

Rebozo Technique Effectively Reduces Maternal Pain during Childbirth Stage 1 Active Phase

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ABSTRACT

Background: Pain is the main complaint felt by mothers during childbirth. Pain management can be done with non-pharmacological techniques, one of which is using the Rebozo technique.

Objective: This study aimed to determine the effectiveness of the rebozo technique for active phase 1 labour pain in primiparous women.

Methods: The study used a quasi-experimental design with a pretest and posttest control group. An accidental sampling technique divided a sample of 30 people into control and intervention groups. The intervention group received Rebozo therapy, a therapy using a traditional cloth wrapped around the pelvis and buttocks with the mother kneeling, then shaking it slowly. The pain was measured using the Visual Analogue Scale (VAS), ranging from 0-10. Bivariate test using Wilcoxon.

Results: The majority of respondents were aged 21-29 years (56.7%), had high school education (83.3%) and were housewives (50%). The majority of the control group showed moderate pain (53.3%), while the intervention group showed severe (60%). The reduction in pain in the intervention group was more significant than in the control group (2.27 > 0.73). Both the control group and the intervention group showed $p < 0.001$.

Conclusion: The Rebozo technique effectively reduces labour pain in the active phase of the first stage in primiparous women. This technique is easy and inexpensive, so it can be an option for non-pharmacological therapy to treat labour pain.

KEY WORDS

childbirth, complementary therapy, labor pain, primiparity

INTRODUCTION

The first stage of labour begins when the mother experiences contractions and the cervix dilates and ends at complete dilatation (10 cm). Mothers who enter the first delivery stage will excrete mucus mixed with blood (bloody show)¹⁾. This bloody mucus comes from cervical canal mucus, and blood comes from capillaries around the cervical canal which burst due to the opening of the cervix²⁾. Cervical dilatation mechanism different between primigravida and multigravida³⁾. The length of the first stage for primigravida lasts 12 hours, while for multigravida, it is about 8 hours⁴⁾. The process that occurs in the first stage causes pain⁵⁾.

Pain experienced during labour is a form of the body's defence mechanism. Pain can cause an increase in nervous system function and an increase in blood pressure, heart rate, and breathing⁶⁾. Labour pain can be influenced by culture, fear, anxiety, previous birth experiences, preparation for labour, and support⁷⁾. Pain can also cause death for both mother and baby, interrupting blood and oxygen supply to the placenta⁸⁾. If pain is not treated promptly, discomfort, distress, fear, and stress may increase⁹⁾. Management and monitoring of labour pain, especially during the first stage active phase, is crucial⁷⁾.

One of the efforts to overcome first-stage pain during labour can be made by pharmacological and non-pharmacological methods^{10,11)}. Many non-pharmacological techniques are used to treat pain in childbirth^{12,13)}.

One of the non-pharmacological methods is using the Rebozo technique. Rebozo helps provide more expansive pelvic space for the mother so that the baby is easier to descend from the pelvis and the delivery process is faster. Rebozo is a technique of making space for the baby in a way that is fun for the mother. Rebozo can be used during labour to help the muscles and muscle fibres in the uterine ligaments relax, thereby reducing pain during contractions¹⁴⁾.

Rebozo has been popularly used in developed countries by health workers in assisting childbirth as a non-pharmacological method^{15,16)}. The Rebozo technique is a traditional scarf or cloth used by midwives in Iceland to help mothers give birth. With the Rebozo technique wrapped around the pelvis and buttocks, then gently rocking them, this movement can be performed from the third trimester until delivery and is believed to relax pregnant women and help the baby find the birth canal. This technique can be used for pregnancy, childbirth, postpartum, and fertility¹⁷⁾.

Research using the Rebozo technique in childbirth is rarely used in Indonesia. Previous research has shown working using the Rebozo Technique increases maternal comfort^{18,19)}. The Rebozo technique also reduces labour pain in multiparous women^{20,21)}. This study used primiparous mothers who had no previous experience giving birth. This research has an external target as a complementary or natural therapy. This study aimed to determine the effectiveness of the rebozo technique for labour pain in the active phase of the 1st stage in primiparous mothers.

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Table 1: Characteristics of Respondents (N = 30)

Variables	Control Group		Intervention Group		Total		
	f	%	f	%	F	%	
Age (year)	21-29	6	40.0	11	73.3	17	56.7
	30-35	9	60.0	4	26.7	13	43.3
Education	Elementary School	3	20.0	0	0	3	10.0
	Highschool	12	80.0	13	86.7	25	83.3
	University	0	0	2	13.3	2	6.7
Occupation	Private company	9	60.0	4	26.7	13	43.3
	Entrepreneur	2	13.3	0	0	2	6.7
	Housewife	4	26.7	11	73.3	15	50.0
Labour Pain	Moderate	8	53.3	6	40.0	14	46.7
	Severe	7	46.7	9	60.0	16	53.3

Table 2: Effect of Rebozo Technique on First Stage of Labour Pain (N = 30)

Variable	First Stage of Labour Pain		
	Mean ± SD	Δ Mean	p [‡]
Control Group			
Pretest	6,82 ± 1,168	-0.73	< 0.001
Posttest	6,09 ± 1,446		
Intervention Group			
Pretest	6,45 ± 1,036	-2.27	< 0.001
Posttest	4,18 ± 1,079		

p = p-value; SD = Standard Deviation; Δ = Difference posttest-pretest; tested using Wilcoxon

METHODS

Study Design

The researcher used quasi-experimental research with a nonequivalent control group pretest and posttest design. The data collection process was carried out from February to June 2022 at the Lydia Syfra Clinic, Kudus, Indonesia. The independent variable is the provision of Rebozo technique therapy to pregnant women in the first stage. The dependent variable is the pain scale.

Samples

The study population used data on the number of pregnant women who checked themselves into the clinic from November 2021 to January 2022. The sample consisted of two groups, namely control and intervention. Calculate samples for each group using the Federer formula, $(n-1) \times (t-1) \pm 15$, n = number of samples for each group, and t = number of groups. Based on the calculation, the number of samples in each group was 15. The sampling process used accidental sampling. According to the inclusion criteria, the researcher determined that the sample were Third-trimester pregnant women, 37-42 weeks gestation, 20-35 years old, primigravida, had no abnormalities and pregnancy complications as evidenced by the results of fetal ultrasound examination and was willing to be respondents. Gemelli, a Mother with a history of heart, musculoskeletal, and respiratory disease, became the exclusion criteria for the study.

Instruments

The research instruments were grouped into tools for administering Rebozo therapy and measuring pain. The administration of Rebozo therapy uses standard operating procedures and observation sheets. Pain measurement uses standard operating procedures and a Visual Analogue Scale (VAS) ranging from 0-10. The instrument compiled by the researcher has been tested by an expert panel of 3 experts with an average value of 0.90, indicating the tool is feasible.

Data Collection

A total of 4 assistants helped the research process, consisting of two

midwives and two nurses. Before starting the research, the assistant got an explanation of the entire research process and signed a letter of approval to become a research assistant. Data collection was divided into two data collection periods. Data collection for the control group was conducted from February 01 to March 23, 2022. Pain measurements were carried out during the pretest and posttest. Pretest pain is a phase I pain scale felt by respondents, measured when they come to the clinic. Posttest pain in the control group is a phase I pain scale felt by the respondent within 30 minutes of the pretest pain measurement. The control group did not get any intervention. After getting data on the control group, the researchers researched the intervention group. The time for data collection for the intervention group is March 24 to June 30, 2022. The entire research process still adheres to the COVID-19 prevention procedures. The intervention group received intervention using the Rebozo Technique.

The Rebozo technique uses a traditional scarf or cloth to help the mother give birth. Respondents were arranged in a kneeling position and supported on a gym ball, then the material was wrapped around the pelvis and buttocks, then rocked slowly. Rebozo was given once for 30 minutes by the research assistant. Pain measurements were carried out at the pretest and posttest. Pretest pain is a phase I pain scale felt by respondents, measured before the intervention. Posttest pain in the intervention group is a phase I pain scale felt by respondents after the intervention. Pain measurements for the entire group were performed with the patient lying down.

Data Analysis and Ethical Consideration

Before signing the informed consent, respondents received an explanation of the objectives, benefits, and all the study steps. Researchers explain the rights and obligations of researchers and respondents. The data collection process started after obtaining research permit No 006/P3M/STIKES-BUP/II/2022. Normality test using Kolmogorov Smirnov with abnormal results ($p < 0.05$). The group's internal bivariate test used Wilcoxon.

RESULTS

Characteristics of Respondents

Table 1 shows that the control and intervention groups were mainly aged 21-29 years with a total of 56.7%, high school education as much as 83.3%. The control group showed that most mothers worked in the private sector (60%), and the intervention group was housewives (73.3%). The level of maternal pain in the control group was mainly in the moderate (53.3%), while the intervention group was in the severe (60%).

Effect of Rebozo Technique on First Stage of Labour Pain

Table 2 shows that both the control group and the intervention group experienced a decrease in pain. Still, the reduction in pain in the intervention group was more significant than in the control group ($2.27 > 0.73$). The control group showed differences in labour pain in the first stage of the pretest and posttest ($p < 0.001$). The same thing also happened in the intervention group, which showed the Rebozo Technique's effect on labour pain in the first stage. Although the results showed differences in

labour pain during the pretest and posttest, the most significant reduction in pain occurred in mothers who received the Rebozo technique.

DISCUSSION

The results showed that the Rebozo Technique effectively reduced labour pain in the first stage. The study supports the research of Iversen *et al.*, who stated that women who performed the Rebozo Technique during labour experienced a reduction in pain²³. The difference with previous studies used a qualitative design, while this study experimented directly with the respondent. The results of the case study also reported a decrease in patient pain during labour after being given the Rebozo technique²³. The case study described the effect of Rebozo on one patient, while this study showed the effect on the experimental group. Another study also showed the same results: the Rebozo Shake The Apples (RSTA) and Rebozo Sifting While Lying Down Techniques effectively reduce pain during the active phase of multigravida mothers²⁰. Several things were different from this study, including Nurpratiwi *et al.* using two types of rebozo technique given to two groups without using the control group. The samples used were multigravida mothers, while this study used primiparous mothers. The equation in terms of the stages of labour used is the first stage of the active phase.

The Rebozo technique is a non-pharmacotherapy that can be given to pregnant women. The rebozo technique is a non-invasive technique and practice that can help during childbirth. This technique can be performed in a standing, lying or knee position with both palms touching the floor. This technique causes the mother's hips to move in a controlled and gentle manner. The movement is made using a special woven cloth or scarf wrapped around the mother's stomach. This technique can be performed by midwives, nurses, and other health workers¹⁴. In this study, the patient was in a kneeling position because the patient claimed to be more comfortable using this position. Previous studies have shown decreased pain using a higher lying position than kneeling²⁰. However, the researchers considered the respondents' comfort more, and the data from previous studies showed that the difference in pain reduction in the two techniques did not show a large gap.

The results showed differences between the pretest and posttest in the control group. This difference was evident from the decrease in pain during the posttest. These results do not match the hypothesis because the control group was not given the Rebozo Technique intervention. Previous research on the spinal pain reduction program for pregnancy pain showed decreased pain in the group in the sixth week²⁴. The decrease in pain in the control group was probably due to the support system and a good delivery environment.

Pain is the main complaint of mothers during childbirth. Labour begins when the uterine muscles tighten during contractions. A contracted uterus puts intense pressure on the bladder, rectum, spine, and pubic bone. These things cause pain for the mother, plus a stretch in the perineal area²⁵. The intensity of pain the mother feels during childbirth is mild²⁰. The results in the control group are in line with this study, which showed that most of the pain was mild. While the intervention group showed different results, most respondents had severe pain under control.

This study has limitations, including that all respondents received family support during the active phase of the first stage of labour. The existence of family support may affect the intensity of pain felt by the respondent. The researcher also did not conduct further testing comparing the differences between the two research groups.

CONCLUSION

The results showed an effect of the Rebozo Technique in reducing labour pain in the mother's first stage of the active phase. The Rebozo technique is a non-invasive technique that is easy and inexpensive, so it is very appropriate to be applied to mothers who are about to give birth. Families can practice this technique to help mothers with a previous record that health workers must train them.

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CONFLICT OF INTEREST

There was no conflict of interest in this study.

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