

Journal of Maternal and Child Health

Vitamin D Status in Pregnant Women with Hypertension in Madura: A Case Control Study
Dini Setiarsih, Pramudji Hastuti, Detty Siti Nurdianti, Lidia Aditama Putri

Meta-Analysis: Are Acupressure and Birthing Ball Exercise Associated with Labor Pain?
Susiana Yuni Astuti, Uki Retno Budihastuti, Hanung Prasetya

Risk of Premature Birth in Pregnant Women Infected with COVID-19: A Meta Analysis
Ratih Hermas Purnasari, Yulia Lanti Retno Dewi, Bhisma Murti

The Effect of Maternal Anemia on Low Birth Weight: A Systematic Review And Meta Analysis
Fara Khansa Azizah, Yulia Lanti Retno Dewi, Bhisma Murti

The Effect of Traditional Games (Congklak) on Cognitive and Fine Motor Development in Children Under Five
Rukmini

Meta-Analysis the Effect of Sensory Integration Therapy on Sensoric and Motoric Development in Children with Autism Spectrum Disorder
Ayu Fitriyaningsih, Yulia Lanti Retno Dewi, Rita Benya Adriani

Meta-Analysis the Effect of Baby Massage in Increasing Quality of Sleep and Infant Body Weight
Raina Lola Fauzia, Uki Retno Budihastuti, Rita Benya Adriani

Association Between Food Plastic Packaging and Dysmenorrhea in Female Adolescents
Dhini Safira Maghrifi, Pudji Lestari, Ashon Sa'adi

Feeding Practice with Preventing Stunting on Keluarga Harapan Program Recipients in Pangkajene and Islands Districts
Mardhatillah, Zulkarnain Sulaiman, Khaeriyah Adri, Devy Febrianti, Sunandar

Anxiety and It's Relationship with Adherence to Visit Antenatal Care in Pregnant Women
Siti Zaimatul Ainun, Gadis Meinar Sari, Endyka Erye Frety

Correlation between Parenting Style during the COVID-19 Pandemic and Personal Social Development of Preschool Children (3-6 Years)
Rahmaini Fitri Harahap, Marito Manullang, Nurul Hajah Butar-Butar, Nurfida

Correlation between Antenatal Care and Anxiety in Primigravida Pregnant Women at Glagah Community Health Center
Hawa Nur Salsabila, Sulistiawati, Ratna Dwi Jayanti

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Table of Contents

Articles

<u>Vitamin D Status in Madura Pregnant Women with Hypertension: A Case Control Study</u>	<u>PDF</u>
Dini Setiarsih, Pramudji Hastuti, Detty Siti Nurdiati, Lidia Aditama Putri	Page: 1-8 Viewed: 284
<u>Meta-Analysis: Are Acupressure and Birthing Ball Exercise Associated with Labor Pain?</u>	<u>PDF</u>
Susiana Yuni Astuti, Uki Retno Budihastuti, Hanung Prasetya	Page: 9-21 Viewed: 275
<u>Risk of Premature Birth in Pregnant Women Infected with COVID-19: A Meta Analysis</u>	<u>PDF</u>
Ratih Hermas Purnasari, Yulia Lanti Retno Dewi, Bhisma Murti	Page: 22-33 Viewed: 411
<u>The Effect of Maternal Anemia on Low Birth Weight: A Systematic Review And Meta Analysis</u>	<u>PDF</u>
Fara Khansa Azizah, Yulia Lanti Retno Dewi, Bhisma Murti	Page: 34-43 Viewed: 352
<u>The Effect of Traditional Games (Congklak) on Cognitive and Fine Motor Development in Children Under Five</u>	<u>PDF</u>
Rukmini Rukmini	Page: 44-51 Viewed: 230
<u>Meta-Analysis the Effect of Sensory Integration Therapy on Sensoric and Motoric Development in Children with Autism Spectrum Disorder</u>	<u>PDF</u>
Ayu Fitriyaningsih, Yulia Lanti Retno Dewi, Rita Benya Adriani	Page: 52-63 Viewed: 413
<u>Meta-Analysis the Effect of Baby Massage in Increasing Quality of Sleep and Infant Body Weight</u>	<u>PDF</u>
Raina Lola Fauzia, Uki Retno Budihastuti, Rita Benya Adriani	Page: 64-74 Viewed: 1178
<u>Association Between Food Plastic Packaging and Dysmenorrhea in Female Adolescents</u>	<u>PDF</u>
Dhini Safira Maghrifi, Pudji Lestari, Ashon Sa'adi	Page: 75-81 Viewed: 259
<u>Feeding Practice with Preventing Stunting on Keluarga Harapan Program Recipients in Pangkajene and Islands Districts</u>	<u>PDF</u>
Mardhatillah Mardhatillah, Zulkarnain Sulaiman, Devy Febrianti, Khaeriyah Adri, Sunandar Said	Page: 82-89 Viewed: 246
<u>Correlation Between Parenting Styles During The COVID-19 Pandemic with The Level of Personal Social Development of Preschool Children (3-6 Years)</u>	<u>PDF</u>
Rahmaini Fitri Harahap, Marito Manullang, Nurul Hajah Butar-Butar, Nurfida Nurfida	Page: 100-109 Viewed: 248
<u>Anxiety and It's Relationship with Adherence to Visit Antenatal Care in Pregnant Women</u>	<u>PDF</u>
Siti Zaimatul Ainun, Gadis Meinar Sari , Endyka Erye Frety	Page: 90-99 Viewed: 244
<u>Correlation between Antenatal Care and Anxiety in Primigravida Pregnant Women at Glagah Community Health Center</u>	<u>PDF</u>
Hawa Nur Salsabila, Sulistiawati Sulistiawati, Ratna Dwi Jayanti	Page: 110-116 Viewed: 262

Anxiety and It's Relationship with Adherence to Visit Antenatal Care in Pregnant Women

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ABSTRACT

Background: Pregnant women were listed as one of the vulnerable groups at risk of being infected with COVID-19 due to physiological changes during pregnancy that result in a decrease in partial immunity. Anxiety experienced by pregnant women causes low compliance in conducting pregnancy tests. This study aims to determine the relationship between anxiety levels and antenatal care compliance in third trimester pregnant women.

Subjects and Method: This study used a correlation analytic design with a cross sectional approach. The population in this study were all third trimester pregnant women in Kebonrejo Hasmlat, Kebonrejo Village, Grati District, Pasuruan Regency in November 2021 as many as 37 people. The sampling technique in this research was total sampling. The research instrument used a questionnaire and MCH handbook. Data analysis using Chi-square test.

Results: from 37 subjekts, almost all of them experienced mild anxiety, namely 29 subjekts (78.4%), and most of them did not comply with ANC, namely 25 subjects (67.6%). The chi-square test show that there is a relationship between anxiety levels and ANC compliance in third trimester pregnant women during the COVID-19 pandemic ($p < 0.001$).

Conclusion: Anxiety levels was associated with ANC compliance in third trimester pregnant women during the COVID-19 pandemic.

Keywords: anxiety, adherence, antenatal care, mental disorder, maternal health.

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BACKGROUND

Coronavirus disease 2019 or also known as COVID-19 is currently a pandemic in almost all countries in the world (Banerjee, 2020). At present, our concerns are increasing regarding the continued spread of the COVID-19 outbreak in some parts of the world and the challenges of suppressing the spread of this epidemic in other parts (ILO, 2020). Severe cases of the disease can lead

to cardiac, and respiratory failure, acute respiratory syndrome, or even death (Holshue et al., 2020). The problem that is currently happening is that there is a lot of information related to COVID-19 (WA/Internet) which is not necessarily all correct, causing various understandings of pregnant women about COVID-19. This causes high levels of anxiety for pregnant women (Nurjasm, 2020).

Pregnant women are listed as one of the vulnerable groups at risk of being infected with COVID-19 because during pregnancy there are physiological changes that result in a partial decrease in immunity (Liang and Acharya, 2020). Anxiety experienced by pregnant women causes low compliance in conducting pregnancy tests (Nurjasmi, 2020). On the other hand, mothers should still get prenatal checkups during the pandemic. ANC guidelines during the pandemic recommend that pregnancy checks be carried out at least 6 times, namely 2 times in the first trimester with 1 visit to a health facility for a full examination, 1 time in the second trimester, and 3 times in the third trimester with 1 visit to a health facility for detection. pregnancy complications/ preparing for delivery referrals if necessary (Nurjasmi, 2020). Difficulties in obtaining access to professional health services from medical personnel may also be a source of concern for pregnant women. Pregnant women also feel uncomfortable because they are worried about being exposed to the corona virus when visiting health care facilities so they don't do ANC (Islami et al., 2021).

Data on ANC services in Indonesia which was conducted randomly in January 2020 (before the pandemic) collected from a sample of pregnant women was 76,878 for K1, and dropped drastically in April 2020 (entering the COVID-19 pandemic) to 59,326, while K6 visits in January 2020 (before the pandemic) collected was 57,166 for K1, and decreased in April 2020 (entering the COVID-19 pandemic) to 50,767 (Nurjasmi, 2020). In a study comparing the prevalence of increased anxiety symptoms, it was found that the general prevalence of anxiety in the US in 2019 was 16%. The percentage of anxiety during pregnancy by meta-analysis reporting the prevalence is 18-25% (Cella et al., 2020). Meanwhile, during the COVID-19 pandemic, there was a signi-

ficant increase in anxiety in pregnant women to 59% based on a cohort study (Wang et al., 2020).

The results of the preliminary study in Kebonrejo Village are that the coverage of K6 is still far below the strategic plan target of 80%, which is 64%. The results of interviews on March 29, 2021 with 5 pregnant women showed that 3 people (60%) said that they only did pregnancy checks less than 6 times until they were 9 months pregnant for various reasons, namely 1 person (20%) for fear of contracting COVID-19, 1 person (20%) is afraid of being ordered to do a rapid and swab test, and 1 person (20%) is afraid of being diagnosed with COVID-19, while 2 people (40%) continue to visit at least 6 times, even routinely every month because they feel that they have to know health conditions of self and fetus so that pregnancy is maintained properly even during the COVID-19 pandemic.

Women who are pregnant are a group that is vulnerable to psychological disorders, including anxiety disorders. The existence of a pandemic like this can be a risk factor that influences the occurrence of increased anxiety in pregnant women (Bender et al., 2020). Anxiety of pregnant women has increased because of the consequences of worries about the COVID-19 pandemic. Anxiety in pregnant women is also caused by fears of not getting adequate prenatal care during a pandemic which can trigger various other symptoms and diseases (Lebel et al., 2020).

Many negative impacts are caused by the anxiety experienced by the mother during pregnancy and childbirth, including the restless fetus to stunted growth, as well as weakening uterine muscle contractions. These impacts will be harmful to the mother and fetus. A study in Indonesia showed that the majority of babies born prematurely or miscarriages were experienced by pregnant

women with high levels of anxiety (Jayanti & Mayasari, 2020). Pregnant women who do not perform prenatal care cannot know whether their pregnancy is going well or are experiencing high risk conditions and obstetric complications that can endanger the life of the mother or fetus (Saifuddin, 2014).

Efforts to reduce high anxiety in pregnant women can be realized through health education. Through the FCMC (Family Centered Maternity Care) approach, the role of the family is recognized and its involvement is valued, families are encouraged to recognize and build on their strengths, and enable families to make the best decisions in the care of pregnant women by creating a normal lifestyle. FCMC respects the diversity of family structures, cultural backgrounds, choices, strengths, weaknesses and family needs. The implementation of FCMC makes families more independent and confident in taking care of pregnant women (Jayanti & Mayasari, 2020). Many efforts have been suggested and developed so that pregnant women can still conduct consultations regarding their pregnancy, such as drive throughs or via telephone and video conferencing. This is to reduce the risk of transmitting the virus to pregnant women (Turrentine et al., 2020). Based on this background, the authors are interested in examining the relationship between anxiety levels and ANC compliance in third trimester pregnant women during the COVID-19 pandemic.

SUBJECTS AND METHOD

1. Study Design

This study used an analytical observational design. The research was conducted in Kebonrejo Village, Grati District, Pasuruan Regency.

2. Population and Sample

The population in this study were all third trimester pregnant women in Kebonrejo Hamlet, Kebonrejo Village, Grati District,

Pasuruan Regency in November 2021 as many as 37 subjects. The sampling technique in this study was total sampling, namely all third trimester pregnant women in Kebonrejo Hamlet, Grati District, Pasuruan Regency. This research was conducted on November 14-13 December 2021.

3. Study Variables

The dependent variable was ANC compliance. The independent variable was anxiety.

4. Operational Definition of Variables

Anxiety level is a feeling of discomfort or fear or may have a premonition of calamity even though he does not understand why these threatening emotions occur, especially regarding the COVID-19 pandemic with indicators of feelings of anxiety, fear, tension, feelings of depression, sleep disturbances, intelligence disorders, somatic symptoms, respiratory symptoms, and cardiovascular symptoms.

ANC compliance is the behavior of pregnant women carrying out pregnancy checks in accordance with the provisions given by health professionals with indicators of the number of ANC visits each trimester with the provisions of TM I: minimum 2 times with 1 visit Health facilities, TM II: minimum 1 time, TM III: minimum 3 times with 1 visit Health facilities

5. Study Instruments

The measuring instrument is using the HARS scale with no anxiety categories: Less 14, Mild anxiety: 14-20, Moderate anxiety: 21-27, Severe Anxiety: 28-41, Panic anxiety: 42-56. ANC compliance measured by maternal and child health book monitoring.

6. Data analysis

Data analysis was carried out using univariate analysis with frequency and percentage distributions. Bivariate analysis using Chi-square.

7. Research Ethics

This research was conducted using ethics in

the form of informed consent, anonymity, and confidentiality which were carried out carefully during the research. This research has received a letter of ethics from the Faculty of Medicine, Airlangga University, Surabaya Indonesia with the number 1330/UN3. 1.1/DL.11.2021.

28 subjects (75.7%), most of them were not working, namely 26 subjects (70.3%), Most of the income is equal to or above the minimum wage, namely 26 subjects (70.3%), almost all are pregnant with their second-fourth child, namely 31 subjects (83.8%), almost half have 2-4 children, namely 18 subjects (48.6%), almost all have birth spacing with the smallest child > 3 years, namely 29 subjects (78.4%), and almost half of them had a home distance from health facilities < 1 km, namely 18 subjects (48.6%).

RESULTS

1. Subjects Characteristics

Based on Table 1, it can be seen that from 37 subjects, almost all of them were 26-35 years old, namely 31 subjects (83.8%), most of them had high school education, namely

Table 1 Characteristics of Study Subjects

Characteristics	Criteria	F	%
Age	17-25 years	6	16.2
	26-35 years	31	83.8
	36-45 years	0	0
	PS	0	0
Education	JHS	7	18.9
	SHS	28	75.7
	College	2	5.4
Occupation	Working	11	29.7
	Not working	26	70.3
	Under minimal wage	11	29.7
Income	Equivalent or above the minimum wage	26	70.3
	1	6	16.2
Pregnancy number	2-4	31	83.8
	> 4	0	0
	No child before	6	16.2
Number of children	1	13	35.1
	2-4	18	48.6
	> 4	0	0
Birth Distance with the Smallest Child	0	6	16.2
	< 1 years old	0	0
	1-3 years old	2	5.4
Distance from home to health facilities	> 3 years old	29	78.4
	< 1 km	18	48.6
	1-2 km	16	43.2
	> 2 km	3	8.1

Table 2. Characteristics of Anxiety and ANC Compliance in Third Trimester Pregnant Women

Variable	Criteria	Frequency (n)	Percentage (%)
Anxiety Level	No anxiety	6	16.2
	Mild anxiety	29	78.4
	Moderate anxiety	2	5.4
	Severe anxiety	0	0
	Panic	0	0
ANC Compliance	Obey	12	32.4
	Not obey	25	67.6

Based on table 2, it can be seen that from 37 subjects, almost all of them experienced mild anxiety, namely 29 subjects (78.4%), and most of them did not comply with ANC, namely 25 subjects (67.6%).

2. Bivariate Analysis

Based on the table above, it is known that all subjects who did not experience compliance anxiety in performing ANC were 6 of 6 subjects (100%), almost all subjects who

experienced mild anxiety did not comply with ANC, namely 23 of 29 subjects (79.3%), and all subjects who experience anxiety are not obedient in doing ANC, namely 2 of 2 subjects (100%).

The chi-square test show that there is a relationship between anxiety levels and ANC compliance in third trimester pregnant women during the COVID-19 pandemic (p<0.001).

Table 3. Cross Table of the Relationship between Anxiety Levels and Antenatal Care Compliance in Third Trimester Pregnant Women During the COVID-19

Level of anxiety	ANC Compliance		p
	Not Obey	Obey	
No anxiety	0	6	<0.001
Mild anxiety	23	6	
Moderate anxiety	2	0	

DISCUSSION

1. Anxiety Levels in Pregnant Women

Based on the results of the study, it is known that almost all third trimester pregnant women experience mild anxiety during this COVID-19 pandemic. There are a small number of mothers who experience moderate anxiety, and there are also mothers who do not experience anxiety.

There are several factors that can cause anxiety, namely age and education factors, as well as other factors such as predisposing factors which include traumatic events that can trigger anxiety, emotional conflicts experienced by individuals, disturbed self-concept, frustration, physical disorders, patterns of family coping mechanisms,

family history of anxiety. Anxiety disorders in the family, medication, and precipitating factors include threats to physical integrity, tensions that threaten physical integrity, threats to self-esteem (Suliswati et al., 2015). Anxiety experienced can occur because the information obtained is excessive or negative things such as cases of transmission and death are increasing. In the context of this pandemic, anxiety arises because pregnant women perceive the corona virus as a threat to their health. Anxiety comes because of fear of being infected with the corona virus which is increasingly infecting people and increasing deaths (Supriyadi & Setyorini, 2020).

Based on the results of the study, the

subject's level of anxiety was mild. This is caused by several factors such as age, education, and traumatic events, in this case a history of chronic disease and the environment in which COVID-19 patients are present. Symptoms of anxiety were not felt by the subject because at the time the study was conducted, the number of COVID-19 in Pasuruan was experiencing a significant decline so that the subject felt that COVID-19 was not as scary as when he first entered Indonesia. Subjects who experience moderate anxiety can be caused by consuming too much news about COVID-19 which makes the subject afraid.

The first factor that causes mild anxiety is the age factor where table 1 shows that almost the subjects are 26-35 years old. The older a person is, the more constructive they are in using coping with problems, it will greatly affect their self-concept. Age is seen as a condition that forms the basis of a person's maturity and development (Long, 2014). Mild anxiety can occur in all age groups, which means mild anxiety does not depend on age, subjects who have good coping mechanisms will not feel severe symptoms of anxiety, but still feel symptoms of anxiety even though they are mild because after all, at that time their family members was sick and needed treatment so he definitely wanted his family to be treated quickly. At this age a person should already have mature thoughts and be able to maintain emotions compared to older people, but COVID-19 attacks anyone regardless of age, so without good knowledge about COVID-19, the subject will still feel symptoms of anxiety. Both psychologically and somatically.

The second factor that causes mild anxiety is education where in table 1 it's known that most of the subjects have high school education. In addition to the age factor, education also affects a person's level of anxiety. The higher a person's education, the

easier it is to receive information, so the more knowledge they have. So, it can be assumed that the education factor greatly influences a person's level of anxiety about new things that have never been felt or greatly affect a person's behavior towards his health (Nursalam, 2015). Higher education makes it easier for subjects to manage stressors that make them anxious, they tend to have ways of diverting anxiety so they don't panic, subjects with secondary and primary education can also experience mild anxiety if they have good coping mechanisms.

2. Compliance of Pregnant Women in Performing ANC during the COVID-19 Pandemic

Based on the results of the study, most of the third trimester pregnant women were not compliant in performing ANC during the COVID-19 pandemic. This non-compliance is in the form of not making visits to health facilities in the first and third trimesters, and performing ANC less than 6 times during pregnancy.

The factors that influence pregnant women to perform antenatal care are age, education, occupation, parity, knowledge, family support and reach to health care facilities (Rohan & Siyoto, 2013). Antenatal visits are also influenced by the availability of health facilities (access/reach, adequate facilities/infrastructure and level of hygiene), the presence of pregnant women who move health facilities for certain reasons (change of domicile) and the role of cadres and health workers in providing services (Bobak et al., 2015).

Subjects who are obedient in carrying out ANC are caused because the mother understands the importance of ANC for the welfare of the mother and fetus so that pregnancy is always healthy and monitored and avoids complications, so the mother diligently checks with the midwife every month. In the first and third trimesters,

mothers also visit health facilities on the recommendation of the midwife because the midwife's main task is to provide the best possible ANC service, however, the recommendation from the Indonesian Ministry of Health to carry out examinations at health facilities requires midwives to remain professional in carrying out their duties. Non-compliance with ANC is caused because pregnant women only make visits to midwives because they feel that the main ANC is carried out at midwives, and there is no need to visit specialist health facilities for obstetrics and gynecology, however, the recommendation from the ministry of health is to still visit health facilities during pregnancy, especially during pregnancy. first and third trimesters. This can be caused because the subject feels that there are no serious complaints. Mothers prefer to perform ANC many times to a midwife or health center at a lower cost but can still monitor the condition of her pregnancy on a regular basis. This causes the subject to be categorized as disobedient.

Based on table 1, it is known that almost all subjects ranged from 26-35 years. With the increasing age of a person, the maturity in thinking is getting better so that they are motivated in getting a pregnancy check, also knowing the importance. In the period of healthy reproduction, it is known that the safe age for pregnancy and childbirth is 20-30 years. Maternal mortality in pregnant women and giving birth at the age of under 20 years is 2-5 times higher than maternal deaths that occur at the age of 20-29 years. Maternal mortality increases again after the age of 30-35 years (Wiknjosastro, 2014). Maternal age does not affect maternal compliance in carrying out ANC because pregnant women who are not obedient or obedient are not in a certain age range, so that anyone can comply or not comply in performing ANC.

Based on table 1, it is known that most of the pregnant women have high school education. In general, the higher a person's education, the better the level of knowledge. The process of changing behavior towards maturity and improving life, thus education has a very large influence on the behavior of highly educated people who differ in their behavior with people with only basic education. Educated women are more open to new ideas and changes to get proportional health services because they are fully aware of the benefits of health services (Notoatmodjo, 2016). The mother's education which is classified as middle class makes her less understanding about what good ANC looks like, because the mother is still based on the midwife's recommendation to return to control according to what is written in the MCH Handbook, and if there are no serious complaints, the subject does not perform ANC to Obstetrics and Gynecology Specialist Health Facilities.

Based on table 1, it is known that the income of the subjects is mostly equal to or above the UMK. Adequate family income supports good and awareness to check, because it can provide all their needs, both primary and secondary (Soetjningsih, 2016). Mothers who are pregnant for the first time are very new things so they are motivated to have their pregnancy checked by health workers. On the other hand, mothers who have given birth to more than one person have the assumption that they have experience so they are not motivated to have their pregnancy checked (Wiknjosastro, 2014). Although most of the pregnant women whose families have incomes equal to or above the UMK, it does not mean that pregnant women will obey in conducting ANC visits, especially visits to health facilities. However, the subject can still perform ANC at the midwife regularly according to K4 instead of K6 at the midwife.

Based on table 1, almost all subjects are pregnant with their second-fourth child, almost half of them already have 2-4 children, and almost all subjects have birth spacing with the smallest child >3 years. Mothers who are pregnant for the first time are very new things so they are motivated to have their pregnancy checked by health workers. On the other hand, mothers who have given birth to more than one person have the assumption that they have experience so they are not motivated to have their pregnancy checked (Prawirohardjo, 2014). Experience does not always make mothers more obedient in carrying out ANC, on the contrary, mothers who have experience with pregnancy will tend to be more disobedient because they already understand what to do if there are complaints during pregnancy without always having to go to health workers.

Based on table 1, it is known that almost half of the subjects have a distance from home to health facilities < 1 km. The low antenatal visit is also influenced by the distance between users and health care facilities, the longer the distance between users and health care facilities, causing pregnant women to be reluctant to perform ANC (Jannah, 2017). According to the researcher, the close distance makes it easier for the subject to reach health facilities to perform ANC checks, mothers who live close to each other but are not obedient in performing ANC can be caused by a lack of support from their families, mostly because there is no one to accompany them, while subjects who are far away Her house is far away but she is still obedient in doing ANC because of the support from a good family, the mother also understands the importance of ANC in accordance with the recommendations of health workers so that she remains obedient in doing ANC even though she is far from where she lives. Currently, there are also many vehicles that can be used to reach the

Midwife's house or Puskesmas, so that long distances are not an obstacle to ANC.

3. The Relationship between Anxiety Levels and ANC Compliance during the COVID-19 Pandemic

Based on the results of the study, it was found that the results of the Spearman Rho test showed a strong relationship between anxiety levels and ANC compliance in third trimester pregnant women during the COVID-19 pandemic.

Women who are pregnant are a group that is vulnerable to psychological disorders, including anxiety disorders. The existence of a pandemic like this can be a risk factor that influences the occurrence of increased anxiety in pregnant women (Bender et al., 2020). Anxiety of pregnant women has increased because of the consequences of worries about the COVID-19 pandemic. Anxiety in pregnant women is also caused by fears of not getting adequate prenatal care during a pandemic which can trigger various other symptoms and diseases (Lebel et al., 2020). But on the other hand, mothers must still get pregnancy checks during the pandemic. Pregnancy also requires increased medical check-ups which have made it difficult to obtain facilities during the pandemic. Difficulties in obtaining access to professional health services from medical personnel may also be a source of concern for pregnant women. Pregnant women also feel uncomfortable because they are worried about being exposed to the corona virus when visiting health care facilities so they don't do ANC (Islami et al., 2021).

Mothers who do not experience anxiety are obedient in performing ANC. This is because mothers are more concerned with the health condition of their babies so they want to always monitor the situation. Mother also understands that it is also important to have an examination at a health facility, even if you do not experience severe

complaints, but it is important to monitor the condition of the fetus. Mother feels that by implementing the health protocol, she will be more protected, especially when research is being carried out, the incidence of COVID-19 has decreased and vaccines have begun to be available for the community during early pregnancy until the third trimester. Most mothers do feel worried during the first trimester of pregnancy because the incidence of COVID-19 is still very high, but when the research was conducted, mothers were calmer because the incidence had decreased.

A small proportion of mothers who experience mild anxiety are obedient in performing ANC. Mild anxiety is a natural thing to happen to mothers during this COVID-19 pandemic, however the pandemic is still not over, but mothers still carry out ANC because they feel the need and want to know the health condition of their fetus by carrying out ultrasound examinations at health facilities and regular pregnancy checkups to the midwife.

Pregnant women who experience anxiety are not obedient in performing ANC. This is due to mothers' fears and concerns about the COVID-19 pandemic where mothers who are less able to manage information well will have a mindset that health care facilities have a lot of contact with patients who can transmit COVID-19, which will make mothers even more afraid to visit ANC.

This study concludes that there is a relationship between anxiety and ANC compliance in third trimester pregnant women during the COVID-19 pandemic.

AUTHORS CONTRIBUTIONS

Siti zaimatul Ainun collected the data. Gadis Meinar Sari and Endyka Erye Frety collaborated to analyze the data.

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CONFLICT OF INTEREST

None.

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