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The effect of prenatal class on anxiety to primigravida women on fear of childbirth

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Abstract

Background: Pregnant women in the world have been proven to have problems when facing childbirth, such as experiencing anxiety and efforts are needed to reduce this anxiety. Anxiety in pregnant women must be addressed immediately to prevent adverse effects on the health of the mother and fetus. Pregnant women's classes are one way to increase self-knowledge to reduce anxiety.

Purpose: To determine the effect of prenatal class on anxiety to primigravida women on fear of childbirth.

Method: Quantitative research with pre-experimental pre-test and post-test design, conducted in Gunungwungkal Health Center Work Area in June-August 2024 to pregnant women. Sampling using purposive sampling technique and obtained a sample of 75 participants. Sample inclusion criteria were pregnant women in trimester I-III, first pregnancy, have a smartphone, and are willing to be participants. The independent variable is the class of pregnant women, while the dependent variable is anxiety. Maternal anxiety was measured using the Perinatal Anxiety Screening Scale (PASS) questionnaire and the data analysis used was the Shapiro Wilk test and paired t univariate and bivariate.

Results: Before the prenatal class intervention, most participants experienced severe anxiety, as many as 30 participants (40.0%). However, after attending the prenatal class, anxiety decreased and most participants no longer felt anxious, as many as 47 participants (62.7%) or experienced mild anxiety, as many as 26 participants (34.7%). Based on the normality test, the probability value (p-value) of both tests was 0.001 (<0.05). This shows that all circulating data is not normal, so the Wilcoxon signed rank test was carried out.

Conclusion: There is a significant influence between prenatal classes on the level of anxiety of pregnant women in the first trimester-III of the first pregnancy. Several factors such as age, education level, employment status, and economy or family income also influence the anxiety experienced by pregnant women.

Suggestion: The community, especially pregnant women, can attend mother classes to increase knowledge about pregnancy. Further research can be done using different methods, designs, sample sizes, and locations and exploring other factors that may influence anxiety in pregnant women.

Keywords: Anxiety; Pregnant Women; Prenatal Class; Primigravida.

INTRODUCTION

Anxiety is a bad experience that occurs when the body responds to physiological stimuli. This causes several signs and symptoms such as anxiety or fear (Baroah, Jannah, Windari, & Wardani, 2020; Valsamak, Chrousos, & Mastorakos, 2019). Pregnancy is an important event and an unforgettable

moment in a woman's life, although it is associated with many positive feelings, it can also be one of the most stressful events (Qian, Sun, Yang, Zhou, Wu, & Yu, 2020). Pregnancy can be an emotional crisis for some women, if not handled properly, it can cause maternal and neonatal complications. Many somatic

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and psychological problems, including fear, anxiety, and depression are associated with pregnancy (Hassanzadeh, Abbas-Alizadeh, Meedy, Mohammad-Alizadeh-Charandabi, & Mirghafourvand, 2020).

Anxiety during pregnancy is often felt by pregnant women due to lack of knowledge and support from family, society, and the surrounding environment, coupled with health conditions experienced by the mother which can increase anxiety for herself and her baby. In the early months of pregnancy, feelings of restlessness, anxiety, and stress are often experienced by pregnant women (Fairbrother, Young, Janssen, Antony, & Tucker, 2015). This is a normal condition and cannot be avoided because it is caused by physical and psychological conditions that change greatly during pregnancy (Siallagan & Lestari, 2018). Fear of losing the attention that has been given to her during pregnancy, anxiety when considering whether her baby will be born normally or not, anxiety due to labor pain, and low self-esteem about preparing to become parents are some of the anxieties experienced by pregnant women (Tyastuti & Wahyuningsih, 2016; Staneva, Bogossian, & Wittkowski, 2015).

In reducing the negative impact of anxiety on pregnant women, proper handling is needed (Misri, Abizadeh, Sanders, & Swift, 2015). Prenatal classes are one way to increase self-knowledge to reduce anxiety. The goal is to increase knowledge and skills related to pregnancy, childbirth, postpartum period, and issues related to postpartum family planning programs. In addition, this class also focuses on preventing possible negative impacts, newborn care, and providing physical activity or exercise, such as gymnastics for pregnant women. Prenatal classes can be concluded as a forum for pregnant women to increase knowledge about pregnancy together, discuss, and solve health problems experienced, and share knowledge about maternal and child health which is carried out through comprehensive, structured, and sustainable stages. This prenatal class package includes maternal and child health books, facilitator guides, prenatal class implementation instructions, and flip charts. This package is used by midwives and health workers to facilitate the implementation of classes for pregnant

women (Ministry of Health of the Republic of Indonesia, 2014).

Through participation in face-to-face classes, the main objective of prenatal classes is to improve the knowledge and skills of pregnant women related to aspects of pregnancy, care during pregnancy, the delivery process, postpartum care, newborn care, information on facts and myths, infectious diseases, and administrative processes such as making birth certificates. In addition, this class is expected to have a major impact in preparing pregnant women to face the delivery process (Ministry of Health of the Republic of Indonesia, 2014).

RESEARCH METHOD

This study used a quantitative design with a pre-experimental design, testing was carried out on one group with the pre-test and post-test methods. The study was conducted in the Gunungwungkal Health Center Working Area in June-August 2024 to pregnant women. Sampling used a purposive sampling technique and obtained a research sample of 75 participants.

The sample inclusion criteria were pregnant women in the first-third trimester, first pregnancy, having a smartphone, and willing to participate. The exclusion criteria were mothers who could not read or write, had severe pregnancy complications, and mothers with mental disorders. The independent variable was the class of pregnant women, while the dependent variable was anxiety. Maternal anxiety was measured using the Perinatal Anxiety Screening Scale (PASS) questionnaire consisting of 31 questions with 4 answer choices, 0 = never, 1 = sometimes, 2 = often, and score 3 = always, the anxiety category is divided into 4, namely not anxious (normal) if the score is 0–31, mild if the score is 32–62, moderate if the score is 63–93, and severe if the score is 94–124.

Pregnancy classes are held in 4 face-to-face meetings and use a maternal and child health guidebook. Before participants take part in a series of pregnancy class activities at the first meeting, a pre-test questionnaire is filled out to determine the scale of anxiety, followed by the delivery of material about pregnancy, physiological and psychological changes. After the delivery of the material and questions and answers, pregnancy exercises are carried out. At the

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second meeting, socialization is given regarding nutritious food for pregnant women, several things that pregnant women should not do, pregnancy exercises, and sharing. At the third meeting, pregnant women come to class with their partners and discuss the role of husbands and standby husbands, followed by pregnancy exercises. The last meeting provides counseling about advanced pregnancy, signs of labor, dangers of labor, and preparation for labor while a post-test is carried out to determine the scale of anxiety experienced.

Data analysis conducted to provide an explanation or description of each variable studied was univariate analysis, while to see the relationship between the two variables using bivariate analysis Shapiro Wilk test and paired t. This study has received permission from the Research Ethics Committee of the Faculty of Medicine, Muhammadiyah University of Surakarta with the number: 5246/B.1/KEPK-FKUMS/VII/2024.

RESEARCH RESULTS

Table 1. Distribution of Participant Characteristics (N=75)

Variables	Results
Age (Mean±SD)(Range)(Years)	(26.17±5.383)(19-39)
Age (n/%)	
<20	12/16.0
20-35	52/69.3
>35	11/14.7
Education (n/%)	
Primary School	10/13.3
Junior High School	20/26.7
Senior High School	39/52.0
College	6/8.0
Occupation (n/%)	
Housewife	39/52.0
Entrepreneur	7/9.3
Self-Employed	6/8.0
Employee	10/13.3
Civil Servant	6/8.0
Other	7/9.3
Income (n/%)	
< IDR 1.500.000	23/30.7
IDR 1.500.000-3.000.000	40/53.3
> IDR 3.000.000	12/16.0

Table 1. shows that the majority of participants are aged 20-35 years as many as 52 participants (63.3%). Most of them have a high school education as many as 39 participants (52.0%), most of them work as housewives as many as 39 participants (52.0%), and have an income between IDR 1.500.000-3.000.000 as many as 40 participants (53.3%).

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Table 2. Pre-Post-Test Anxiety Level of Primigravida Mothers (N=75)

Variable	Pre-test	Post-test	p-value
Anxiety (n/%)			
Normal	5/6.6	47/62.6	
Mild	14/18.7	26/34.7	
Moderate	26/34.7	2/2.7	0.001
Severe	30/40.0	0/0	
Standard Deviation	0.926	0.545	

Table 2 shows the frequency distribution of anxiety levels experienced by participants before being given antenatal class intervention, most of whom experienced severe anxiety as many as 30 participants (40.0%). After attending antenatal classes, the anxiety experienced decreased and the majority of participants no longer felt anxiety (normal) as many as 47 participants (62.7%) or experienced mild anxiety as many as 26 participants (34.7%). Based on the normality test, the probability value (p-value) of the two tests was 0.001 (<0.05). This shows that all circulating data is not normal, so the Wilcoxon signed rank test was used to test the hypothesis of this study.

Table 3. Results of the Wilcoxon Signed Rank Test

Variable	p-value
The effect of prenatal classes on anxiety in primigravida pregnant women	0.001

Based on Table 3, the p-value result is 0.001 (<0.05), which means that H1 is accepted and H0 is rejected, so there is a significant influence between prenatal classes on the anxiety levels of primigravida pregnant women in the first-third trimester.

DISCUSSION

The results of this study indicate that the majority of pregnant women are aged 20-35 years, namely 52 participants (69.3%). This is in accordance with the results of previous studies which stated that a good age range for pregnancy is the age range of 20-35 years. At this age range, the condition of the uterus is physically and psychologically more ready for pregnancy, so that the pregnancy process is safer. However, women who become pregnant at the age of 35 years or more are considered high risk because at that age the possibility of congenital abnormalities and complications during pregnancy and childbirth increases (Asmariyah, Novianti, & Suriyati, 2021; Hvidman, Petersen, Larsen, Macklon, Pinborg, & Nyboe Andersen, 2015).

Based on the research results, the average pregnant woman in this study graduated from high school with a frequency of 39 participants (52.0%).

This is in line with previous research which found that the majority of participants were high school graduates, namely 64% (Nurtini, Dewi, & NorianI, 2021). The level of knowledge possessed by pregnant women is very important to minimize maternal and infant mortality rates because knowledge can reflect behavior that tends to be better (Nawabi, Krebs, Venedey, Shukri, Lorenz, & Stock, 2021).

The majority of pregnant women work as housewives, which is 52.0%. This study is directly proportional to the study conducted at the Tragen Health Center, where the majority of participants work as housewives, which is 66.3% (Setiawati, Qomari, & Daniati, 2022). Occupation does not affect the decision of pregnant women to make a check-up visit. Even though pregnant women work, if they have good knowledge, they will still take the time to do check-ups

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and activities that are beneficial for themselves and their babies.

In this study, the average income of participants ranged from IDR 1.500.000-3.000.000 with a frequency of 40 (53.3%). The results of other studies also found that as many as 279 pregnant women (70.3%) were in good socio-economic conditions (Santi, Dewi, & Purnamaningrum, 2023). Economic factors also play an important role in ensuring that the process during pregnancy is in accordance with expectations. Families who have adequate economic conditions can check their pregnancy regularly, plan the delivery process at the right health care facility, and prepare other needs more optimally (Prautami, 2019; Tekelab, Chojenta, Smith, & Loxton, 2019).

In this study, researchers obtained results that the level of anxiety before the intervention was given, most participants experienced anxiety as much as 40.0%. However, after being given the intervention, the level of anxiety decreased to mild (34.7%) and not anxious (normal) (62.7%). Based on previous research, the assessment of anxiety levels in pregnant women showed that before receiving the intervention, most mothers experienced moderate anxiety as much as 53.7%. After being given the intervention of pregnant women's classes, most mothers were not anxious, namely 57.4%. Maternal anxiety in facing childbirth is a real condition that threatens the lives of pregnant women, making mothers feel stressed, anxious, and afraid. Therefore, pregnant women try their best to get through these times until it is time to give birth (Maniagasi, Nontji, & Ahmad, 2022).

Physiological changes during pregnancy can cause psychological instability that causes constant worry in primigravida. This feeling can turn into anxiety that makes the mother feel unprepared for childbirth. Anxiety accompanied by feelings of doubt is often not realized by the mother and can last a long time with increasing frequency and intensity (Devi, Shinde, Shaikh, & Khole, 2018).

Other studies also support the results of this study, where mothers experienced anxiety before receiving prenatal class intervention in the low-risk factor group (KRR), high-risk factor group (KRT), and very high-risk factor group (KRST) showed that 10 respondents experienced high anxiety. After receiving the intervention, no more mothers experienced high

anxiety. This shows that prenatal class intervention can reduce the intensity of anxiety felt with an initial value of 41.20 to 36.10 after the post-test (Simbolon, Siburian, & Ritonga, 2021).

According to the Ministry of Health of the Republic of Indonesia, anxiety experienced by first-time pregnant women can be caused by how active, present, and understand the material provided. This class is a forum for increasing knowledge that is carried out simultaneously and discusses the health of pregnant women, carried out directly or face-to-face in a group. This class is expected to expand knowledge and expertise related to early pregnancy to the delivery process. Things such as the postpartum period, contraception after giving birth, prevention of unwanted side effects, newborn care, and physical activity or sports for pregnant women are also discussed in this class. This special class for pregnant women consists of a maximum of 10 participants, pregnant women can increase knowledge and expertise, discuss, and share knowledge about maternal and child welfare in a comprehensive and structured manner. Village midwives or health workers can be mentors in this class and are scheduled routinely and continuously with various benefits for mothers (Ministry of Health of the Republic of Indonesia, 2014).

This study uses a hypothesis test through the Wilcoxon signed rank test because the circulating data is not normal. The Wilcoxon Signed Rank test functions to evaluate the impact of the prenatal class intervention on the level of anxiety experienced (Putri, Nauli, & Jaya, 2021). Based on the test results, a significance value of 0.001 (<0.05) was obtained so that H_1 was accepted and H_0 was not rejected, meaning that the prenatal class had an effect on the level of anxiety of primigravida pregnant women during the labor process. This finding is also in line with previous studies which showed that mothers experienced anxiety at first, but the anxiety disappeared after receiving treatment. This is due to an increase in the mother's ability to adapt to her pregnancy conditions (Simbolon et al., 2021).

Perubahan dapat terjadi karena adanya pemberian informasi saat kegiatan kelas prenatal yang membantu ibu mengatasi kekhawatirannya. Penelitian lain menunjukkan bahwa pelaksanaan intervensi kelas prenatal yang diberikan pada ibu

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hamil mempengaruhi tingkat kecemasan yang dialami (Çankaya & Şimşek, 2021). Penelitian terdahulu yang dilakukan oleh salah satu klinik di Kabupaten Jayapura pada tahun 2022 juga menunjukkan adanya perbedaan antara pre test dan post test intervensi kelas prenatal. Hasil yang diperoleh dengan nilai rata-rata sebesar 19,44, dibandingkan dengan sebelum kelas yaitu sebesar 12,28. Adanya penurunan kecemasan ibu sebelum dan sesudah pelaksanaan kelas menunjukkan bahwa program tersebut memberikan dampak yang baik dalam menurunkan kecemasan pada ibu hamil saat proses persalinan (Maniagasi et al., 2022).

CONCLUSION

There is a significant influence between prenatal classes on the level of anxiety of pregnant women in the first trimester-III of the first pregnancy. Several factors such as age, education level, employment status, and economy or family income also influence the anxiety experienced by pregnant women.

SUGGESTION

The community, especially pregnant women, can attend mother classes to increase knowledge about pregnancy. Further research can be done using different methods, designs, sample sizes, and locations and exploring other factors that may influence anxiety in pregnant women.

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