

# The Effect of Prenatal Yoga on Back Pain in Pregnant Women

*by Perpustakaan IIK Bhakti Wiyata*

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## 1 The Effect of Prenatal Yoga on Back Pain in Pregnant Women

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### Abstract:

Hormonal changes during pregnancy alter the soft tissue that supports and connects the muscles, thereby reducing muscle flexibility and resulting in pregnant women's back pain. **Objective:** The purpose of this research is to determine whether prenatal yoga helps pregnant women with back discomfort. **Methods:** A pre-experimental research design was used. Non-probability sampling was conducted using a one-group pre-test-post-test design. We used the accidental sampling method to select 10 participants for the sample at random. A pregnant woman who happened to meet a researcher could be used as a sample when viewed as a suitable respondent. Data collection was done with observation sheets using the Numeric Rating Scale pain scale. **Results** According to the Wilcoxon test results, H0 is rejected and H1 is obtained, the p value is equal to 0.005, and the  $\alpha$  value is less than 0.05. A 1.9% decrease is indicated by the average difference of  $6.40 \pm 4.50$  between the pretest and posttest. **Conclusion:** The findings of this study indicate that expectant mothers' discomfort can be lessened by using prenatal yoga. Prenatal yoga may help pregnant women with back pain, according to one study. Prenatal yoga is intended to be used in conjunction with other therapies as a supplemental treatment to help pregnant women with their waist pain.

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## INTRODUCTION

Pregnancy is a state wherein a woman has an embryo or fetus developing in her womb. Beginning on the day of the last menstrual cycle, a pregnancy typically lasts 40 weeks or 280 days. (Jeepi, 2019). Internal changes often occur by themselves during pregnancy as a result of the body's adjustment to changing pregnancy conditions (Jeepi, 2019). Pregnancy is a natural event that involves a large number of changes and adaptations in a woman's body and requires medical attention and proper care to ensure the mother's and child's health.

Pregnant women face a number of important physiological and psychological problems as they approach the third trimester, all of which require extensive treatment. During the third trimester, typical symptoms include fatigue, swollen hands and feet, shortness of breath, difficulty sleeping, and, most commonly, back pain. Based on research by Wulandari (2017) conducted on 180 pregnant women, back pain often occurs, especially in the third trimester of pregnancy, with an incidence varying from 50% in the UK and Australia to 70% in Indonesia. According to research by Mafikasari & Kartikasari (2015), the prevalence of pregnant women experiencing lower back pain in various regions of Indonesia reaches 60–80%.

The possibility of a pregnant woman experiencing complaints of back pain is greater if she has experienced back pain before pregnancy, a history of backache in prior pregnancies, the older age of the pregnant woman, and frequent births (Rahayu, Kusuma, & Sari, 2022). Untreated back discomfort during pregnancy may develop into persistent back pain, which will be more challenging

to manage (Pischa, 2021). Back pain can be caused by weight gain related to pregnancy, joint instability due to ligament flexion, abnormalities in the curvature of the spine, and excessive stretching of the abdominal muscles during pregnancy, which are often the causes of back discomfort during pregnancy (Sencan, 2017). Back pain during pregnancy can reduce a woman's quality of life if left untreated. This issue will persist during pregnancy in the form of recurrent injuries or persistently worsening circumstances (Wulandari, 2021).

Pregnant women can lessen their back pain in the final trimester of their pregnancy by engaging in little activity, like prenatal yoga (Pischa, 2021). According to research by Rafika (2018), yoga can increase muscle strength and is especially useful for preventing back pain. The yoga exercises performed in this study not only strengthened the shoulder, back, and leg muscle groups but also helped maintain proper body position, which can lessen expectant mothers back pain.

The relaxing physical activity of prenatal yoga will aid expectant mothers in the second or third trimester. Expectant mothers can calm their minds and relax their joints by doing gentle and calming yoga poses, especially on the inside. Mothers can practice all the yoga poses at home or in pregnancy yoga classes during the second and third trimesters. Specific benefits include strengthening the body during pregnancy, avoiding back discomfort, breathing exercises, and better sleep due to reduced worry about giving birth. One of the five yoga pregnancy exercise methods is exercise. Yoga, breathing (pranayama), meditation, postures (mudra), and deep relaxation can also help maintain fetal health in addition to helping natural pregnancy and childbirth (Widayanti, 2019).

Based on the background, the researchers are interested in conducting a study entitled "Effectiveness of Prenatal Yoga against Back Pain in Pregnant Mothers of Trimester III in BPM X City Kediri".

#### METHOD

This research design uses pre-experimental research. This pre-experimental study is influenced by the dependent variables and independent variables. There are no control variables, and the samples are selected randomly. The research utilizes a single-group pretest-posttest design. In this design, before the treatment, a pretest was given to all respondents who experienced back pain; after that, they were given prenatal yoga, and after the treatment was given, the pain scale was assessed. The subjects of this research were 10 expectant mothers in their third trimester who experienced back pain at BPM Bidan X, Kediri City. This research technique uses total sampling. This study uses both independent and dependent variables. The independent variable is prenatal yoga for pregnant women, and the dependent variable is back pain in the third trimester. Data were assessed using the Wilcoxon test to ascertain the efficacy of prenatal yoga in lessening low back pain in third-trimester pregnant women.

## RESULT

Table 1.1. Characteristic distribution by age

Age	Frequency	Percentage (%)
18-21 year	5	7,7
22-31 year	5	38,5
32-41 year	3	53,8
>41 year	0	0
Total	13	100

Source Primary Data, 2024

Table 1.1 The data above indicates that, out of the 13 respondents, 7 (53.8%) of the pregnant women were between the ages of 32 and 41.

Table 1.2 Distribution of back pain pregnant women prior to prenatal yoga.

Pain Intensity	Frequency	Percentage (%)
4	1	7,7
5	3	23,1
6	4	30,8
7	4	30,8
8	1	7,7
Total	13	100

Source Primary Data, 2024

Based on table 1.2, it can be seen that of the 13 respondents in this study before prenatal yoga, 8 respondents had moderate pain of intensity 4-6, intensity 4 was 1 respondent (7.7%), intensity 5 was 3 respondents (23.1%), intensity 6 was 4 respondents (30.8%). Meanwhile, severe pain was controlled with an intensity of 7-9 by 5 respondents, where intensity 7 was 4 respondents (30.8%), and intensity 8 was 1 respondent (7.7%).

Table 1.3 Frequency distribution of back pain after prenatal yoga in second trimester pregnant women

Pain Intensity	Frequency	Percentage (%)
0	9	69,2
1	4	30,8
Total	13	100

Source Primary Data, 2024

Based on table 1.3, it can be seen that the 13 respondents in this study after prenatal yoga intervention had mild and non-painful pain intensity. The distribution of mild intensity pain was 4 respondents (30.8%) in the pain range 1. Meanwhile, 9 respondents (69.2%) indicated no pain or range 0.

## DISCUSSION

There is a distinction in typical pain before and following the intervention. The results of the study showed a value of  $t$ -value = 0.001, which means that there is an effect of lower back pain in pregnant women before and after pre-birth yoga. Back pain is one of the problems often experienced by pregnant women. Low back pain is discomfort that manifests beneath the ribs and above the buttock joints. Back pain in pregnant women can be caused by various things, especially in the second and third trimesters, such as weight gain in pregnant women, excessive twisting of the body, walking without breaks and heavy objects (Susanto and Fitriana, 2019). Back pain can occur due to the burden on the back muscles or shifts that occur in the spine (Arummega, 2022).

Pregnancy and fetal development increase with gestational age, which causes the uterus to enlarge. With the broadening of the uterus, the tendons, muscles, nerve filaments, and back muscles will be extended. As a result, the weight to thrust the spine forward will increment, causing physical lordosis. This causes back torment in pregnant ladies (Husein, 2014). Amid pregnancy, back torment is the most common sort of distress. Back torment can be caused by weight on the back muscles or changes within the spine that cause pressure within the joints (Tanjung Rejeki and Fitriani, 2019).

Midwives play an important role in helping mothers reduce complaints of back pain by advising mothers to maintain good body mechanics, encouraging exercise during pregnancy to strengthen their muscles, helping mothers adapt to changes in their bodies, and advising mothers to reduce activity and get more rest period as needed (Husein, 2014). Prenatal yoga is one example of pregnancy exercise that can reduce or even prevent low back pain experienced by mothers during pregnancy. According to Fitriyah (2020), lower back discomfort associated with pregnancy can be overcome by using unique yoga postures and methods, which are very good for pregnant women. The science of yoga reveals how a person's physical, mental, and spiritual well-being are all connected to achieving overall health (Lebang, 2015).

Prenatal yoga may be an alteration of yoga developments that are adjusted to the circumstances of pregnancy. The objective is to prepare pregnant ladies physically, rationally, and profoundly for the birthing (Holden, 2019). Based on an inquiry by Rafika (2018), pre-birth yoga performed once a week for two weeks with a p-value of 0.000 and for 30 to 60 minutes is valuable in lessening lower back inconvenience in pregnant ladies. Prenatal yoga employs breathing and extending procedures. Amid pregnancy, the mother may encounter a lopsidedness, which can cause back torment. Delicate extending with a center on adjust and muscle adaptability will offer assistance, diminish inconvenience, and unwind muscles (Purinawa, 2016).

Pregnancy yoga consolidates certain postures and strategies that are sound for pregnant ladies and offers assistance to soothe inconvenience caused by their changing bodies. Pregnant women who practice yoga can help their bodies become more flexible and comfortable, improve blood circulation, and eliminate pain, swelling, and back and waist pain (Fitriyah, 2020). According to research by Fitriani (2018), it shows the effect of pregnancy yoga in diminishing lower back torment in pregnant ladies who are within the third trimester, with a cruel esteem of 29 and ( $p=0.000$ ) seen from the decrease in lower back pain from pre-test to post-test. Prenatal yoga not only helps in reducing back pain but can also support an overall healthy pregnancy by strengthening core muscles, increasing flexibility, and reducing stress. Prenatal yoga may be an adjustment of yoga developments that are adjusted to the circumstances of pregnancy. The objective is to get pregnant ladies ready physically, rationally, and profoundly for the birthing handle (Purinawa, 2016). Based on research by Rafika (2018), prenatal yoga performed once a week for two weeks with a p-value of 0.000 and for 30 to 60 minutes is useful in reducing lower back discomfort in pregnant women. Prenatal yoga uses breathing and stretching techniques. During pregnancy, the mother may experience an imbalance, which can cause back pain. Gentle

stretching with a focus on balance and muscle flexibility will help reduce discomfort and relax muscles (Pisca, 2021).

### CONCLUSION

The comes about of the speculation test within the inquire about appeared a p value of 0.001, which suggests  $< 1\pm$  ( $1\pm = 0.05$ ). This demonstrates that there's effectiveness of pre-birth yoga in diminishing back torment for pregnant ladies within the 3rd trimester. There are also limitations in this research, such as researchers only using one group, so it is impossible to compare it with other therapies.

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