



The Effect of the Rebozo Technique on Reducing Lower Abdominal Pain in Pregnant Women in the Third Trimester

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Abstract: *Third-trimester pregnancy is often accompanied by lower abdominal pain, which can significantly affect the comfort and well-being of pregnant women. This study aims to examine the effect of the Rebozo technique in reducing lower abdominal pain in third-trimester pregnant women. A total of 65 third-trimester pregnant women at UPT Puskesmas Rum Balibunga participated in the study. The results show a significant reduction in pain levels after applying the Rebozo technique, with all participants reporting negative ranks (pain reduction). The Wilcoxon Signed Ranks Test yielded a $Z = -8.062$ and $p\text{-value} = 0.000$, indicating that the reduction in pain after applying the Rebozo technique was statistically significant. This pain reduction can be attributed to the relaxation effect provided by the Rebozo technique, which helps relieve muscle tension and provide physical support to the pregnant woman's body. The study suggests that the Rebozo technique can be an effective non-pharmacological alternative for reducing pain in pregnant women, especially in the third trimester.*

Keywords: *Lower Abdominal Pain; Pain Reduction; Rebozo Technique; Relaxation; Third-Trimester Pregnancy.*

1. INTRODUCTION

Pregnancy is one of the most significant phases in a woman's life, bringing about major physical and psychological changes. One of the common experiences for pregnant women, especially in the third trimester, is pain, particularly lower abdominal pain (Amalia Yunia Rahmawati, 2020). This pain is often caused by the increasing weight, changes in body posture, pressure on internal organs, and contractions that occur as the body prepares for labor (Wijayanti & Marfu'ah, 2023). In addition to these physical factors, emotional stress and anxiety about the upcoming childbirth can also contribute to the discomfort.

During the third trimester, many pregnant women experience lower abdominal pain, which can significantly affect their quality of life (Faidah et al., 2024). This pain may lead to anxiety, sleep disturbances, and a decrease in the ability to carry out daily activities. Therefore, it is important to find effective solutions or methods for relieving this pain without compromising the health of both the mother and the baby. One technique that has been suggested to help alleviate pain during pregnancy is the Rebozo technique (Astuti et al., 2024). This traditional method, originating in Mexico, has been used for centuries by midwives and healthcare providers to reduce pain in pregnant women (Hutabarat et al., 2022).

The Rebozo technique involves using a long piece of cloth wrapped around the pregnant woman's body to provide support and relieve muscle tension, thus offering a sense of comfort (Rendo et al., 2024). This technique helps relax the muscles, reduce discomfort in the back and abdominal area, and may assist in improving the baby's position in the womb. Several studies

have suggested that the Rebozo technique can be effective in alleviating pelvic and lower back pain in pregnant women (Maryati & Tinggi Ilmu Kesehatan Abdi Nusantara, 2020).

However, despite the anecdotal benefits of this technique, there is limited research specifically examining its effectiveness in reducing lower abdominal pain in third-trimester pregnant women (Yulianan & Yuriati, 2023). Therefore, this study aims to investigate the effect of the Rebozo technique on relieving lower abdominal pain in third-trimester pregnant women, particularly at UPT Puskesmas Rum Balibunga.

In this study, a preliminary investigation was conducted at UPT Puskesmas Rum Balibunga in October 2025, involving 65 third-trimester pregnant women. The data indicated that a majority of the participants, both primiparous (first-time pregnant women) and multiparous (women with previous pregnancies), experienced severe abdominal pain. This study aims to test whether the Rebozo technique can effectively reduce pain levels in both primiparous and multiparous women.

The research will also examine whether the Rebozo technique leads to a significant reduction in pain and whether there is a difference in response to the technique between primiparous and multiparous women. This study is expected to contribute to the development of non-pharmacological pain management techniques for pregnant women and open the door for further research into other alternative methods that can be used in maternal care.

2. RESEARCH METHOD

This study uses a quantitative experimental design with a pre-post test approach to analyze the effect of the Rebozo technique in reducing lower abdominal pain in third-trimester pregnant women. This design was chosen to measure changes in pain levels before and after the application of the Rebozo technique, aiming to assess its effectiveness in alleviating pain in pregnant women.

The population in this study consists of third-trimester pregnant women registered at UPT Puskesmas Rum Balibunga, with a sample of 65 pregnant women selected using purposive sampling. The sample includes 26 primiparous women (first-time pregnant) and 39 multiparous women (women with previous pregnancies). Inclusion criteria included pregnant women over the age of 18 who did not have medical conditions that would prevent the use of the Rebozo technique. All participants gave informed consent to participate after being provided with an explanation of the study's objectives.

Data were collected by measuring the lower abdominal pain intensity using the visual analog scale (VAS), classifying pain into three categories: mild, moderate, and severe. The

Rebozo technique was applied to each participant for 20-30 minutes to relieve pain. After the intervention, pain levels were measured again to assess any changes. The data obtained were analyzed using the Wilcoxon Signed Ranks Test to determine if there was a significant difference in pain levels before and after the application of the Rebozo technique.

3. RESULTS AND DISCUSSION

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Table 1. Age Distribution Categorized by Age Periods.

Age Period	Frequency	Percent	Cumulative Percent
< 20 years	4	6.3%	6.3%
20-35 years	59	90.6%	96.9%
> 35 years	2	3.1%	100.0%
Total	65	100.0%	100.0%

The age of the respondents has a mean of 28.18 years with a standard deviation of 5.55 years, suggesting that most participants are within the 20-35 years age group, which accounts for 90.6% of the sample. The median age is 29 years, meaning half of the participants are younger and half are older than this value. The distribution is skewed slightly negative (skewness = -0.118), indicating that most respondents are concentrated within the 20-35 years age group, which is the optimal age for pregnancy.

Table 2. Gravida Distribution.

Gravida	Frequency	Percent	Cumulative Percent
Primigravida	26	40.0%	40.0%
Multigravida	39	60.0%	100.0%
Total	65	100%	100%

The mean gravida is 1.60, with a standard deviation of 0.49, indicating that most of the respondents are either primigravida (first-time pregnant) or have had one previous pregnancy. The distribution shows that 40% of the respondents were primigravida, while 60% were multigravida. This distribution suggests a relatively balanced representation of first-time and repeat pregnancies.

Table 3. Education Level Distribution.

Education Level	Frequency	Percent	Cumulative Percent
SD	8	12.3%	12.3%
SMP	9	13.8%	26.2%
SMA	33	50.8%	76.9%
PT	15	23.1%	100.0%
Total	65	100%	100%

The education level of respondents shows that a majority, 50.8%, have completed senior high school (SMA), followed by 23.1% with a university degree (PT). Only 12.3% completed

elementary school (SD), and 13.8% attended junior high school (SMP). This indicates that the majority of respondents have at least completed high school, which may influence their understanding of pregnancy-related care and health interventions.

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Table 4. Ranks Summary.

		Ranks		
		N	Mean Rank	Sum of Ranks
Pain Level After - Pain Level Before	Negative Ranks	65 ^a	33.00	2145.00
	Positive Ranks	0 ^b	.00	.00
	Ties	0 ^c		
	Total	65		

The results of the Wilcoxon Signed Ranks Test indicate a significant reduction in pain after delivery for all participants. The test shows negative ranks for all 65 respondents, meaning that each participant experienced less pain after delivery compared to before. This suggests that the intervention, whether through natural childbirth processes or pain management techniques, effectively alleviated pain.

There were no positive ranks, which implies that none of the participants experienced an increase in pain after delivery. Additionally, the absence of ties indicates that there were no instances where the pain levels before and after delivery were the same, confirming the reduction in pain for every participant.

The Sum of Ranks for the negative ranks is 2145, reflecting a substantial reduction in pain across the sample. This is a strong indicator that the intervention, in this case, childbirth, resulted in significant pain relief for all participants.

Finally, the Wilcoxon Signed Ranks Test produced a Z value of -8.062 and a p-value of 0.000, which is well below the significance threshold of 0.05. This confirms that the reduction in pain after delivery is statistically significant. Therefore, we can confidently conclude that there is a clear and significant difference in pain levels before and after delivery, with pain decreasing significantly after childbirth.

Discussion

Based on the results of the Wilcoxon Signed Ranks Test, this study shows a significant reduction in lower abdominal pain after the application of the Rebozo technique in third-trimester pregnant women. All participants experienced negative ranks, meaning that the intensity of pain after delivery was significantly lower compared to before delivery. This suggests that the Rebozo technique was effective in reducing pain, especially in the abdominal

area, which is often tense and painful during the third trimester. The reduction in pain can be explained by the physical support provided by the Rebozo technique, which involves wrapping a long cloth around the pregnant woman's body to alleviate muscle tension and provide comfort.

These results align with the findings of Ami Damayanti & Yulia Ulfah (2021), who stated that non-pharmacological techniques, such as the Rebozo technique, play an essential role in reducing pain during pregnancy, particularly in the third trimester. Sarli & Putri, (2024) also noted that the Rebozo technique, which provides support to the body and relieves muscle tension, is highly effective in alleviating lower back and abdominal pain. These findings support the conclusion that the Rebozo technique is an effective method to reduce pain without relying on medications, which may have potential side effects for both the mother and the baby.

Furthermore, Hurin'in & Agustina, (2025) emphasized that techniques based on relaxation and providing physical support can help reduce pain in pregnant women. The Rebozo technique, by wrapping the cloth around the body, offers a form of relaxation that helps to release tension in the abdominal and back muscles. This process helps to reduce the pressure on areas that bear significant weight during pregnancy, such as the lower back and abdomen, which are often the primary sources of pain. Therefore, the Rebozo technique not only serves as a pain reliever but also provides a therapeutic effect by relaxing the body overall.

Physiologically, the pain reduction observed after the application of the Rebozo technique can be explained by hormonal changes that occur during labor or when the body is in a relaxed state. Ismiatun , Nila Qurniasih , Inggit Primadevi, (2024) mentioned that a decrease in cortisol levels a stress hormone that increases during labor or when the mother experiences tension plays a significant role in pain reduction. The Rebozo technique works by relieving muscle tension, reducing physical stress, and enhancing comfort, which contributes to the reduction in cortisol levels. This process supports maternal comfort naturally, without the need for medications that might have side effects.

The significant pain reduction observed in pregnant women who received the Rebozo technique is consistent with findings by Agustin, (2023), who showed that emotional and psychological support plays a major role in reducing pain during pregnancy. While emotional support was not directly analyzed in this study, it is likely that the support provided by healthcare providers or partners during the application of the Rebozo technique contributed to its effectiveness. Psychological factors, such as feeling secure and comfortable, also reduce the perception of pain in pregnant women, further enhancing the effectiveness of the Rebozo technique (Fajriah et al., 2024).

Additionally, the Rebozo technique helps to improve blood circulation and relax tense muscles, which are common causes of pain in pregnant women during the third trimester. Improved blood circulation not only helps to relieve muscle tension but also enhances the flow of oxygen to the fetus, providing additional benefits to both maternal and fetal health. This finding supports Farag et al., (2024), who explained that relaxation achieved through physical techniques such as the Rebozo can improve overall maternal well-being.

Overall, this study confirms that the Rebozo technique is effective in reducing lower abdominal pain in third-trimester pregnant women, providing a safe and beneficial non-pharmacological alternative. Given the evidence of its effectiveness, further research is needed to explore the long-term benefits of the Rebozo technique and its impact on maternal well-being and recovery after childbirth. Future studies could also examine the role of emotional support accompanying the technique and compare the Rebozo technique with other pain management methods to determine which is most effective in alleviating pregnancy-related discomfort.

4. CONCLUSION

This study demonstrates that the Rebozo technique is an effective non-pharmacological method for reducing lower abdominal pain in third-trimester pregnant women. The significant reduction in pain levels, as shown by the results of the Wilcoxon Signed Ranks Test, indicates that the technique provides relief to all participants. The effectiveness of the Rebozo technique can be attributed to its ability to alleviate muscle tension, provide physical support, and promote relaxation, which in turn reduces pain perception.

The findings of this study are consistent with previous research, which highlights the role of physical support and relaxation techniques in managing pain during pregnancy. The absence of positive ranks, indicating no increase in pain after applying the technique, further supports the conclusion that the Rebozo technique is beneficial in reducing discomfort in pregnant women. Additionally, the technique's potential benefits extend beyond pain reduction, as it may improve maternal well-being and contribute to a more positive pregnancy experience.

Given the promising results, it is recommended that healthcare providers consider incorporating the Rebozo technique into standard care practices for pregnant women, especially for those experiencing abdominal pain during the third trimester. Further research is needed to explore the long-term effects of the Rebozo technique on maternal health, as well as its potential benefits in combination with other pain management strategies. The inclusion of

emotional and psychological support in conjunction with physical techniques like the Rebozo may enhance overall outcomes, making it an important area for future investigation.

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