

# The Effect of Prenatal Yoga on Readiness to Facelabour in Third-Pregnant Women

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## Abstract

*Prenatal Yoga helps mothers become aware and recognize the physical and psychological changes during pregnancy, and creates communication and bonding with the baby and prepares the mother physically and psychologically for childbirth. Practicing yoga in the third trimester is a useful solution as a medium *self help* which will reduce discomfort during pregnancy, help with the birthing process and even prepare mentally for the early days after giving birth and while raising a child. The purpose of this research is to see the influence *Prenatal Yoga* for the readiness of pregnant women to face childbirth at PMB Nomreti Ruslan. Research uses *pre-experiment (one group pre-test post-test)*. The sample consisted of 10 respondents using sampling techniques *positive sampling*. Prenatal yoga intervention was carried out at TPMB Nomreti Ruslan on November 2 - December 10 2024. The research results use tests *Wilcoxon Signed Ranks Test* we get *p value* = 0.005 with a value of  $\alpha = 0.05$  ( $p < \alpha$ ), which shows the influence of prenatal yoga on the back pain of pregnant women in the third trimester at the Independent Practice Place of Midwife Nomreti Ruslan, Padang City. It is recommended for midwifery services to use prenatal yoga intervention as one of the programs in preparing third trimester pregnant women for childbirth.*

**Keywords:** Third Trimester, Readiness for childbirth, Prenatal Yoga

## Introduction

The third trimester of pregnancy is the last months or the last third of pregnancy. During pregnancy, pregnant women experience physical and psychological changes that can cause discomfort, apart from that, mothers will also begin to imagine the birth

process, how their baby will be and the condition of their baby after birth. During pregnancy, changes will occur in the mother's body system, both physical and psychological. If the mother is unable to handle the discomfort, it can become very disturbing during the pregnancy, birth and postpartum process (1).

A comfortable pregnancy process without physical complaints and a smooth and easy delivery process can be supported by paying attention to the 3 main aspects of pregnancy, namely the balance of the uterus, muscles and pelvis. Prenatal Gentle Yoga and pregnancy counseling help mothers become aware and recognize the physical and psychological changes during pregnancy, and establish communication and bonding with the baby. Prenatal Yoga is expected to help mothers prepare physically and psychologically for childbirth. Research to determine Influence *Prenatal Care* Yoga on Mother's Physical and Psychological Preparation for Childbirth (2).

Apart from that, the physical and psychological conditions of pregnant women will influence the emergence of diseases and complications of pregnancy and childbirth in both the mother and the baby, and also influence the smooth delivery. The anxiety of pregnant women in the third trimester in facing childbirth is one of the emotional disorders that is often encountered and causes quite serious psychological impacts (3). Based on the results of research conducted by (4) entitled The Effect of Prenatal Yoga on Childbirth Readiness, it was found that there was a significant influence between prenatal yoga on childbirth readiness where the P value = 0.0008.

In the initial survey conducted in July 2024, midwives stated that there were routine activities carried out every month for pregnant women through prenatal classes, but had never provided yoga services in the process of providing midwifery care to pregnant women. Of the 5 pregnant women met at TPMB Nomreti Ruslan, it was found that 3 (60%) pregnant women experienced complaints such as back pain, pain in the lower abdomen, anxiety and were not ready to face childbirth and 5 (100%) pregnant women said they had never done prenatal yoga during their pregnancy, so researchers were interested in conducting research on the influence of prenatal yoga and pregnancy counseling on the readiness of third trimester pregnant women to face childbirth (5).

## Method

This research uses *pre-experiment* design by design *one group pre-test post-test*.

The population of this study were all pregnant women who visited TPMB Nomreti Ruslan. The sample was 10 third trimester pregnant women who met the inclusion criteria. The sampling technique is *positive sampling* (6), where respondents are selected according to predetermined inclusion and exclusion criteria so that researchers can obtain the required data from respondents. This prenatal yoga intervention was carried out at TPMB Nomreti Ruslan on November 2 – 13 2024. The data obtained from the research questionnaire is maternal readiness for childbirth in third trimester pregnant women before and after the intervention. The intervention was carried out by doing prenatal yoga movements for 60 minutes, namely 3 times in 12 days. The statistical test used is a different test by looking at the data source in the form of a ratio scale (numerical), so that the data is tested for normality first using *sapphire wilk*. The parametric statistics used are *Wilcoxon test* because one of the contributing data is not normal.

## Results

Table . 1

Average score of Pregnant women's readiness to face childbirth before prenatal yoga for pregnant women in the third trimester at TPMB Nomreti Ruslan

<b>Readiness for childbirth</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b><i>Pretest</i></b>	<b>10</b>	<b>4,80</b>	<b>1,93</b>	<b>2</b>	<b>8</b>

Based on table 1, it can be seen that the average score for the readiness of pregnant women to face childbirth at TPMB Nomreti Ruslan before prenatal yoga was 4.80.

Table. 2

The average score of pregnant women's readiness to face childbirth after prenatal yoga for pregnant women in the third trimester at TPMB Nomreti Ruslan

<b>Readiness for Childbirth</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b><i>Posttest</i></b>	<b>10</b>	<b>0,20</b>	<b>0,63</b>	<b>0</b>	<b>2</b>

Based on table 2, it can be seen that the average score for pregnant

women's readiness to face childbirth after prenatal yoga is 0.20.

Table. 3  
Differences in Pregnant Women's Readiness Scores for Childbirth Before and After Prenatal Yoga for Pregnant Women in the Third Trimester at TPMB Nomreti Ruslan

Readiness for childbirth	N	Mean	Mean Difference	p value
Pre-Test	10	4,80	4,60	0,005
Post-Test	10	0,20		

Based on table. 3 shows that the average readiness of pregnant women to face childbirth before prenatal yoga intervention and after prenatal yoga intervention is 4.30 and 0.20. Based on statistical tests using *Wilcoxon test* value is obtained *p value* 0.005, with  $\alpha = 0.05$  ( $p < \alpha$ ). This means that  $H_0$  is rejected, so there is a difference in the score of pregnant women's readiness to face childbirth before and after prenatal yoga for third trimester pregnant women at TPMB Nomreti Ruslan. This shows the influence of prenatal yoga on the readiness scores of pregnant women to face childbirth in third trimester pregnant women at TPMB Nomreti Ruslan.

## Discussion

Based on data analysis and presentation of research results regarding the influence of prenatal yoga and childbirth preparation counseling on the readiness of pregnant women to face childbirth at TPMB Nomreti Ruslan, Padang City, the discussion can be described as follows:

### *Univariate Analysis*

#### **The average score of Pregnant Women's Readiness to face childbirth before and after prenatal yoga for pregnant women in the third trimester at TPMB Nomreti Ruslan, Padang City**

Based on table 1, it can be seen that the average score for the readiness of pregnant women to face childbirth at TPMB Nomreti Ruslan before prenatal yoga was

4.80. Meanwhile, based on table 2, it can be seen that the average score for pregnant women's readiness to face childbirth after prenatal yoga is 0.20.

This research is also in line with research conducted by Yuniarti, et al in 2020, namely that the average readiness before the prenatal yoga intervention in facing normal childbirth was 19.67 and after the intervention it decreased to 10.80 (7). Based on research conducted by Novria Hesti in 2021 regarding the description of pregnant women's knowledge about prenatal yoga at TPMB Silvia Nova Sari, Amd. Keb, it was found that more than half of pregnant women had low knowledge about prenatal yoga (8). This shows that not all pregnant women know about prenatal yoga so they cannot do it yet.

Prenatal yoga is a form of exercise that is beneficial and safe for the health of the mother and fetus, namely yoga. Prenatal yoga is part of non-pharmacological therapy that can overcome pregnancy discomfort. Prenatal yoga is a modified type of hatha yoga which is adapted to the conditions of pregnant women (3). Prenatal yoga is useful in helping pregnant women overcome complaints of discomfort felt during pregnancy and helps smooth the birthing process (1). Preparation for childbirth is the most important part of the birthing process which aims to improve optimal health before delivery and immediately provide lactation. This preparation includes physical and psychological preparation, physical exercise including prenatal yoga is one form of mother's preparation for childbirth as per the results of Novria Hesti's research in 2022 with the title Factors related to preparation for childbirth in pregnant women where the results showed that more than half (53.1%) of respondents were not ready to prepare for childbirth (9).

The benefits of prenatal yoga are to help overcome back pain and prepare physically by strengthening and maintaining the elasticity of the abdominal wall muscles, ligaments, pelvic floor muscles related to the birth process, shaping body posture, while other benefits of prenatal yoga are increasing blood circulation as well as relaxation and overcoming stress (10). The positive way of thinking that pregnant women develop in relation to childbirth is one form of benefit obtained from yoga exercises in the deep relaxation stage. With this relaxation, it is hoped that pregnant women will avoid feelings of tension and anxiety and fear related to childbirth and can give rise to feelings of optimism and courage to go through the natural process that

women will go through (10). This is also supported by research (11) that carrying out prenatal yoga during pregnancy is a very useful effort as a means of *self help*.

### ***Bivariate Analysis***

#### **Differences in Readiness Scores for Childbirth Before and After Prenatal Yoga for Pregnant Women in the Third Trimester at TPMB Nomreti Ruslan**

Based on the research results in table 1, it was found that the average readiness of pregnant women to face childbirth before prenatal yoga intervention and after prenatal yoga intervention was 4.80 and 0.20. Based on statistical tests using *Wilcoxon test* The p value obtained was 0.005, with  $\alpha = 0.05$  ( $p < \alpha$ ). This means that  $H_0$  is rejected, so there is a difference in the readiness scores of pregnant women to face childbirth before and after prenatal yoga for pregnant women in the third trimester at TPMB Nomreti Ruslan. This is also supported by research conducted by Mu'alim (12) regarding the influence of prenatal yoga on readiness to face childbirth in pregnant women in the third trimester, stating that based on research results the average score of readiness to face childbirth before prenatal yoga intervention was 4.69. readiness for childbirth before prenatal yoga tends to be high (12).

This research is supported by research conducted by Yuniarti, et al in 2020, namely the results of bivariate analysis obtained values *p-value* 0.005  $< 0.05$ , which means there is an influence of prenatal yoga training on the readiness of pregnant women to face childbirth in BPM Bengkulu City. This research is also in line with research conducted by Nanda Nurvita Sari in 2023, namely that there is a significant influence between prenatal yoga on the psychological readiness of TMT III primigravida pregnant women and the results *p-value* 0.003 (13) and research (14) found that there was an influence of prenatal yoga on the mother's physical and psychological preparation for childbirth, namely  $p \text{ value} < 0.05 = 0.000$ .

Prenatal Yoga has various positive effects on pregnant women, including reducing anxiety and stress, relieving back pain, increasing body flexibility and preparing for pregnancy. Apart from that, yoga practice can also improve sleep quality and fetal well-being. Yoga affects the hypothalamus to suppress secretions *Corticotropin* (CRH) which will affect the anterior lobe of the pituitary gland to

suppress hormone production *Adrenocorticotropic* (ACTH) so that the production of adrenal hormones and cortisol decreases and orders the anterior lobe pituitary gland to release endorphin hormones. Apart from that, yoga will inhibit the increase in sympathetic nerves so that the hormones that cause body dysregulation can be reduced in number. The parasympathetic nervous system signals to influence the release of catecholamines which results in a decrease in heart rate, breathing rhythm, blood pressure, muscle tension, metabolic rate and production of anxiety-causing hormones (15).

### **Conclusions and Recommendations**

Based on the results of research on the influence of prenatal yoga on readiness to face childbirth in the third trimester of pregnancy at TPMB Nomteri Ruslan, Padang City, the following conclusions can be drawn: The average score for readiness to face labor of respondents before prenatal yoga was carried out for pregnant women in the third trimester at TPMB Nomteri Ruslan City was 4.80. The mean score of respondents' readiness for childbirth after prenatal yoga was carried out for pregnant women in the third trimester at TPMB Nomreti Ruslan Kota was 0.20. There is a difference in readiness scores for childbirth before and after of 4.60 and results *Wilcoxon test* showed that there was an influence of prenatal yoga on readiness for childbirth in pregnant women at TPMB Nomreti Ruslan, Padang City (*p value 0,005*). Health workers or midwives can provide prenatal yoga through prenatal classes for third trimester pregnant women to increase the mother's readiness to face childbirth both physically and psychologically.

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