psikologis pada ibu hamil dengan prevalensi (36,77%) mengalami peningkatan gejala kecemasan setelah penerapan kebijakan *social distancing* dan karantina. Rekomendasi kepada pemerintah dan departemen terkait untuk memberi dukungan dan layanan kesehatan mental yang multidisiplin dan intervensi peka budaya.[19] Demikian juga tingkat kecemasan ibu hamil yang diteliti di Italia sebanyak 31% mengalami gejala kecemasan dengan rekomendasi peneliti agar semua ibu hamil dan bayi baru lahir dijamin hak-haknya untuk dihormati saat mereka menerima pelayanan perawatan di fasilitas kesehatan meskipun sedang ada pandemi. Bagi ibu yang memiliki riwayat psikologis diperlukan perawatan khusus karena kekhawatiran dan ketakutan yang sangat relevan.[2]

Coping Mechanism of Pregnant Women on Anxiety Level

Coping mechanisms are defined as constantly changing cognitive and behavioral efforts aimed at dealing with the demands of certain situations that are considered stressful.[12] In pregnancy situations, coping mechanisms can influence birth outcomes by minimizing or preventing negative emotional, behavioral, cognitive, and physiological responses to stressors.[20] This coping mechanism was assessed using a Brief COPE Scale questionnaire from Carver with 28 questions

on a Likert scale with three subscales, namely: dysfunctional coping, problem-focused coping, and emotion-focused coping..[21]

This study has discovered that more than half of the respondents had adaptive coping mechanisms and a small proportion had maladaptive coping mechanisms. Adaptive coping mechanisms are mechanisms that support the function of integration (a unified whole), progress, and learning, and there is an effort to achieve goals with the categories being talking to other people, solving problems effectively, relaxation techniques, balanced exercises, having broad perceptions, being able to receive support and other constructive activities.[13] The coping mechanisms used by pregnant women in this study used three subscales of coping mechanisms in a balanced manner from dysfunctional coping indicators (calm the mind, for example making jokes and joking, increasing worship according to religion or spiritual beliefs), problem-focused coping (getting emotional support, getting guidance and advice from others) and emotion-focused coping (doing something to keep the problem from thinking too much, such as watching TV, reading, sleeping, daydreaming, or shopping).

The results of this study confirm the results of previous studies that found dysfunctional coping strategies such as self-blame, rejection, and distraction, and emotional-focused coping such as using emotional support from others, acceptance, humor, and strengthening one's religion.[23]

The results of the statistical test of this study indicate that coping mechanisms significantly affect the level of anxiety in pregnant women. Where the majority of respondents with adaptive coping mechanisms tend to have mild and moderate levels of anxiety and conversely respondents with maladaptive coping mechanisms tend to have severe anxiety levels. Pregnant women with good coping mechanisms also contribute well to their anxiety levels. If the coping mechanism is adaptive, the level of anxiety is lower because a good coping pattern is a factor that can reduce the level of anxiety. However, if the coping mechanism is maladaptive, it can be a factor in the emergence of increasingly severe psychological disorders. A person can cope with stress and anxiety by mobilizing coping resources in the environment by using social problem-solving skills and cultural beliefs.[24]

Thus, adaptive coping mechanisms can significantly reduce the level of anxiety experienced by pregnant women during the Covid-19 pandemic. By generating sources of dysfunctional coping, emotion-focused coping mechanisms, and problem-focused coping through experiences of the COVID-19 pandemic which are indirectly linked to the mental health of pregnant women in general.

Knowledge of Pregnant Women About Covid-19 on Anxiety Levels

The result of this study indicates that the level of knowledge of pregnant women about Covid-19 is quite good. The term knowledge refers to a theoretical or practical understanding of a subject.[25] The outbreak of Coronavirus disease 2019 (COVID-19) which was detected for the first time in Wuhan China since December 31, 2019, brought tremendous psychological impact to the general public because of the highly contagious nature of the disease and no specific type of medicine to cure it. The enormous psychological effect allows for fear, anxiety, and even depression.[26] Especially for pregnant women who are generally more susceptible to respiratory pathogens including Covid-19. Vulnerability to this disease can lead to high knowledge of the risk of disease in pregnant women. Research on pregnant women in Ethiopia found that two-thirds of pregnant women being studied had good knowledge about the Coronavirus pandemic.[15] There is a significant relationship between knowledge and the level of anxiety of pregnant women during the Covid-19 pandemic. Good knowledge is obtained from exposure to information. If information is not well received as a basis for knowledge and awareness, it can cause fear and worry which can increase anxiety.[14]

This study has also found that more than half of the respondents had sufficient knowledge about Covid-19, which included sufficient knowledge about the transmission of the virus, signs, and symptoms of being exposed to Covid-19, prevention of Coronavirus infection, how to increase immunity, how to know maternal health, knowledge on pregnancy during the Covid-19 pandemic and diagnostic tests to find out if the body is exposed to the Coronavirus (Covid-19). Another similar study has found a significant relationship between knowledge and anxiety. This indicates that good knowledge is capital for pregnant women to protect themselves against COVID-19 transmission.[27]

In testing the hypothesis, it was found that Coping Mechanisms and Knowledge were significant in influencing Anxiety Levels. Good knowledge about Covid 19 allows pregnant women to know and understand what to do during the covid pandemic. With sufficient knowledge, the coping mechanisms of pregnant women can be more adaptive, so that anxiety and worry during a pandemic can be overcome. A person can overcome anxiety by mobilizing coping resources in the environment by using social problem-solving skills and cultural beliefs.

4. Conclusion

This study has discovered that during the Covid-19 pandemic, the majority of pregnant women had symptoms of anxiety, and most of them exhibit adaptive coping mechanisms, along with mostly sufficient knowledge about Covid-19. Coping mechanisms and knowledge are two of many factors that can affect the level of anxiety of pregnant women during the Covid-19 pandemic in Banjarbaru City and Banjar Regency, South Kalimantan, Indonesia. Healthcare institutions need to identify sources of concern and

anxiety for pregnant women, the impact of stressful events on physical and mental health, and provide education so that mothers have good coping mechanisms during pregnancy and crisis situations due to disease outbreaks.

Acknowledgment

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