



CORRELATION BETWEEN PRENATAL YOGA PARTICIPATION AND ANXIETY LEVELS IN PREGNANT WOMEN: A CROSS SECTIONAL STUDY

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Abstract

Pregnant women in the third trimester tend to experience high anxiety because they are worried about the labor process and the condition of the fetus that will be born. Untreated anxiety can pose a risk to the mother and baby. One effort that can be made to reduce stress is with non-pharmacological techniques, namely prenatal yoga. The aim of this study was to determine the correlation between Prenatal Yoga Participation and Anxiety in Pregnant Women in the Third Trimester. This study used a cross-sectional design. The research sample of pregnant women in their third trimester, selected using simple random sampling technique, was 38 people. The instrument used was the Pregnancy Related Anxiety Questionnaire Revised (PRAQ-R2). Data analysis describes the characteristics of each variable with percentages, and correlation tests using the chi square test. Research result shows that a p-value = 0.040, showing a correlation between participation in prenatal yoga and anxiety in pregnant women in the third trimester. Prenatal yoga is an effective method for reducing anxiety and provides clear guidance on how to provide prenatal yoga to pregnant women, ensuring a comfortable and stress-free pregnancy.

Keyword: Pregnancy, Anxiety Level, Prenatal Yoga, Third trimester

INTRODUCTION

Pregnancy is a sequence of events that naturally consists of fertilization, implantation, embryo growth, and fetal growth, and ends in pregnancy (Astuti and Sulastri, 2019). Each stage of pregnancy is an emergency that requires psychological and physiological adjustments to accommodate the impact of pregnancy hormones and mechanical pressure caused by the uterus and mechanical enlargement of other tissues. One of the psychological problems that often arises during pregnancy, especially in the third trimester, is anxiety (Rosalinna 2019).

Anxiety is a response to an unpleasant experience characterized by feelings of worry, and fear due to facing threats that will be experienced by the individual and accompanied by physiological

stimulation. Pregnant women in the third trimester tend to experience high anxiety because they are worried about the labor process and the condition of the fetus that will be born (Baro'ah et al., 2020). The impact of anxiety that can occur is increasing the risk of LBW and premature birth. In addition, the effect that appears in the mother is the weakening of uterine muscle contractions during labor due to the release of catecholamine and adrenaline hormones can inhibit the release of the hormone oxytocin. Weakening of uterine muscle contractions can cause prolonged labor and increase the incidence of infection and fatigue in the mother. In addition, anxiety that occurs in pregnant women is also related to postpartum depression due to unstable emotional disorders in the mother, both before and after labor (Baro'ah et al., 2020).

Anxiety and depression in pregnancy are problems with a high prevalence of around (12.5-42%) it is even estimated that this disorder will be the second largest cause of disease in 2020 (Putri, 2019). World Health Organization (WHO) data shows that around (10%) of pregnant women and (13%) of women who have just given birth worldwide experience mental disorders of depression trauma (WHO, 2017). The phenomenon based on research on the level of anxiety in Indonesia found that out of 247 total samples of primigravida pregnant women, 42 people (17%) were not anxious, 52 (21.05%) were mildly anxious, 81 (32.8%) were moderately anxious, and 72 (29.15%) were severely anxious. Meanwhile, in multigravida, from a total of 260 pregnant women, 140 people (53.85%) were not anxious, 49 people (18.85%) were mildly anxious, 28 people (10.77%) were moderately anxious, 27 people (10.38%) were severely anxious, and 16 people (6.15%) were very severely anxious. The majority of multigravida pregnant women did not experience anxiety (53.85%), but there were also multigravida pregnant women who experienced mild anxiety (18.85%) (6) (Valentine, 2023). Anxiety in the third trimester of pregnancy can be overcome with non-pharmacological measures, namely complementary therapy. Some examples of complementary therapy measures that can reduce anxiety and provide a sense of comfort to pregnant women in the third trimester are prenatal yoga, aroma therapy, steam therapy, therapeutic touch, and so on (Mulyati and Zafariyana, 2018).

Prenatal Yoga is the base emphasis of physical exercise on posture and deep breathing techniques. Breathing techniques can provide the ability to manage emotions and thoughts and focus more on one's condition. *Prenatal Yoga* also affects the hypothalamus to suppress CRH secretion and will affect the anterior lobe pituitary gland to suppress the production of the ACTH hormone so that the production of adrenal hormones and cortisol decreases and instructs the anterior lobe pituitary gland to secrete endorphin hormones (Mulyati and Zafariyana, 2018).

Prenatal Yoga' will inhibit the increase in sympathetic nerves so that the number of hormones that cause body dysregulation can decrease. The parasympathetic nervous system signals to affect the production of *catecholamine*. As a result, there is a decrease in heart rate, breathing rhythm, blood pressure, muscle tension, metabolic rate, and the production of hormones that cause anxiety or stress (Hayati, 2020).

The results of the study by Yuniza et al. (2021) stated that there was an effect of prenatal yoga exercises on the anxiety of pregnant women in the third trimester. By performing a 60-minute yoga intervention, pregnant women were required to be able to perform deep breathing techniques and every movement performed properly so that mothers could feel psychologically calm from anxiety to anxiety (Yuniza et al., 2021).

The results of Wulansari's (2021) research stated that 4 out of 14 parameters marked by feelings of anxiety, tension, fear, and trouble sleeping decreased after the intervention. *Prenatal Yoga'* brings positive energy to unite every movement that can minimize and even make you comfortable and which is proven to reduce mild anxiety and no anxiety (Wulansari, 2021).

Based on data obtained from the Rejang Lebong Health Office, the target number of pregnant women in Rejang Lebong in 2023 is 4,923, while in the work area of the East Curup Health Center, there are 182 pregnant women. Based on the first survey conducted at Clinic Kasih Ibu, the number of K1 visitors in 2023 was 296 pregnant women, with 65 third-trimester pregnant women. There were 40 pregnant women in the third trimester who participated in Prenatal Yoga. The results of a survey of 40 pregnant women who experienced anxiety found that 33 people experienced anxiety during pregnancy in the third trimester, while 6 pregnant women did not experience anxiety during pregnancy.

The participation of pregnant women in prenatal yoga is proven to reduce the anxiety of pregnant women, but there is no research that correlation the participation of pregnant women in prenatal yoga at least 4 times, this is supported by the theory that prenatal yoga should be done at least 4 times during pregnancy to improve the welfare of the mother and fetus.

Based on the background of the above problem, which shows the importance of *Prenatal Yoga* in pregnant women as it reduces stress, anxiety, and pain during pregnancy, discomfort, and labor pain, the author is interested in conducting more in-depth research on "The relationship between participation in Prenatal Yoga and anxiety in pregnant women in the third trimester at Clinic Kasih Ibu in the East Curup Health Center Working Area in 2024".

MATERIALS AND METHODS

This study used a cross-sectional design. The research sample of pregnant women in their third trimester, selected using simple random sampling technique, was 38 people. The instrument used was the Pregnancy Related Anxiety Questionnaire Revised (PRAQ-R2). The Pregnancy Related Anxiety Questionnaire Revised (PRAQ-R2) is a measure of anxiety during pregnancy with predictors related to childbirth and the baby and independent of general anxiety. The PRAQ-R2 is a revision of the PRAQ and has been psychometrically tested. The questionnaire format of the PRAQ-R2 has been translated into Bahasa Indonesia. The validity test results for each question item were <0.05 and the Cronbach's alpha reliability value was $0.910 > 0.6$, so this questionnaire can be declared valid and reliable (Hatmanti et al, 2021). Data analysis describes the characteristics of each variable with percentages, and correlation tests using the chi square test. This research has received ethical approval and ethical review from the Poltekkes Kemenkes Bengkulu on 22 May 2023 with number KEPK.BKL/360/05/2024.

RESULTS AND DISCUSSION

The results of the research conducted on 38 respondents of pregnant women in the third trimester at Clinics Kasih Ibu in the working area of the East Curup Health Center, Rejang Lebong Regency are as follows:

Univariate analysis aims to obtain the frequency distribution of respondent characteristics according to the research subject.

Table 1 : Frequency distribution of respondent characteristics

Characteristics	Frequency	
	n	%
Age		
Risk	2	5,3
Not a Risk	36	94,7
Parity		
Primigravida	18	4,74
Multigravida	20	52,6
Education		
Low Education	3	7,9
Higher Education	35	92,1
Occupation		
Employed	11	28,9
Unemployed	27	71,1

Based on Table 1, it shows that all respondents are not at risk, namely (94.7%). Nearly all respondents were highly educated (92.1%). Meanwhile, most respondents did not work (71.1%). Meanwhile, the parity characteristics of respondents were mostly multigravida (52.6%).

Table 2 : Overview of Prenatal Yoga Participation and Respondents' Anxiety Levels

Variables	Frequency	
	N	%
Prenatal Yoga Participation		
Yes	20	52,6
No	18	47,4
Anxiety Levels		
Mild Anxiety	13	34,2
Moderate Anxiety	16	42,1
Severe Anxiety	9	23,7

Based on Table 2, it shows that most of the respondents followed prenatal yoga as much as (52.6%), while almost half had a moderate level of anxiety, namely (42.1%)

Table 3 : Correlation Between Prenatal Yoga Participation And Anxiety Levels

Variables		Anxiety Levels						Total	p Value*	
		Mild		Moderate		Severe				
		n	%	n	%	n	%			
Pranatal Participation	Yoga	10	26,3	8	21,1	2	5,3	20	52,7	0,040
	Yes	3	7,8	8	21,1	7	18,4	18	47,3	
	No									

*chi-square test

Based on Table 3 shows that the results of the analysis using Chi-square test obtained a p-value of $0.040 < 0.05$, which can be concluded that there is a relationship between prenatal yoga participation and anxiety of pregnant women in trimester III.

Based on the results of characteristic that almost all respondent had an age that was not at risk. The optimal age for a pregnant woman is 20-35 years old because at that age it is considered a mature age and can accept pregnancy both psychologically and physically. Because people who are less than 20 years old tend to experience unstable emotions, they are mentally immature, so they are prone to shocks that result in a lack of attention to nutritional fulfillment during pregnancy. Meanwhile, at the age of 35 years related to setbacks and decreased immunity are categorized as at high risk of developing diseases and complications during pregnancy, although physically the risk of complications is higher, mentally they are better prepared (Rangkuti, 2020).

Characteristic of education showed that almost all pregnant women were highly educated. In this study, as a large number of highly educated respondents are expected to be able to more easily understand knowledge, especially about the childbirth process that will, then mothers will prepare all needs carefully and anxiety about childbirth can be reduced. A person's level of education also determines whether it is easy to absorb and understand the knowledge about the childbirth process that they have acquired thus, an adequate level of education or insights pregnant women can help pregnant women get various information during the pregnancy process, but on the other hand, if the information they have is low, the knowledge of pregnant women is also lacking, so that anxiety or

fear in carrying out pregnancy in the face of childbirth can occur (Hastanti, Budiono, and Febriyana 2021).

Characteristic of occupation showed that almost all of them did not work. Employment can be continuous to meet daily needs, both primary and secondary. Working mothers are able to gain information and experience about pregnancy from others because they are more likely to meet other people. In addition, mothers who have jobs are influenced in identifying stressors, so mothers are better able to control anxiety (Murdayah 2021).

Anxiety in pregnancy, if not addressed as soon as possible, will hurt the mother and fetus. The impact on the mother triggers uterine contractions resulting in premature babies, miscarriages, and depression. The consequences of this condition can increase blood pressure so that it can trigger preeclampsia and miscarriage, the adverse impact on the fetus with mothers who experience anxiety, will affect the results of fetal nerve development related to cognitive, emotional, and behavioral development until childhood (Puspitasari, et al. 2020).

Prenatal yoga is the fundamental emphasis on physical exercise on posture and deep breathing techniques given to pregnant women in the third trimester (Julianti 2023). Prenatal yoga is also a non-conventional complementary method that has a positive influence on body health, psychology, and the role and reaction of the body experienced by pregnant women (Nurbaiti et al. 2020). The goals of prenatal yoga include practicing breathing, helping to reduce physical discomfort during pregnancy, and learning mind-centering techniques to reduce anxiety (Mulyati and Zafariyana, 2018). A person in a state of physiological anxiety will activate the Limbic Hypothalamus Pituitary Adrenal Axis (LHPA), then stimulate the hypothalamus and cause the secretion of the hormone Corticotrophin Releasing Hormone (CRH). This will cause an increase in the production of Sympathetic Adrenal Medular (SAM), with this response causing stimulus in the limbic groove of the Hypothalamus Pituitary Adrenal Axis (LHPA), then stimulating the hypothalamus and causing the secretion of the hormone Corticotrophin Releasing Hormone (CRH). This causes the activation of Adeno Cortico Trophin Hormone (ACTH) which will stimulate the production of the hormone cortisol from the adrenal cortex, in addition to that it will cause the activation of adrenergic neurons from the Locus.

The impact that pregnant women will feel while participating in Prenatal yoga will inhibit the increase in sympathetic nerves so the number of hormones that cause body dysregulation can be reduced. The parasympathetic nervous system signals to affect the production of catecholamine. As a result, there is a decrease in heart rate, breathing rhythm, blood pressure, muscle tension, metabolic rate, and the production of hormones that cause anxiety or stress (Hayati, 2020).

The results of Wiratama's (2024) research state there are many health benefits associated with exercise during pregnancy such as reducing gestational hypertension, maternal pain during pregnancy, anxiety, shortening the duration of childbirth, and reducing the risk of cesarean section. Therefore, it was concluded that there was a significant relationship between participation in pregnancy gymnastics and anxiety levels in primigravida mothers in the third trimester (Wiratama, 2024).

The results of Sari's (2019) research also obtained data that there was a significant difference in the reduction of anxiety levels in pregnant women who did a pregnancy gymnastics program compared to those who did not do a pregnancy gymnastics program, this can be due to the many benefits that mothers get when doing pregnancy gymnastics activities for later childbirth such as strengthening the pelvic floor muscles, abdominal muscles, and form an excellent body posture so that it can help overcome complaints, train the elasticity of joints related to the delivery process, influence the position of the fetus better, relieve tightness in breathing, master. Deep breathing methods can provide inner calmness during labor (Sari, 2019).

In this study titled The Relationship of Prenatal Yoga Participation to Anxiety of Pregnant Women in the Third Trimester at Clinic Kasih Ibu in the Working Area of the East Curup Health Center in 2024, it was found that the results of the Chi-square test obtained a p-value of $0.040 < 0.05$. This means that it can be concluded that there is a relationship between prenatal yoga participation and anxiety of pregnant women in the third trimester. There are many health benefits related to physical activity in pregnant women participating in Prenatal Yoga. When pregnant women engage in Prenatal Yoga there will be an inhibition of an increase in sympathetic nerves to reduce the number of hormones that cause body dysregulation. The parasympathetic nervous system sends signals that affect the release of catecholamines. As a result, heart rate, respiratory rate, blood pressure, muscle tension, metabolic rate, and production of hormones that cause anxiety or stress are reduced.

The less physical activity done during pregnancy, the greater the risk of a negative impact on the mental health of pregnant women. Participation in Prenatal Yoga is not only beneficial for physical health but also has the possibility of being associated with various psychological benefits, including reduced anxiety levels due to increased self-confidence, positive ways of thinking built by pregnant women so that they get self-peace that is expected to avoid mothers from tension and excessive anxiety and fear.

In line with research conducted by Hartasih (2018), Prenatal Yoga provides many benefits that make pregnant women more relaxed, have peace of mind, know the correct breathing technique, and focus attention on the rhythm of breathing will make it easier for mothers in the delivery

process. Meanwhile, pregnant women who do not participate in prenatal yoga will lack knowledge about how to control the mind and process the correct breath in the delivery process (Hartasih et al. 2018).

According to Julianti (2023), Prenatal Yoga activities that are regularly followed once a week for one month prove that participation in Prenatal Yoga has effectively reduced anxiety in pregnant women. The relaxation movements found in the Prenatal Yoga movement are very beneficial for improving breathing, lowering adrenaline, relieving muscle tension, increasing endurance, increasing blood flow, releasing endorphins, reducing stress and tension, and increasing a sense of well-being, calm, comfortable, and suitable for childbirth preparation (Julianti, 2023).

This research is supported by Rahmadani's research (2023), which states that participation in Prenatal Yoga activities greatly affects the anxiety of pregnant women. Respondents who do not follow Prenatal Yoga will affect the onset of anxiety by 5.68 times compared to pregnant women who follow Prenatal Yoga. In his research, he states that Prenatal Yoga is effective in reducing anxiety and provides recommendations for providing Prenatal Yoga to pregnant women so that pregnant women can carry out their pregnancy comfortably (Rahmadani et al. 2023).

The theory and research mentioned above have strengthened the results of this study, that there is a relationship between participation in Prenatal Yoga and the level of anxiety of pregnant women in the third trimester.

CONCLUSION

Based on this study, it can be concluded that the characteristics this study are pregnant women in the third trimester who take part in Prenatal Yoga who experience mild, moderate, and severe anxiety, at the age of almost all respondents are not at risk, for education more or less all respondents are highly educated, most of the respondents are not working. And for parity of Muligravida's mothers. Summary of participation in prenatal yoga of the 38 respondents studied. Anxiety characteristics are almost half at moderate anxiety levels. There is a Relationship between Prenatal Yoga Participation and Anxiety in Third Trimester at Clinic Kasih Ibu Kerja Puskesmas Timur Curup 2024.

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