



The Relationship between Pregnancy Exercise and the Level of Anxiety of Pregnant Women in Confronting Normal Childbirth at the Kartasura Health Center Work Area

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<p>Track Record Article</p> <p>Accepted: 30 September 2024 Revised: 27 October 2024 Published: 30 November 2024</p> <p>How to cite : Anggraini, P. N., & Sulastris. (2024). The Relationship between Pregnancy Exercise and the Level of Anxiety of Pregnant Women in Confronting Normal Childbirth at the Kartasura Health Center Work Area. <i>Contagion : Scientific Periodical of Public Health and Coastal Health</i>, 6(2), 1223–1231.</p>	<p style="text-align: center;">Abstract</p> <p><i>The first of the psychological issues that pregnant women frequently face, particularly during the third trimester, is anxiety related to typical labor. Pregnancy exercises are among the non-pharmacological strategies that can be used to lessen anxiety. The purpose of this study is to ascertain how pregnant women's anxiety levels at the Kartasura Health Center working area relate to their prenatal exercise regimens. This study employed a cross-sectional design and a quantitative methodology. The research was conducted in the working area of the Kartasura Health Center which was carried out in August 2024. The population of this study were all third trimester pregnant women in the Kartasura Health Center area as many as 258. The sample technique used purposive sampling so that the sample in this study was 72. Data collection for this study used demographic questionnaires and PASS (Perinatal Anxiety Screening Scale) anxiety questionnaires. Data analysis in this study with Descriptive Univariate and Bivariate analysis with Chi-Square test. The results showed that pregnant gymnastics has a relationship with reducing anxiety and smoothness in facing the normal labor process at the Kartasura Health Center (p-value-0.036). It is expected that medical professionals can increase the pregnant exercise program and reduce maternal morbidity. Pregnant exercises can be included in the childbirth preparation program at the Kartasura Health Center to help pregnant women face childbirth more calmly.</i></p> <p>Keywords: Pregnancy Exercise, Anxiety, Third Trimester Pregnant Women</p>
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INTRODUCTION

Pregnancy is a crucial stage in a woman's life that brings happiness as well as various challenges. Despite the happiness they feel, many pregnant women also face quite high levels of anxiety and stress. Based on research conducted (Rifki et al., 2018), In underdeveloped nations, the prevalence of psychological illnesses among expectant mothers is approximately 15.6%, and during the postpartum phase, this number rises to 19.8%. In Indonesia, data shows that around 373,000 pregnant women experience anxiety, with 28.7% of them actively preparing for childbirth (Kemenkes R1, 2019). In Sukoharjo, there are 11,314,000 pregnant women (Handayani & Fatmawati, 2023). Regarding the Sustainable Development Goals (SDGs), Indonesia's maternal mortality rate was 205 per 100,000 live births, infant mortality was 18.6 neonatal deaths per 1,000 live births, and the mortality rate for children under five was 18.4 per 1,000 live births (Kemenkes RI, 2022).

The anxiety experienced by pregnant women can have a negative impact on their physical and mental health. Anxiety related to the birthing process can cause discomfort,

resulting in physical and psychological changes that can potentially lead to instability or even death. Some common concerns felt by pregnant women include pain during childbirth, personal and baby safety, as well as costs and the choice between natural or surgical delivery (Zuhroh & Hambali, 2023). Various factors influence this level of anxiety, such as age, education, support from the husband, and the condition of the pregnancy itself (Putri & Mutiara, 2022). Therefore, it is important to explore interventions that can help reduce such anxiety. One approach that has been proven to be effective is a pregnancy exercise program, which is not only beneficial for physical health but also has a relaxing effect that can help stabilize emotions.

Pregnancy exercises are pelvic muscle fitness exercises that can reduce anxiety during normal delivery. Pregnancy exercise is recommended for around 30 minutes a week, with a frequency of 3-5 times a week. Regular pregnancy exercise can reduce maternal discomfort and complaints during labor, such as back pain, swollen legs, nausea and anxiety (Bahri & Novia, 2018). Pregnancy exercise generally aims to maintain a pregnant woman's physical and emotional well-being while she prepares for childbirth. The specific aim of pregnancy exercise is to strengthen and maintain the elasticity of the abdominal wall muscles, ligaments and tissues involved in the delivery mechanism (Sartika & Asriani, 2020).

Pregnancy gymnastics is one of the antenatal service activities that aims to prepare women for labor. In addition to training the muscles of the birth canal, pregnancy exercises also contain a relaxing effect that can stabilize the emotions of pregnant women (Maryunani et al., 2011). Pregnant women's desire in doing prenatal workouts will be impacted by ignorance brought on by a lack of education. The degree to which expectant mothers comprehend the significance of engaging in prenatal exercises is influenced by their educational attainment. In addition to affecting pregnancy exercises, education of pregnant women also affects the understanding of how to do the right pregnancy exercises (Julianawati, 2022).

According to Judith (2018), carried out a study on how pregnant women's anxiety levels were affected by pregnancy workouts. The findings demonstrated that anxiety levels before and after receiving pregnancy workouts differed. Participating in prenatal exercises helped expectant mothers feel less nervous and more at ease when it came time for labor. Because the movements of prenatal exercises help pregnant women feel calm and relaxed, researchers have found that they can lower anxiety levels in expectant mothers. Pregnant women's anxiety during childbirth is significantly correlated with their level of prenatal activity, providing a relaxing and calming effect (Kowalska, 2023; Susanti et al., 2024). Research Julianawati (2022), claimed that the degree of anxiety third-trimester pregnant women had about giving birth in the Botania Health Centre Working Area was correlated with their participation in

pregnancy gymnastics. This is because half of the respondents did not follow the overall pregnant gymnastics experienced moderate to severe anxiety. This shows that the relaxing effect of pregnant exercises is not obtained in third trimester pregnant women, so that almost half of the respondents experience moderate to severe anxiety. Pregnancy exercises provide many benefits during pregnancy.

A preliminary survey conducted in the Kartasura Health Center working area showed that many pregnant women experience high anxiety before normal labor, especially in the third trimester. The anxiety they felt ranged from fear of pain, fear of complications, and uncertainty about the labor process. Most of the pregnant women stated that the anxiety was caused by a lack of knowledge about childbirth and mental unpreparedness in facing it. In addition, the survey results also show that the participation of pregnant women in pregnancy exercises in the region is still very low.

Many pregnant women do not participate in regular exercises, citing lack of time, not being used to physical activity, or not knowing the benefits of pregnancy exercises clearly. In fact, pregnancy exercises are known to help reduce anxiety and prepare mothers physically and mentally for labor. Furthermore, the survey also found that education regarding the importance of pregnancy exercises is still minimal. Pregnant women mostly get information about medical and nutritional aspects, but rarely get an understanding of the benefits of pregnancy exercises in reducing anxiety and preparing for labor. Based on these findings, a study was conducted to see the relationship between pregnancy exercises and the anxiety level of pregnant women in facing normal labor.

METHODS

This study used quantitative methods with a cross-sectional design. The research location was at the Kartasura Health Center, Kartasura District, Sukoharjo Regency. The research was conducted in August 2024. The population studied was third trimester pregnant women who checked their pregnancy as many as 258 pregnant women. This study used Purposive Sampling technique, which is based on sampling technique with certain considerations in accordance with the characteristics of pregnant women who check their pregnancy at the Kartasura Health Center. The inclusion criteria of this study are willing to be respondents, experiencing anxiety in the mild to moderate range and 20-38 weeks of gestation. While the exclusion criteria of this study are high-risk pregnancies such as hypertension and women who are pregnant and aged between 20 and 38 weeks who cannot communicate due to extreme anxiety and poor awareness. The sample in this study was 72.

Pregnant gymnastics is the study's independent variable, and pregnant women's fear in the face of typical labour is its dependent variable. The instruments used in this study include demographic questionnaires the number of prenatal examinations, and a history of pregnancy difficulties, ever doing pregnant gymnastics, planning normal labor. and and anxiety measuring instrument PASS (Perinatal Anxiety Screening Scale) is the first screening and recording tool for a broad spectrum of anxiety disorders specific to the perinatal or pregnancy era. There are thirty-one original and reliable question items in the PASS questionnaire with a score of 0 never, score 1 sometimes, score 2 often and score 3 always.

The two univariate and bivariate analysis were used in this study. Through distribution and frequency, univariate descriptive analysis seeks to provide a clear picture of the association between pregnancy gymnastics and pregnant women's anxiety when confronted with the typical labour process. While Bivariate analysis aims to determine the relationship of pregnant gymnastics to the anxiety of pregnant women in facing the normal labor process. This study has obtained a health ethics permit from Dr. Moewardi Regional General Hospital Number: 1.970/VIII/HREC/2024.

RESULTS

Table 1 Characteristics of Respondents

Characteristics	Frequency	%
Age		
< 20 years	4	5,6
20-35 years	66	91,7
>35 years	2	2,8
Education		
Elementary school	5	6,9
Junior High School	4	5,6
Senior High School	47	65,3
Bachelor	16	22,2
Jobs		
Housewife	37	51,4
Private	6	8,3
Self-Employed	20	27,8
Employees	8	11,1
Farmer	1	1,4
Pregnancy to-		
1	32	44,4
2	28	38,9
3	10	13,9
4	2	2,8
Total	72	100,0

Based on Table 1. The results showed that the majority of respondents were pregnant women aged 21-35 years, with 66 respondents (91.7%), while only 2 respondents (2.8%) were

over 35 years old. All respondents were pregnant women who were in the third trimester. Most of the respondents' last education was senior high school or high school major, as many as 47 respondents (65.3%), while only 4 respondents had junior high school education (5.6%). Most respondents worked as housewives, as many as 37 respondents (51.4%), and 1 respondent (1.4%) worked as a farmer.

Table 2. Distribution And Frequency of Pregnant Women's Knowledge and Compliance Pregnant Women Consuming Fe Tablets in The Kartasura Health Center Working Area

Variable	Frequency	%
Pregnancy Status		
Primigravida	32	44,4
Multigravida	40	55,6
Pregnancy Exercise		
Follow	36	50,0
No Follow	36	50,0
Anxiety levels of pregnant women who have attended pregnancy exercise		
Without Anxiety	22	30,6
Mild Anxiety	14	19,4
Moderate Anxiety	0	0,0
Serious Anxiety	0	0,0
Anxiety levels of pregnant women who do not attend pregnancy exercise		
Without Anxiety	4	5,6
Mild Anxiety	22	30,6
Moderate Anxiety	5	6,9
Serious Anxiety	5	6,9
Total	72	100,0

Based on Table 2. The results showed that the majority of the 72 pregnant women, 55.6% were multigravida, while 44.4% were primigravida. Participation in pregnancy exercises was equally divided, with 50% participating and 50% not. Pregnant women who participated in pregnancy exercises tended to experience less anxiety, with 30.6% having no anxiety and 19.4% having mild anxiety. No one experienced moderate or severe anxiety. In contrast, in the non-participating group, only 5.6% had no anxiety, while 30.6% had mild anxiety, and 6.9% had moderate or severe anxiety.

Table 3. Analysis of the Relationship Between Pregnancy Exercise And Anxiety Levels In Pregnant Women

Pregnancy exercise	Anxiety										P-value
	Not Anxious		Mid Anxiety		Moderate Anxiety		Severe Anxiety		Total		
	n	%	n	%	n	%	n	%	N	%	
Attended	22	30,6	14	19,4	0	0,0	0	0,0	36	50	0,039
Not Attended	4	5,6	22	30,6	5	6,9	5	6,9	36	50	
Total	26	36,2	36	50	5	6,9	5	6,9	72	100	

Based on Table 3. of the 36 respondents (50.0%) who engaged in pregnancy exercises, the findings indicated that 14 pregnant women (19.4%) had mild anxiety and 22 pregnant women (30.6%) did not experience any anxiety. 36 respondents (50%), however, were in the

group that did not engage in pregnancy exercises. Of these, 4 pregnant women (5.6%) reported no anxiety, 22 pregnant women (30.6%) reported mild anxiety, 5 pregnant women (6.9%) reported moderate anxiety, and 5 pregnant women (6.9%) reported severe anxiety. After being tested with Chi-Square statistics, a p-value of 0.039 was obtained which is smaller than α (0.05). Thus, there is a relationship between pregnant gymnastics and anxiety level in facing labor in the Kartasura Health Center working area.

DISCUSSION

The Relationship of Pregnant Gymnastics to the Anxiety Level of Pregnant Women in Facing the Normal Process of Childbirth in the Kartasura Health Center Working Area

Pregnancy exercise is a series of body movements designed as exercises with special movement rules and principles adapted to the condition of pregnant women. One form of pregnancy care provided by midwives is teaching pregnancy exercises, which is part of antenatal care which aims to prepare mothers for childbirth (Julianawati, 2022). The aim of pregnancy exercise is to prepare the mother mentally and physically for the birthing process (Parni & Novrida, 2023).

Pregnant women who engage in prenatal exercises more frequently report feeling less anxious about giving birth. Frequent exercise throughout pregnancy helps keep the muscles and joints in good condition, which is important for the delivery mechanism. When engaging in physical activity, the body will produce endorphins which come from the brain and spinal nervous system. Increasing endorphin levels has been proven to be closely related to reducing anxiety and improving appetite. Therefore, pregnancy exercise can be an effective method in reducing anxiety (Zamziri et al., 2023).

Research by Pudji et al., (2018), also shows that pregnancy exercises carried out by pregnant women in the third trimester can reduce anxiety and overcome discomfort such as swelling of the legs, back pain and difficulty sleeping. Anxiety in pregnant women is a psychological condition that influences the increase in hormones during pregnancy and exacerbates external stressors (Rizqika et al., 2018).

Research findings indicate a relationship between anxiety levels as the normal birth process approaches and activity levels during pregnancy. According to the study's findings, pregnant women who engaged in pregnancy exercise had a higher likelihood of not experiencing anxiety (around 23 responses), but those who did not engaged in pregnancy exercise had a higher likelihood of mild, moderate, and severe anxiety. As a result, a statistical test was run to see whether anxiety and pregnancy exercise were related, and the results showed

that p-value was $0.036 < \alpha (0.05)$. Of the 72 respondents, the majority often did pregnancy exercise, 36 respondents (50.0%) and 36 respondents (50.0%) did not do pregnancy exercise.

According to research by Wardani et al., (2023), Pregnancy exercise and anxiety levels are correlated in third-trimester primigravida women, and most respondents said that exercising during pregnancy caused them to feel mildly anxious. However, because they don't perform pregnancy exercises, some primigravida pregnant women suffer from extreme anxiety. Meanwhile, most third trimester multigravida pregnant women also experience mild anxiety due to participating in pregnancy exercise, in comparison to multigravida pregnant women in their third trimester who do not engage in these types of physical activities (Sitorus et al., 2023).

These results are supported by research Saragih et al., (2022), which states that the positive impact of pregnancy exercise can balance the psychological condition of pregnant women. In research (Wiratama et al., 2024), the level of physical activity during pregnancy can reduce anxiety symptoms. Analysis of the results shows that pregnant women who take part in pregnancy exercise experience mild anxiety, different from pregnant women who do not take part in pregnancy exercise, who experience mild, moderate and severe anxiety (Kusumawati & Yunda, 2020). Anxiety is part of emotion, namely an emotional state that does not have a specific object. The anxiety level values are different between pregnant women who take part in pregnancy exercise and those who do not take part in pregnancy exercise (Sitepu et al., 2023).

CONCLUSIONS

As for the conclusion of the results of this study that pregnant exercises have a relationship with reducing anxiety and smoothness in facing the normal delivery process at the Kartasura Health Center. It is suggested that health workers should be more active in promoting and integrating pregnancy exercises in pregnant women's health services. Pregnant women are also advised to follow gymnastics regularly to reduce anxiety and improve physical and mental readiness before labor.

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