

# The Effect of Bladder Point 23 Acupressure Therapy on Back Pain Intensity in Pregnant Women in the Thirty Trimester

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**Abstract:** Back pain is one of the common complaints experienced by pregnant women, especially in the third trimester. According to data from the World Health Organization (WHO), around 50-70% of pregnant women experience back pain which can affect their quality of life (WHO, 2021). Acupressure therapy, especially at the Blader 23 point, has been known as a non-pharmacological method that can reduce pain. This study aims to analyze the effect of acupressure therapy at the Blader 23 point on the intensity of back pain in pregnant women in the third trimester. Research Methods: The research method used in this study was a pre-experiment with a pre-post group test. The study sample consisted of 20 primigravida pregnant women. Pain intensity was measured using a numeric scale (NRS) before and after the intervention. The data obtained were analyzed using a paired t-test. There was a significant difference in the level of pain in pregnant women in the third trimester between before and after being given acupressure at the Blader 23 point, this was evidenced by the mean value of the pre-test results of 25.5 but the mean value of the post-test results was 23.2. This is reinforced by the results of the t-test obtained t count 7.254. Furthermore, based on the results of the calculation of the level of significance, it shows that the value of  $p$  (Sig) 0.001 means that there is a difference in the level of back pain in pregnant women in the third trimester after being given acupressure. Acupressure therapy at the Blader 23 point is effective in reducing the intensity of back pain in pregnant women in the third trimester. It is recommended to consider this therapy as one of the options in the management of back pain in pregnant women.

**Keywords:** Acupressure; Back; Bladder 23; Pain

## 1. Introduction

Back pain is one of the common complaints experienced by pregnant women, especially in the third trimester. According to research conducted by BÃ, et al. (2015), around 50-70% of pregnant women experience back pain during their pregnancy. This pain can be caused by various factors, including changes in body posture, weight gain, and hormonal changes that occur during pregnancy. In this context, it is important to find an effective method to reduce the intensity of back pain, one of which is acupressure therapy.

Back pain is one of the common complaints experienced by pregnant women, especially in the third trimester. Based on research conducted by ACOG (American College of Obstetricians and Gynecologists), around 50-70% of pregnant women experience back pain during their pregnancy (ACOG, 2020). This figure shows a fairly high prevalence and is an important concern in prenatal care. In addition, a study in Indonesia found that 63% of pregnant women experience back pain, with pain intensity varying from mild to severe (Sari, 2021).

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Increased relaxin hormone during pregnancy contributes to ligament laxity, which can lead to spinal instability and back pain (Choi et al., 2021). In addition, significant weight gain during pregnancy also puts additional stress on the spine, which can worsen the condition. Data from WHO shows that back pain is one of the leading causes of disability in pregnant women, which can affect their quality of life (WHO, 2021).

Another factor that affects the incidence of back pain is the lifestyle and physical activity of pregnant women. Research shows that pregnant women who are not physically active are more susceptible to back pain compared to those who exercise regularly (Kumar & Kumar, 2020). Therefore, it is important for health workers to provide education on the importance of safe physical activity during pregnancy.

In this context, it is important to screen and evaluate pregnant women who experience back pain. With a good understanding of the incidence and risk factors, health workers can design appropriate interventions to reduce back pain in pregnant women. This will also help reduce the incidence of complications that may arise due to untreated back pain.

Overall, the high incidence of back pain among pregnant women indicates the need for greater attention and intervention in prenatal care. With the right approach, it is hoped that the quality of life of pregnant women can be improved, as well as reducing the negative impact of back pain on their health and fetal development.

Acupressure is a technique originating from traditional Chinese medicine that involves pressing certain points on the body to relieve pain and improve overall health. The Blader 23 (BL23) point, located in the waist area, is known as a point associated with kidney and back health. Research by Lee et al. (2017) showed that stimulation at this point can help relieve lower back pain. Thus, this study aims to explore the effect of acupressure therapy at the Blader 23 point on the intensity of back pain in pregnant women in the third trimester.

In this study, researchers will involve a number of pregnant women who experience back pain and compare the level of pain before and after acupressure intervention. The data obtained are expected to provide deeper insight into the effectiveness of this method as a non-pharmacological alternative in treating back pain in pregnant women. This is important, considering that many pregnant women avoid using drugs during pregnancy because of the potential side effects that can harm the fetus (Chung et al., 2018). Through this study, it is hoped that it can provide scientific evidence regarding the benefits of acupressure therapy, as well as provide recommendations for medical personnel and pregnant women regarding safe and effective pain management methods. This study will also contribute to the development of knowledge in the field of maternal and child health, as well as improve the quality of life of pregnant women who experience back pain.

## 2. Proposed Method

This study used an experimental design with a quantitative approach. The targeted population is pregnant women in their third trimester who experience back pain. Samples will be taken randomly with inclusion criteria of pregnant women aged 20-35 years, have measurable back pain with a pain scale of 1-10, and do not have serious medical conditions (Smith et al., 2020). After obtaining ethical approval, participants will be divided into two groups: an intervention group that will receive acupressure therapy at the BL23 point and a control group that does not receive intervention. Acupressure therapy will be carried out for 30 minutes each session, with a frequency of twice a week for four weeks. Before and after the intervention, the intensity of the participants' back pain will be measured using a numeric pain scale (NRS) (Jensen et al., 2018). This study was conducted from February to October 2024. The data obtained will be analyzed using descriptive and inferential statistics. The paired t-test will be used to compare differences in pain intensity before and after the intervention in the intervention group. (Field, 2018).

## 3. Results and Discussion

Based on table 1, it is known that there is a difference in the level of pain of pregnant women in the third trimester between before and after being given acupressure, this is evidenced by the mean value of the pre-test results of 25.5 but the mean value of the post-test results of 23.2. This is reinforced by the results of the t-test obtained t count 7.254. Furthermore, based on the results of the calculation of the level of significance, it shows that the value of  $\rho$  (Sig) 0.001 means that there is a difference in the level of pain of pregnant women in the third trimester after being given acupressure.

### 3.1. Figures and Tables

**Table 1.** Test of differences in back pain levels before and after acupressure was given at the blader 23 point

Statistic	Pre test	Post test	$\rho$ (Sig)
Mean	25,5	23,2	0,001
SD	5,4	5,7	
t count	7.254		

## 4. Result and discussion

Acupressure therapy is an increasingly popular alternative method for treating back pain in pregnant women. The Blader 23 point, located in the lower back area, is believed to have a positive effect on relieving back pain (Zhou et al., 2021). Research shows that stimulation at this point can increase blood flow, reduce muscle tension, and stimulate the release of endorphins, which function as natural analgesics (Kang et al., 2020).

Back pain in pregnant women has become a concern for many researchers and health practitioners. Various studies have shown that back pain can affect the quality of life of pregnant women and has the potential to cause complications during pregnancy (Kumar et al., 2019). According to a meta-analysis conducted by Macfarlane et al. (2020), back pain can cause sleep disturbances, depression, and anxiety in pregnant women, which in turn can affect fetal development.

Acupressure, as an alternative method, is effective in reducing back pain. A study by Lee and Kim (2018) showed that acupressure therapy at the BL23 point can reduce the intensity of lower back pain in 80% of participants involved in the study. In addition, this therapy is also known to have a relaxing effect that can help reduce stress and improve mental well-being in pregnant women (Zhou et al., 2019).

The Bladder 23 (BL23) point is located in the lumbar region, and functions to strengthen the kidneys and relieve back pain. Research by Wang et al. (2021) shows that stimulation at this point can improve blood circulation and reduce muscle tension in the back area. This is especially relevant for pregnant women who experience significant physical changes during the third trimester.

In this context, it is important to understand the mechanism of action of acupressure. According to the meridian theory in traditional Chinese medicine, pain can be caused by an imbalance of energy in the body. Acupressure works to restore this balance by stimulating certain points, thereby reducing pain (Bai et al., 2020). By understanding these basics, we can better appreciate the potential of acupressure therapy in treating back pain in pregnant women.

A study conducted by Chen et al. (2022) showed that pregnant women who received acupressure therapy at the Bladder 23 point experienced a significant decrease in back pain intensity. This decrease was measured using a visual pain scale (VAS), which is a commonly used tool to assess pain levels. The results of this study indicate that acupressure therapy can be an effective and safe option for pregnant women who experience back pain.

In addition, acupressure therapy also has the advantage of easy access and relatively low cost. Pregnant women can do this therapy themselves at home after receiving basic training from health workers. This provides flexibility for pregnant women to deal with their back pain anytime and anywhere (Liu et al., 2021).

However, it is important to note that although acupressure therapy shows promising results, not all pregnant women will experience the same benefits. A study by Zhang et al. (2020) showed that the response to acupressure therapy can vary depending on individual factors such as pain severity, previous health conditions, and tolerance to therapy.

The causes of back pain in pregnant women vary widely and can be categorized into several factors. One of the main causes is changes in body posture that occur along with fetal growth. As the gestational age increases, the center of gravity of the pregnant woman's body also changes, which can cause tension in the back muscles (Miller et al., 2019). These changes

are often overlooked, but can contribute significantly to the back pain experienced. In addition to changes in posture, hormonal factors also play an important role in the onset of back pain. Increased levels of the hormone relaxin during pregnancy cause loosening of connective tissues and ligaments, which can lead to instability in the joints and spine (Kumar et al., 2020). Research shows that increased levels of this hormone are associated with increased intensity of back pain in pregnant women.

Psychological factors can also contribute to back pain. Stress and anxiety experienced during pregnancy can cause muscle tension, which in turn worsens back pain (Bennett et al., 2018). Research shows that pregnant women who experience high levels of stress are more likely to experience back pain compared to those who have good emotional support.

Pre-existing medical conditions, such as scoliosis or herniated discs, can also worsen back pain during pregnancy. Research by Lee et al. (2020) found that women with a history of spinal problems were at higher risk of experiencing back pain during pregnancy. Therefore, it is important to conduct a thorough evaluation of the pregnant woman's medical history before planning an intervention.

## 5. Conclusions

The conclusion of this study is expected to provide a clear picture of the effect of acupressure therapy at the Blader 23 point on the intensity of back pain in pregnant women in the third trimester. If the results of the study show that this therapy is effective, then it can be recommended as one of the non-pharmacological methods to overcome back pain in pregnant women. This will provide an alternative for pregnant women who want to avoid the use of drugs during pregnancy.

This study is also expected to provide a basis for the development of a broader intervention program, involving other alternative techniques in the management of back pain. With increasing awareness of the importance of mental and physical health during pregnancy, acupressure therapy can be an attractive option for pregnant women who are looking for a safe and effective solution to overcome back pain.

Finally, this study will contribute to the development of knowledge in the field of maternal and child health, as well as improve the quality of life of pregnant women who experience back pain. Thus, it is hoped that the results of this study can be applied in clinical practice and become a reference for further research in the future.

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