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Prenatal Yoga to Reduce Anxiety Level of Primigravida mothers in Facing Childbirth

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ABSTRACT

Anxiety before childbirth is something that many pregnant women experience before the delivery process [1].this is natural, especially in primigravida mothers. Excessive anxiety if not resolved can have a big impact psychologically for the mother and can affect the smooth delivery process [2]. Prenatal yoga is one way that can be done to reduce the anxiety of pregnant women in facing the labor process.The research design used in the study was an Experimental Quasy with the type of Pretest Posttest with Control Group. The population is All III trimester primigravida mothers present in PBM Mrs. "S". The sample in this study was III trimester primigravida mothers who experienced excessive anxiety in the face of childbirth in PMB Mrs. "S". Data analysis using the Wilcoxon test. The results of the study were most respondents in the treatment group and control group had a category of severe anxiety levels before being given prenatal Yoga, namely 8 people (53%) in the treatment group and 7 people (47%) in the control group. Most respondents in the treatment group had a mild anxiety level category of 9 people (60%) after being given yoga rentals. The results of the analysis of Asymp value research data. Sig. (2-tailed) of 0.000 ($p<0.05$), it can be concluded that there is an influence of prenatal yoga given in reducing the level of anxiety of maternity mothers in facing the labor process. Prenatal yoga can be given to pregnant women from the 1st trimester of pregnancy to the 3rd trimester. Prenatal yoga given to 3rd trimester pregnant women is effective in helping mothers reduce the level of anxiety of maternity mothers in facing the labor process. So it is important and necessary to introduce complementary obstetrics to pregnant women including prenatal yoga.

Keywords: Maternal anxiety; Prenatal Yoga

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INTRODUCTION

Pregnancy is a continuous process from conception to the onset of labor [4]. Physiological and psychological changes occur during the pregnancy process. These changes can cause discomfort in pregnant women such as dyspnea, insomnia, gum inflammation, epulis, frequent urination, pressure and discomfort in the perineum, back pain, constipation, varicose veins, fatigue, Braxton Hicks contractions, leg cramps, ankle edema, mood changes, and increased anxiety[5].

Anxiety and depression during pregnancy are issues with a relatively high prevalence, around (12.5-42%), and it is estimated that these disorders will become the second largest cause of disease by 2020 [6]. Data from the World Health Organization (WHO) shows that about (10%) of pregnant women and (13%) of women who have just given birth worldwide experience trauma-related mental disorders such as depression. In Indonesia, there are 373,000,000 pregnant mothers facing anxiety during childbirth, which amounts to 107,000,000 people (28.7%). Meanwhile, the entire population in Java Island has 679,765 pregnant mothers experiencing anxiety during childbirth, which amounts to 355,873 people (52.3%).

Severe anxiety during pregnancy harms the mother-baby relationship and reduces the mother's ability to fulfill her role as a mother. Physical experiences and studies show that maternal prenatal stress is associated with an increased risk of miscarriage itself, premature delivery, fetal abnormalities, fetal growth retardation, and asymmetrical growth of the baby. Additionally, high stress during pregnancy increases stress hormones, which can lead to elevated blood pressure and decreased birth weight [7]. Mothers experiencing anxiety and stress signal through the Hypothalamic-Pituitary-Adrenal (HPA) axis, which can lead to the release of stress hormones including Adreno Cortico Tropin Hormone (ACTH), cortisol, and catecholamines. The release of these stress hormones causes systemic vasoconstriction, including constriction of the uteroplacental vessels that leads to disruption of blood flow within the uterus, thereby impairing the transport of oxygen to the myometrium and resulting in weak uterine contractions. This event prolongs the labor process (prolonged labor), which may cause fetal distress [8].

Prenatal gentle yoga is a skill in managing thoughts, involving holistic personality development techniques for physical, psychological, and spiritual aspects [9]. In yoga therapy, the movements consist of breath control, relaxation, meditation, and diet aimed at eliminating muscular and emotional stress, enhancing concentration, increasing blood oxygen levels, and assisting the body in recovery. Yoga helps with flexibility and muscle strength and teaches pregnant women to listen to their bodies, reduce stress, and calm their minds. Yoga helps improve physical condition, enhances quality of life, self-efficacy during childbirth, interpersonal relationships, autonomic nervous system function, provides a sense of

comfort, reduces or alleviates labor pain, shortens the duration of labor[10], strengthens back muscles, abdominal muscles, and lower pelvic muscles, as well as facilitating labor and delivery[11].

Yoga also influences the hypothalamus to suppress the secretion of CRH, which will affect the anterior lobe of the pituitary gland to reduce the release of ACTH hormone, thus decreasing the production of adrenal and cortisol hormones and instructing the anterior lobe of the pituitary gland to release endorphin hormones. Yoga will inhibit the increase of sympathetic nerves, thus reducing the amount of hormones that cause body dysregulation. The parasympathetic nervous system signals to affect catecholamine secretion, resulting in decreased heart rate, breathing rhythm, blood pressure, muscle tension, metabolic rate, and production of hormones that cause anxiety or stress [12].

METHOD

The research design used in this study is Quasi-Experimental with a Pretest Posttest Control Group type, which is a design where members of the control and experimental groups are grouped randomly. In this study, the population consists of all primigravida mothers in their third trimester at PBM Ny. 'S'. The sample in this study is primigravida mothers in their third trimester who experience excessive anxiety facing labor at PMB Ny. 'S'. The sampling technique used in this study is purposive sampling. The independent variable in this study is Prenatal Yoga exercise. The dependent variable in this research is the anxiety level of primigravida mothers in the third trimester facing labor. This study uses a research instrument in the form of a checklist for the implementation of prenatal yoga exercises for primigravida mothers in the third trimester as the independent variable, while to measure the anxiety level of primigravida mothers in facing the labor process, the HARS scale is used as the dependent variable. Bivariate analysis in this study uses the Wilcoxon test.

RESULTS

Table 1. Distribution of respondents' anxiety levels before being given prenatal yoga

Level of Anxiety	Treatment Group		Control Group	
	f	%	f	%
a. mild anxiety	1	7	1	7
b. anxious is currently	3	20	5	33
c. very anxious	8	53	7	47
d. extremely anxious	3	20	2	13
Total	15	100	15	100

Most respondents in both the treatment group and the control group had a severe anxiety level category before being given prenatal yoga, namely 8 people (53%) in the treatment group and 7 people (47%) in the control group.

Table 2. The Level of Anxiety of Respondents After Being Given Prenatal Yoga

Level of Anxiety	Treatment Group		Control Group	
	f	%	f	%
a. not anxious	2	13	0	0
b. mild anxiety	9	60	1	7
c. anxious is currently	3	20	6	40
d. very anxious	1	7	8	53
Total	15	100	15	100

Most respondents in the treatment group had a mild anxiety level category of 9 people (60%) after being given prenatal yoga.

Table 3. Statistical test results

		N	Mean Rank	Sum of Ranks
post tets - pre test	Negative Ranks	15[a]	8.00	120.00
	Positive Ranks	0[b]	.00	.00
	Ties	0[c]		
	Total	15		

a. post tets < pre test
b. post tets > pre test
c. post tets = pre test

In the Negative Ranks data, there are 15 (N) which means that all 15 respondents in the treatment group experienced a decrease in anxiety levels after being given prenatal yoga, with an average decrease value (Mean Rank) of 8.00 and a total negative ranking (Sum of Ranks) of 120.00. In the Positive Ranks data, the values show 0 for N, Mean Rank, and Sum of Ranks, which means there are no respondents who experienced an increase in anxiety in the treatment group. Meanwhile, in the Ties data, there is also a value of 0 (N) indicating that no respondents had a change in their anxiety levels after being given Prenatal Yoga.

The Asymp. Sig. (2-tailed) value of 0.000 ($p<0.05$) indicates that there is an influence of prenatal yoga provided in reducing the anxiety levels of mothers in labor when facing the childbirth process.

DISCUSSION

According to the results of the data analysis conducted by the researcher, it was found that the value of Asymp. Sig. (2-tailed) is 0.000 ($p<0.05$), therefore it can be concluded that there is an effect of prenatal yoga given in reducing the anxiety level of mothers in labor when facing the childbirth process.

This is in line with the results of research [13] that prenatal yoga exercises play a crucial role in reducing the anxiety levels of pregnant women entering the third trimester of pregnancy. This study proves that at the beginning of the research, many pregnant women experienced moderate anxiety, namely 50.0% in the intervention group and 40.0% in the control group. After two interventions were conducted for each pregnant woman using a questionnaire, there was a significant change in anxiety levels for the intervention group, showing a significant decrease in the average score ($p=0.000$), whereas for the control group, the difference in average scores was not significant ($p=0.162$). This is in accordance with the theory of [14], which states that yoga can improve physical health, where the hypothalamus, pituitary gland, and sympathetic nerves are stimulated to release corticosteroid and catecholamine hormones (epinephrine and norepinephrine) that can reduce the effects of stress. Yoga is very ideal for pregnancy as it serves as a means for women to train physically and spiritually, as well as to develop self-confidence and self-awareness, including awareness of stress. Thus, the researcher assumes that practicing prenatal yoga exercises in the third trimester has a positive impact on reducing anxiety in pregnant women. The results of the study by [9]. The anxiety measurement tool used is a questionnaire. Based on the statistical test results using the dependent T-test, it can be concluded that the p-value is smaller than α (0.05), indicating that prenatal gentle yoga has an effect on reducing anxiety in mothers during their third trimester of pregnancy. Therefore, prenatal gentle yoga can be a solution to alleviate discomfort in mothers during the third trimester, one of which is the anxiety often experienced by mothers in their third trimester.

Anxiety is an emotional experience that arises due to a threat that is unclear in its cause, whether it is a threat coming from outside or from within the individual themselves [15]. The causes of anxiety include feelings of guilt due to actions someone has taken that resulted in an undesired outcome, as well as fear that something may happen to oneself, leading to a state of anxiety. Prenatal yoga is a modification of classical yoga that has been adjusted to the physical condition of pregnant women, practiced with a gentler and slower intensity [16]. There are various benefits that pregnant women can gain from doing prenatal yoga according to their pregnancy stage, such as relaxation and stress relief, maintaining stamina and health, improving blood circulation, helping to alleviate pain, preparing physically and mentally for the delivery process, speeding up recovery after childbirth, and assisting mothers in enjoying their pregnancy.

Another factor that affects anxiety is age and education level. Songul & Kiymet also mentioned that sociodemographic factors can influence depression and anxiety. Age affects a person's psychology; the older the age, the better the emotional maturity of a person[17]. Safe pregnancy and childbirth occur at healthy reproductive ages, which are between 20-30 years. Mothers under 20 years old or over 35 years old are considered to have high-risk pregnancies, which can cause anxiety. The results of this study are consistent with [18] who stated that young age is a risk factor for anxiety during pregnancy.

The level of education can influence a person's thinking and actions; individuals with higher education are more likely to think rationally, making it easier for them to solve problems and understand how to cope positively[19]. It is undeniable that the higher a person's education, the easier it is for them to accept information, and ultimately, they will possess more knowledge[20]. Conversely, if a person has a low level of education, it will hinder their attitude towards accepting information and new values introduced. 22 Seeing this, low education becomes a supporting factor for the occurrence of anxiety. This is in line with the idea that educated individuals tend to have a more open mindset towards any changes and developments in the knowledge around them. Educated people are more capable of accepting the advancements in science and information, where they are willing to receive complementary midwifery services, namely Prenatal Yoga, and are willing to participate in and follow prenatal yoga classes to reduce anxiety levels when facing childbirth.

CONCLUSION

Most respondents in both the treatment group and the control group had a severe anxiety level before being given prenatal yoga, with 8 people (53%) in the treatment group and 7 people (47%) in the control group. The majority of respondents in the treatment group had a mild anxiety level category with 9 people (60%) after being given prenatal yoga. All respondents totaling 15 people in the treatment group experienced a decrease in anxiety levels after being given prenatal yoga, with an average decrease value (Mean Rank) of 8.00 and a total negative rank (Sum of Ranks) of 120.00. The Asymp. Sig. (2-tailed) value is 0.000 ($p<0.05$), thus it can be concluded that there is an influence of prenatal yoga provided in reducing the anxiety levels of mothers in labor in facing the childbirth process.

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