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Relationship between Anxiety Levels and Prevention Attitudes Toward COVID-19 Transmission Among Pregnant Women

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Abstract

Backgrounds: Pregnant women are classified in a group that is vulnerable to the transmission of COVID-19 infection. Anxiety of pregnant women during COVID-19 pandemic can hinder pregnancy plans and increase anxiety of pregnant women. The anxiety of pregnant women could lead them to have a positive healthy attitude, namely by following the health protocols implemented by the government.

Aim: This study is aimed to determine the relationship between anxiety levels and prevention attitudes toward COVID-19 transmission among pregnant women.

Methodology: This type of research is quantitative analytic with a cross sectional approach using the HARS anxiety questionnaire to determine the anxiety levels of pregnant women and prevention attitude questionnaire toward COVID-19. Research was carried out at Sri Wartini Community Medical Center in Bogor City with a sample of 40 pregnant women. The sampling technique used was total sampling. The data analysis technique used statistical test with chi-square test.

Results: Among 40 participants, 24 (60%) participants had positive prevention attitudes toward COVID-19 and 16 (40%) participants had negative prevention attitudes toward COVID-19 transmission, whereas 15 (37.5%) participants had mild anxiety and positive prevention attitudes toward COVID-19 transmission. The p-value of this research was 0.000.

Conclusion: There was significant relationship between anxiety levels and prevention attitudes toward COVID-19 transmission among pregnant women.

Keywords: Anxiety levels, COVID-19, Pregnant women, Prevention attitude, Transmission

Introduction

According to WHO (2020), COVID-19 is an infectious disease caused by the newly discovered Corona Virus.[1]

In Indonesia, COVID-19 caused many people to feel more anxious being contracted with the disease. COVID-19 cases in Indonesia as of August 8, 2021 have reached 3,666,031 people with 107,096 people were declared dead due to exposure to this virus

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while 3,084,702 people were declared cured from the disease.[2]

According to WHO, pregnant women and fetuses are included in the population at high risk during outbreaks of infectious diseases.[3]

Indonesian Association for Obstetrics and Gynecology recorded that there were 536 pregnant women confirmed to be exposed to COVID-19 and about 3% of that number were declared dead during April 2020 to April 2021.[4] Based on data from the Bogor City Health Department, throughout 2020 there were 64 pregnant women who were confirmed to have been exposed to COVID-19, 13 newly give birth mothers and 4 breastfeeding mothers were exposed to COVID-19.[5]

Pregnant women are one of the groups that are susceptible to health problems, especially infectious diseases due to changes in body physiology and immune response mechanisms in their bodies.[6] According to data from the Indonesian Association for Obstetrics and Gynecology, 13.7% of pregnant women were more easily infected with COVID-19, compared to those who are not pregnant. Pregnant women who were aware of this fact experienced their anxiety level increasing and eventually the pregnancy plans got hindered as well.[4,7]

Methodology

The type of research used was *analytical quantitative* with a cross sectional approach.[9] The number of samples were 40 participants with inclusion criteria, namely pregnant women who had Ante Natal Check-ups (ANC) at Sri Wartini Community Health Center of Bogor City and willing to be a participant. The exclusion criteria were pregnant women who did not have Ante Natal Check-ups (ANC) and those who were not willing to be participants. Coding is carried out starting from participants 1 to 40. The sampling technique used was total sampling with chi square test.

After obtaining research permit to conduct the study from the Sri Wartini Community Health Center, the researchers met the participants to get their consents and explain the instruments used in the study. The types of data collected in this study were primary data through questionnaires and secondary data through records of pregnant women's visits to determine the number of pregnant women who underwent examinations at Sri Wartini Community Health Center.

The questionnaire included personal identity, anxiety questionnaire from the HARS (Hamilton Anxiety Rating Scale) and COVID-19 prevention attitude questionnaire with 10 statements that have been tested for validity and reliability.[10] Nominal data scale for COVID-19 prevention attitudes adapted Likert scales:

Positive statements:

- Strongly Disagree (score 1)
- Undecided (score 2)
- Agree (score 3),
- Strongly Agree (score 4).

Negative statements:

- Strongly Disagree (score 4)
- Undecided (score 3)
- Agree (score 2),
- Strongly Agree (score 1).

The scores were categorized as follows:

1. Positive attitude: if the value of T-score > mean (25,4).
2. Negative attitude, if the value of T-score < mean (25,4).

Results

Data collection was carried out on 18 May - 14 June 2022. Most participants aged less than 30 years old with a total of 24 participants (60%) and most participants worked as housewives with a total of 28 participants (70%).

Table 1. Frequency Distribution of Anxiety Levels in Pregnant Women

Anxiety Level	Frequency	Percentage (%)
No anxiety	7	17.5
Mild anxiety	18	45
Moderate anxiety	12	30
Severe anxiety	3	7.5
Total	40	100

Based on table 1, most of the participants had mild level of anxiety, with a total of 18 participants (45%), while severe anxiety was found in 3 participants (7.5%).

Table 2. Frequency Distribution of Prevention Attitudes toward COVID-19 Transmission in Pregnant Women

Attitude	Frequency	Percentage (%)
Positive	24	60
Negative	16	40
Total	40	100

Table 2. showed that 24 participants (60%) showed positive prevention attitude toward COVID-19 transmission and 16 participants (40%) showed negative prevention attitude toward COVID-19 transmission.

Table 3. The Relationship between Anxiety Levels and Prevention Attitudes Toward COVID-19 Transmission Among Pregnant Women

Anxiety Level	Attitude				Total		P- value
	Positive		Negative				
	F	%	F	%	F	%	
No Anxiety	7	17.5	0	0	7	17.5	0.000
Mild Anxiety	15	37.5	3	7.5	18	45.0	
Moderate Anxiety	1	2.5	11	27.5	12	30.0	
Heavy Anxiety	1	2.5	2	5	3	7.5	
	24	60	16	40	40	100	

Based on table 3, out of 40 participants, there were 15 (37.5%) pregnant women with mild anxiety levels and positive prevention attitude toward COVID-19 transmission and 11 participants (27.5%) had moderate anxiety and negative prevention attitude toward COVID-19 transmission.

Statistical data used the Chi-square analysis test with p-value of 0.000. The result indicated there was a significant relationship between anxiety levels and prevention attitude toward COVID-19 transmission among pregnant women at Sri Wartini Community Health Center of Bogor City.

Discussion

a. Anxiety Levels of COVID-19 Transmission in Pregnant Women

Based on the results of the frequency distribution table 1, it can be depicted that out of 40 participants, 18 participants (45%) had mild anxiety level and 3 participants (7.5%) were found with severe anxiety level.

This finding is in line with research conducted by Citra Dewi Ayu, et al. (2021) regarding anxiety in pregnant women during the COVID-19 pandemic at Ibnu Sutowo Baturaja Hospital, with the result of majority of participants (29.7%) experienced mild anxiety level. [11]

In general, there are two factors that influence anxiety level in pregnant women, namely internal factors and external factors. Internal factors are divided into two types: beliefs about childbirth and feelings before childbirth.[12] In addition to internal factors, external factors are also divided into two types: information from health workers and husband's support.[13]

Belief in internal factors is a response to believe or not believe from pregnant women about stories or myths heard from other people or developing in the area where they live. Meanwhile, the feeling before delivery is related to the feeling of fear or not being afraid of the mother before delivery.[14] Information from health workers is an important external factor for pregnant women because the information obtained can affect the level of anxiety of pregnant women in facing childbirth. The complete information obtained regarding further conditions regarding her pregnancy, including the presence of

comorbidities in pregnancy, makes pregnant women more prepared for all the possibilities that will occur during childbirth. Thus, pregnant mothers will not be burdened with feelings of fear and anxiety. In addition, information from health workers and husband's support play an important external factor for pregnant women.[15] Meanwhile, there are also biological factors and psychological factors that affect anxiety in pregnant women. Biological factors include health and strength during pregnancy as well as smooth delivery of the baby. Psychological factors such as mental readiness of pregnant women to give birth, which includes various feelings of anxiety, tension, happiness, as well as problems such as miscarriage, appearance and ability to give birth.[16]

Psychosocial changes that occur in pregnancy are a response to the physiological disturbances that occur and the increased responsibility associated with the presence of new individuals who have not been able to be independent. A person may begin to feel afraid of the pain and physical harm that comes with giving birth.[17]

Mild anxiety related to tension about daily life events. Mild anxiety symptoms can be identified as occasional shortness of breath, increased pulse and blood pressure, mild gastric symptoms, facial wrinkles and tremors, ringing in the ears, increased alertness, expanded perceptual field, difficulty concentrating on problems effectively, unable to sit still and hand tremors. Pregnant women who experience mild anxiety related to tension in daily life could experience unexpected changes in the field of perception.[18]

b. Prevention Attitude of COVID-19 Transmission Among Pregnant Women

Based on the results of the frequency distribution table for the transmission of COVID-19 in pregnant women at Sri Wartini Community Health Center, most of the participants had positive attitude with a total of 24 (60%) participants.

This is in accordance with the research of Cesar Cuadra et al. (2021), which stated that almost all of the participants had carried out health management very well in preventing COVID-19 among pregnant women. Pregnant women are very aware of the severe risks as a result of COVID-19 and this make them to be very compliant to follow the health protocols and have a positive attitude toward preventing COVID-19 transmission. Pregnant women are worried that contracting COVID-19 will have bad impacts on their babies.[19]

The results in this study showed that there were more pregnant women who had positive attitude toward COVID-19 prevention than the ones with negative attitude. This condition was influenced by the level of education and broad knowledge regarding COVID-19 transmission. If there is pregnant woman who showed a negative prevention attitude toward COVID-19 transmission, this could happen due to a lack of support from the surrounding community and family or lack of self-awareness.

Characteristics of participants in the form of education level are factors that influence the attitude of pregnant women in maintaining health related to COVID-19 prevention. Based on the results of the study, the education of the most participants were Higher Education, with a total of 26 participants (54%). A person's level of education can affect the quality of her life, including how to prevent COVID-19 transmission. One of the goals of education is to change human behavior, which is in line with changes in knowledge and attitudes.

c. The Relationship between Anxiety Levels and Prevention Attitude toward COVID-19 Transmission in Pregnant Women

Based on table 3, the Chi-square test showed that the value with the results of Asymptotic Significance (2-sided) 0.000 < = 0.05. Thus, it can be concluded that there was a significant relationship between the anxiety levels and prevention attitude toward COVID-19 transmission among pregnant women.

This research is in accordance with research conducted by Ding et.al (2021). The research examined 74 participants with 18 pregnant women had negative attitudes toward COVID-19 prevention.[20]leading to adverse health outcomes for mothers and children. The study aimed to evaluate the sociodemographic characteristics, knowledge, attitudes, and practices (KAP Chidebe et.al (2021) stated that negative attitudes occur due to lack of

support from the surrounding community and family, or lack of awareness of the individual himself so that it affects behavior in daily life.[21]attitude, and degree of anxiety towards COVID-19 and its predictors among pregnant women in Ebonyi State, Nigeria. Materials and Methods: This cross-sectional study was conducted between April and July 2020 on 460 pregnant women randomly selected from three hospitals in the state. Data was collected using a structured questionnaire and a Coronavirus Anxiety Scale. Data were analyzed using IBM SPSS version 20 and were represented using a frequency table, percentages, and odds ratios. Results: The mean gestational age and maternal age of the respondents were 33.5 (95% CI 31.9-35.2

Anxiety of pregnant women during the COVID-19 pandemic can hamper pregnancy plans and increase the anxiety of most pregnant women. They often question the impact of COVID-19 virus on the birth of a baby. To avoid exposure to COVID-19, it is necessary to take important precaution steps in order to stop the transmission of the virus.[20]leading to adverse health outcomes for mothers and children. The study aimed to evaluate the sociodemographic characteristics, knowledge, attitudes, and practices (KAP Early detection of anxiety in pregnant women is very crucial step in preventing COVID-19 transmission. Anxiety during pregnancy must be handled properly so that the immune system of the mother and baby remains strong, especially in avoiding the transmission of COVID-19 disease. However, anxiety can also have a positive impact on the level of alertness of pregnant women in preventing the transmission of COVID-19. By having positive anxiety, pregnant women can be more motivated to follow applicable health protocols and reduce risk factors for COVID-19 transmission.

Conclusion

There was a significant relationship between anxiety levels and prevention attitudes toward COVID-19 transmission among pregnant women at Sri Wartini Community Health Center of Bogor City.

Ethical Clearance: No ethical clearance was required.

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Conflicts of Interest: There was no conflict of interest in the research.

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