

The Effectiveness of Using the Rebozo Technique in the Active Phase I Stage of Labor in Primigravida Maternity

Sri Kusmiyati¹, Elpinaria Girsang², Reny Siswanti³, Ranti⁴

^{1,2,3,4}Wijaya Husada Institute, Bogor, West Java, Indonesia, 16117

Email: ²wijayahusada@gmail.com

Abstract— Factors that induce a prolonged first stage labor include problems with the cervix, uterus, fetus, mother's pelvis, fear, and anxiety which trigger the release of adrenaline and lead the cervix to stiffen. (1) The rebozo technique is a non-pharmacological approach to pain management during labor. **Research method** --- This type of quasi-experimental research with a two-group intervention and control design used the SOP rebozo technique, observation sheets, and partographs to determine the duration of the active phase of the first stage of labor in primigravida mothers. The research was carried out in the Working Area of the Cipaku Health Center, Bogor City in June-August 2023, among 28 respondents of primigravida mothers during the first Active Phase, with 14 respondents in intervention group and 14 respondents in control group. The sampling technique used was purposive sampling. Data analysis techniques employed prerequisite tests (normality and homogeneity) and statistical tests used the simple paired t-test or the Wilcoxon rank test. With a significance value through the Mann-Whitney test of 0.040, it can be concluded that H_a is accepted and H_o is rejected, thus the use of the rebozo technique is effective in accelerating the length of the first active phase in primigravida mothers.

Keywords— Rebozo; Length of Childbirth; Primigravida mothers.

I. INTRODUCTION

Factors that induce prolonged first stage of labor include problems with the cervix, uterus, fetus, mother's pelvis, fear and anxiety that trigger the release of adrenaline and cause the cervix to stiffen.¹ The rebozo technique is a non-pharmacological method for pain management during labor. Rebozo approach uses long flat garment normally worn by women in Mexico for daily activities (covering shoulder as shawl, carrying baby, blanket, etc.).² Rebozo is usually worn around the pelvis and buttocks of the pregnant woman and then she will have to shake her hip during the first stage.³ The Rebozo technique is usually performed on pregnant women after 28th weeks of gestational age and can also be used during labor. In the early phase of labor and after entering active phase, rebozo method is performed by swinging from the side to side.⁴ The Rebozo technique is used in many countries as a non-pharmacological approach for accelerating labor. The Rebozo technique focuses on pulling the cloth and gently sifting or jiggling the mother's abdomen and pelvis.⁵ This movement helps mother feel more comfortable. This movement will make the mother feels like being hugged and trigger the release of oxytocin hormone which can help the labor process more smoothly.⁶

II. MATERIALS AND METHODS

Research Design

This type of quasi-experimental research with a two-group intervention and control design used the SOP rebozo technique, observation sheets and partographs to determine the duration of the active phase of the first stage of labor in primigravida mothers. The research was carried out in the Working Area of the Cipaku Health Center, Bogor City in June-August 2023,

among 28 primigravida mothers during the first Active Phase with 14 respondents in intervention group and 14 respondents in control group. The sampling technique used was purposive sampling. Data analysis techniques used prerequisite tests (normality and homogeneity) and statistical test done with Mann Whitney test.⁷

Research process: researchers met each primigravida mother in the first active phase to ask permission and explain the research procedures including the media and instruments to be used.⁸

After signing *informed consent* and conducting a pretest using the SOP for the rebozo technique, observation sheet and partograph were used to monitor the duration of the first active stage of labor in primigravida mothers and provide treatment to each respondent by showing the video of the rebozo technique and performing the rebozo technique on the mothers in the intervention group. Furthermore, when the cervical dilatation was above 6 cm, the rebozo technique was started for 2-5 minutes which was initially carried out by the researcher, then performed by the research assistant and husband or birth attendant during contractions or according to the wishes of the mother, up to 10 cm (full) dilatation. In the control group, the Rebozo technique was used only for monitoring purpose and using observation sheets and partographs with assistance of respondent's husband. Any data that has been obtained is then processed and data analysis was carried out.

III. OBSERVATION AND RESULTS

Based on the results of Table 1, out of 14 respondents, 8 respondents gave birth with fast active first phase less than 6 hours (57.1 %).

Based on the results of Table 2, out of 14 respondents, 6 mothers gave birth with a late active first phase of more than 8

hours (42.9 %).

TABLE 1. Frequency Distribution of Rebozo Technique Application in the Period of Active First Labor Stage in Primigravida Maternity Intervention Groups in the Work Area of the Cipaku Health Center, Bogor City, 2023

No.	Length of Time 1	Frequency	Percentage (%)
1	Slow >8 hours	2	14.3%
2	Normal 6-8 hours	4	28.6%
3	Fast < 6 hours	8	57.1%
Total :		14	100%

TABLE 2. Frequency Distribution of Rebozo Technique Application in the Duration of Active First Labor Stage in Primigravida Maternity Control Group Working Areas of the Cipaku Health Center, Bogor City in 2023

No.	Length of Time 1	Frequency	Percentage (%)
1	Slow >8 hours	6	42.9%
2	Normal 6-8 hours	5	35.7%
3	Fast < 6 hours	3	21.4%
Total :		14	100%

TABLE 3. The Effectiveness of Rebozo Technique in the Active First Labor Phase for Primigravida Maternity in the working area of the Cipaku Health Center, Bogor City, 2023

Group	N	Mean Rank	p- value
intervention	14	11.50	0,040
control	14	17.50	

Based on the results of Table 3, it is estimated that the mean rank in the intervention group was 11.50, while the control group has an average of 17.50. It can be concluded that there was an average increase approximately 5 hours for each respondent. With a significance value through the Mann Whitney test of 0.040, it can be concluded that H_a is accepted and H_o is rejected, which means that the use of the rebozo technique is effective in accelerating the length of the first active phase in primigravida mothers.

IV. DISCUSSION

Based on the results of the frequency distribution of Rebozo technique application in the first active phase of labor of primigravida mothers, out of 14 respondents in intervention group, 8 mothers gave birth with the first fast active phase <6 hours (57.1%).

Rebozo is a technique to provide space for the baby in the womb in a way that is fun for the mother.⁹ The Rebozo technique can be used during labor to help the muscles and muscle fibers in the uterine ligaments relax and reduce pain during contractions.¹⁰ Rebozo has been popularly used in developed countries by health workers in assisting deliveries as a non-pharmacological method. The rebozo technique is a non-invasive technique, practically performed when the mother is in a standing, lying down or kneeling position and both palms touch the floor. This involves gently controlled movement of the mother's hips from side to side using a specially woven scarf and is performed by a midwife or birth attendant.¹¹

The Rebozo technique is usually performed on pregnant women after 28 weeks of gestation and can also be carried out during labor. In the early stages of labor and after entering the active phase, it is performed with The Apple Tree Shake Technique, one of the most commonly performed on the hips of

a woman in labor, with controlled movements to help rock her from side to side in small increments. According to Simbolon et al., most practitioners who assist mothers with rebozo technique use a squatting position or standing with a slight bow.¹²

Based on the results of previous research showed that the length of the first stage in the intervention group before the rebozo application generally slow, namely 42.9% and after the intervention it went fast (71.4.1%). Whereas in the control group, the long stage I was generally normal both on the pre-test (71.4%) and post-test (64.3%).¹² Based on the results of the Frequency Distribution of Rebozo Technique Application in the Long Period of Labor in the Active Phase I in Primigravida Mothers in the Control Group in the Working Area of the Cipaku Health Center, Bogor City in 2023, out of 14 respondents, 6 mothers gave birth with a late first active phase more than 8 hours (42.9%).

Childbirth is a process of expelling products of conception (fetus and urine) that can live to the outside world from the uterus through the birth canal or other routes.¹³

In primigravida mothers, the average latent phase is 8 hours, with the upper normal limit at 20 hours. If the active phase in mothers lasts more than 12 hours, it is an abnormal condition. What is more important than this phase is the speed of cervical dilatation. A rate of less than 1.2 cm per hour indicates an abnormality and should alert the attending physician.¹⁴

Prolonged labor found on primigravida is about more than 18 hours. Prolonged parturition is a complex process in which psychological and physiological events are interrelated and cannot be separated.¹⁵ Some mothers experience longer labor compared to other mothers. Some deliveries take place slowly because of the large size of the fetus and its unusual location.¹⁶ Prolonged labor is labor that lasts more than 24 hours in primigravida mothers and more than 18 hours in multigravida mothers. If the progress of labor is not improving well during this period, the situation must be assessed immediately, the problem must be identified and treated within 24 hours.¹⁷

Based on the results of the Effectiveness of Rebozo Technique Application in the duration of the Active First Phase Labor in Primigravida Mothers in the working area of the Cipaku Health Center, Bogor City in 2023, it is estimated that the respondents in the intervention group averaged 11.50, while the control group has an average of 17.50. It can be concluded that with the Rebozo Application, there was an average increase of about 5 for each respondent. The significance value through the Mann Whitney test showed 0.040, which means that the use of the rebozo technique was effective in accelerating the length of the first active phase in primigravida mothers.

The rebozo technique is a non-pharmacological therapy to accelerate the first stage of labor. Research has shown the effectiveness of the rebozo technique for the first stage so that it can accelerate labor progress.¹⁸ The Rebozo technique functions as an optimization of the fetal position because the ligament muscles in the pelvis and uterus are in a tense position so the fetus in the uterus is not in an optimal position.¹⁹ In this study, researchers used 2 types of rebozo techniques, namely shifting and shaking apple trees. Rebozo shifting is useful for helping the ligament muscles in the uterus while the apple tree

is more for the pelvic muscle ligaments. If the mother's ligament muscles are tense with a poor birthing position, it will cause the uterus to be in an oblique position so that it is difficult for the baby to descend into the pelvis, while at 38 weeks of gestation the fetus should have descended into the pelvis. Researchers conducted research using the pre-experimental method which concluded that there was a difference in the length of the first stage between the treatment group (Rebozo technique) and the control group. Based on the results of previous research, examined the benefits of the Rebozo technique for the progress of labor, given that there was effectiveness in giving the rebozo technique for opening the cervix and lowering the fetal head in women in the active first stage of labor and the rebozo technique was very beneficial for the progress of labor.²⁰

Based on previous research regarding Rebozo Technique on the Intensity of Pain in the First Stage of the Active Phase and the Duration of Labor in Multigravida Mothers in 2020, the measurement of the average value of labor pain intensity in pre-intervention RSTA was 8.59 with a standard deviation 0.939. The average value of labor pain intensity in post-intervention RSTA was 7.94 with a standard deviation of 1.029. The results of the dependent sample t-test analysis show a 2-tailed significance value of 0.007 <0.05, which means that there was a significant difference between pre and post interventions in Rebozo shake the apple technique. The results of the dependent sample t-test analysis showed a significant 2-way (2-tailed) value of 0.000 <0.05, which meant there was a significant difference between pre and post in the intervention of the rebozo shifting while lying down technique.²¹

V. LIMITATION OF STUDY

The measuring instrument in this study used the Rebozo Technique SOP, observation sheets and partographs. The researchers needed quite a long time to get respondents according to the criteria so this might influence the research process.

VI. CONCLUSION

With a significance value through the Mann Whitney test of 0.040, the Rebozo technique is effective in accelerating the length of the first active phase in primigravida mothers. In this study, the authors assume that the Rebozo technique is very effective in accelerating the active phase of the first stage of labor because during the first stage of labor, the ligament muscles in the pelvis and uterus are in a tense position so that the fetus in the uterus is in a non-optimal position where this technique functions as an optimization of the fetal position and makes the mom feels comfortable.

Conflict of Interest : None

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