

Original Research

The Influence of Rebozo Technique on the Duration of Active Phase of Stage I Labor in Primigravida Mothers



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| Article Info | Abstract |
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| <p>Article history: Received: 30 May 2023 Accepted: 27 July 2023</p> <hr/> <p>Keywords: Rebozo technique, labor process, primigravida</p> | <p><i>Introduction:</i> The use of the Rebozo technique is believed to assist the labor process. The function of the Rebozo technique is to provide a wider pelvic space for the mother, making it easier for the baby to descend into the pelvis and speeding up the labor process. The objective of this study was to determine the influence of the Rebozo technique on the labor process.</p> <p><i>Methods:</i> This study employed a pre-experimental research with a satisfic group comparison design approach. The study population consisted of primigravida mothers who received prenatal treatment at the work area of Pagelaran Primary Health Center, with a total of 52 individuals. The sample consisted of 32 individuals who met the inclusion and exclusion criteria and were divided into two groups. Group 1: mothers who received the Rebozo technique, and Group II: mothers who did not receive the Rebozo technique. The measurement used in this study was the duration of Stage I labor.</p> <p><i>Results:</i> The data analysis employed the Chi-Square hypothesis test using SPSS software. The data from Group I indicated that the duration of labor was less than 6 hours for 14 respondents and more than 6 hours for 2 respondents. In Group II, 8 respondents without Rebozo technique had a labor duration of less than 6 hours, and 8 respondents had a labor duration of more than 6 hours. The hypothesis test yielded a p-value of $0.022 < 0.05$.</p> <p><i>Conclusion:</i> There are indications of the influence of the Rebozo technique on the duration of labor.</p> |

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INTRODUCTION

The natural process of ending a pregnancy that reaches full term or 37-40 weeks is a highly anticipated condition, namely the process of childbirth. In this condition, almost every woman will feel tension and happiness [1]. Labour is a physiological process involving the delivery of the fetus, placenta, and membranes from the uterus through the birth canal. This process begins with the opening and dilation of the cervix, which is caused by regular contractions of the uterus in terms of frequency, duration, and intensity. Labor is considered normal when it occurs at term (after 37 weeks) without complications [2]. Pain during labor can cause anxiety in mothers and may have an impact on the duration of labor. The incidence of prolonged labor remained the same at 1.8% between 2007 and 2012. Based on the Maternal Mortality Rate (MMR) in 2015, complications during the antenatal, intranatal, and postnatal periods accounted for 64% of all deliveries, with prolonged labor at 31%, bleeding at 7%, and infection at 5%. In the city of Malang, the occurrence of prolonged labor was reported to be 53.3%. Based on a preliminary study conducted at the Yuni Maternity Clinic in Pagelaran Subdistrict from September to November 26, 2021, a total of 56 primigravida and multigravida mothers in labor were identified.

The progress of labor in the active phase of Stage I, from 3 cm to 10 cm dilation, takes approximately 7 cm and lasts for 6 hours. The active phase of Stage I labor is divided into several parts, including the acceleration phase, which lasts 2 hours and involves

dilation from 3 cm to 4 cm, the maximal dilation phase, which takes 2 hours and involves rapid dilation from 4 cm to 9 cm, and the deceleration phase, which lasts 2 hours and involves slower dilation until reaching 10 cm. The active phase of Stage I labor is the most exhausting and challenging period, and most mothers start experiencing intense pain or discomfort as the uterine activity becomes more active. During this phase, contractions become longer, stronger, and more frequent, which can lead to anxiety. Anxiety in Stage I labor can result in increased adrenaline secretion. One of the effects of adrenaline is the constriction of blood vessels, leading to decreased oxygen supply to the fetus. The decrease in blood flow also weakens uterine contractions and prolongs the labor process, resulting in prolonged labor. Weak or inadequate uterine contractions are the most common cause of prolonged labor [3].

Rebozo is a shawl/cloth that is placed on the pelvis of the laboring mother, with controlled movements to help move the hips or slightly swing them from side to side. This movement provides pressure by rocking or shaking in the pelvis continuously during contractions, where the emphasis is precisely placed on the lumbar, sacrum and coccyx (Lumbosacral) bones of the patient with the rebozo cloth [4]. Research conducted by Damayanti and Fathimah (2021) states that the rebozo technique to reduce pain during labor which causes proper circular movements will make the mother feel hugged and trigger the release of the hormone oxytocin or happy hormone. so that the mother's labor is smoother. In the labor phase, there is muscle and ligament tension so

this rebozo movement is very helpful when the mother gives birth. This rebozo technique can help to become more relaxed without the help of any drugs. This makes this technique very useful when labor is long and the mother begins to feel comfortable [5]. The rebozo technique is effective in reducing contraction pain or in other words there is an effectiveness of the rebozo technique in reducing contraction pain during labor, this is revealed in the research of Maryati and Nursitiharoh (2023) it is believed that the provision of non-pharmacological techniques rebozo is able to provide physiological effects by providing a stimulus effect on the body that releases endorphins hormones [6]. Thus, the rebozo technique can be used during labor to help muscle fibers and ligaments in the uterus relax so as to reduce pain during contractions [7].

There are various efforts to effectively enhance contractions, including ambulation technique, changing positions, emptying the bladder, nipple stimulation, providing food and drink, and reducing maternal stressors, which have been proven effective in increasing the frequency of contractions [8]. Additionally, one effective method is the use of the Rebozo technique. The Rebozo technique helps create a wider pelvic space for the mother, making it easier for the baby to descend into the pelvis and speeding up the labor process. The function of the Rebozo technique is to optimize the position of the baby, relax the pelvic muscles and ligaments, and ensure optimal positioning of the baby in the womb. This technique is particularly useful during prolonged labor and provides comfort for the mother. Furthermore, the

technique can also be used to create space for the baby, ensuring that the baby is in the most optimal position for delivery [9].

Although research on the Rebozo technique has mainly focused on reducing pain during labor, there is a need to investigate its other effects, particularly its impact on the duration of active Phase I labor in primigravida mothers at the work area of Pagelaran Primary Health Center. This research is important to contribute to the scientific knowledge regarding the benefits of the Rebozo technique and serve as a reference in the clinic.

METHODS

This study employed a pre-experimental research design with a satisfic group comparison design approach to determine the influence of the Rebozo technique on the duration of active Phase I labor in the treatment group compared to the duration of active Phase I labor in the control group. The Rebozo technique is applied during contractions throughout the active Phase I of labor. There are 2 mechanisms for the rebozo technique. The first is the Shake Apple Tree technique. This technique is done by slowly moving the mother's buttocks according to comfort using a scarf and both hands supporting the mother on a gym ball or can use a sofa chair covered with pillows. The second technique is Rebozo Shifting which in this technique uses a scarf/cloth/bate to wrap around the stomach, the partner/husband can stand with his legs wide apart and take a comfortable position like swinging a bicycle using a scarf gently. The research location is

conducted at the work area of Pagelaran Primary Health Center. The population of this study consists of all primigravida mothers in labor, totaling 52 individuals. The sample is determined using purposive sampling technique, and the inclusion criteria are as follows: (a) primigravida mothers; (b) no history of miscarriage; (c) willingness to participate as respondents; (d) fetal presentation is cephalic; (e) no history of placental abruption; and (f) full-term pregnancy.

The variables in this study are the Rebozo technique and the duration of active Phase I labor. The Rebozo technique involves controlled movements to help move the pelvis and relax the muscles around the pelvis, aiding the baby in achieving an optimal position. Rebozo techniques given are shake apple tree and shifting type rebozo techniques. The shake apple tree method is by slowly shifting the mother's buttocks according to comfort using a shawl wrapped around the waist to the pelvis and both hands supporting the mother's gymnastic ball, then continued with the shifting rebozo technique using a cloth to wrap the mother's abdomen. The shawl is then shaken slowly, gently and carefully like swinging. Each movement can be done for 2-5 minutes and repeated as long as the mother feels comfortable. The duration of active Phase I labor is measured as the time taken for the cervix to dilate from 4 cm to 10 cm in primigravida mothers. Data analysis involves the Chi-Square hypothesis test using

the SPSS application. This research was declared ethically feasible by the Health Research Ethics Committee Institute of Health Science STRADA Indonesia ref: 2911/KEPK/III/2022.

RESULTS

Table 1 shows that from the 32 respondents, the majority were in the age range of 17-25 years. All respondents were in the active phase of Stage I labor, with the majority having a labor duration of less than 6 hours, amounting to 23 individuals, and birth weight between 2500-3500 grams.

Table 2 In the cross-tabulation table between Rebozo Technique and Duration of Labor mentioned above, it is observed that the provision of Rebozo Technique involved 16 respondents. From 16 respondents who received the Rebozo Technique, 14 had a labor duration of less than 6 hours, while 2 had a duration exceeding 6 hours. On the other hand, among the 8 respondents without Rebozo Technique, 8 had a labor duration of less than 6 hours, and 8 had a duration exceeding 6 hours. Table 2 shows that there is no expected value smaller than 5. The smallest expected value is 5.326, satisfying the condition for the Chi-square test. From the Chi-square test results, a p-value of 0.022 was obtained. Using an alpha value of 0.05, the p-value or significance level is < 0.05 , indicating that there is an influence of the Rebozo technique on the duration of labor.

Table 1

General Research Data

| Characteristic | Intervention | | Control | |
|--------------------|--------------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage |
| Age: | | | | |
| 17-25 year | 10 | 31,25% | 8 | 25% |
| 26-35 year | 6 | 18,75% | 8 | 25% |
| Dilation | | | | |
| Dilation1-3 | 0 | 0% | 0 | |
| Dilation4-10 | 16 | 50% | 16 | 50% |
| Birth Weight | | | | |
| 2500-3500 grams | 15 | 46,90% | 14 | 43,75% |
| >3500 grams | 1 | 3,10% | 2 | 6,25% |
| Duration of Labor: | | | | |
| <6 hours | 14 | 43,75% | 8 | 25% |
| >6 hours | 2 | 6,25% | 8 | 25% |

Table 2

Cross-tabulation of Rebozo Technique and Duration of Labor

| Indicators | | Duration of Labor | | Difference | P-value |
|--------------------------------------|----------------|-------------------|----------|------------|---------|
| | | <6 hours | >6 hours | | |
| Provision of Rebozo Technique | Rebozo | 14 | 2 | 16 | 0,022 |
| | Without Rebozo | 8 | 8 | 16 | |
| Total | | 24 | 10 | 32 | |

DISCUSSION

The results of this study show that out of the 32 respondents, the majority were in the age range of 17-25 years. All respondents were in the active phase of Stage I labor, with the majority having a labor duration of less than 6 hours and a birth weight between 2500-3500 grams. This is consistent with the findings of a study by Ardhiyanti (2016), which revealed that the mother's age is a factor related to the

physical and psychological readiness of the mother, which can influence fetal growth and development as well as the duration of the labor process [9].

In the cross-tabulation table between the Rebozo Technique and the duration of labor mentioned earlier, it is observed that the provision of the Rebozo Technique involved 16 respondents. Out of the 16 respondents who received the Rebozo Technique, 14 had a labor duration of less than 6 hours, while 2

had a duration exceeding 6 hours. On the other hand, among the 16 respondents without the Rebozo Technique, 8 had a labor duration of less than 6 hours, and 8 had a duration exceeding 6 hours. These findings support the research by Afrilia and Suksesty (2021), which demonstrated that the use of the Rebozo technique in primigravida mothers resulted in a faster active Phase I labor duration [10].

Rebozo helps create a wider pelvic space for the mother, making it easier for the baby to descend into the pelvis and speeding up the labor process [11]. The Rebozo technique is used to position the baby optimally, as sometimes the mother's muscles and ligaments experience tension. If the baby is not in a good position, it may be difficult for the fetus to enter the pelvis, as by 38 weeks of gestation, the baby's head should have descended into the pelvis. Rebozo can be used without fear of causing the fetus to shift from the optimal position to malposition [12]. Other studies have also stated that the rebozo technique acts as an optimization of fetal position because the ligament muscles in the pelvis and uterus are in a tense position so the fetus in the uterus is in a non-optimal position. There are two types of rebozo techniques, namely shifting and shake apple tree. Shifting rebozo is useful to help the ligament muscles in the uterus while apple tree is more to the pelvic muscle ligaments. If the mother's ligament muscles are tense and with a poor birthing position, the uterus will be in a tilted position making it difficult for the baby to descend into the pelvis [13].

The research findings by Munafiah (2020) indicated a score of 10.00 for the

Rebozo technique group and 9.00 for the control group. The statistical analysis using the Mann-Whitney Test resulted in a ρ value for the difference between the Rebozo technique intervention group and the control group as 0.018, which is < 0.05 . Thus, the alternative hypothesis (H_a) is accepted, indicating that there is a difference in the effectiveness of the intervention and control groups in cervical dilation during active Phase I labor in PMB C, Semarang [11]. According to Nurpratiwi (2020), the dependent sample t-test analysis showed a significant two-tailed value < 0.05 , indicating a significant difference between pre- and post-intervention in both the Rebozo technique's "shake the apples" and "shifting while lying down" variations. Rebozo is a shawl or wrap that is used on the mother's pelvis, with controlled movements to help move the pelvis or gently sway it from side to side [14].

Based on the research results, the respondents who received the Rebozo technique mostly experienced fast active Phase I labor. This is consistent with previous theories by researchers that the provision of the Rebozo technique can help lower the fetal head and relax the tense ligament muscles of the mother. Besides the application of the Rebozo technique, there are other factors that influence the acceleration of active Phase I labor, including age, education, occupation, and the presence of labor support, which were predominantly favorable characteristics within the treatment group. These factors significantly contribute to supporting the acceleration of active Phase I labor. Therefore, after receiving the Rebozo technique during active Phase I labor at 4 cm of cervical dilation

for 2-5 minutes or during the intervals between contractions, the majority of primigravida inpartu experienced an average active Phase I labor duration of less than 6 hours, indicating a fast progression. In line with Musliha's research (2023) which provides the rebozo shake apple tree technique for inpartu multigravida, it shows that the effectiveness of the Rebozo technique on the length of the first stage of labor is due to the existence through the rebozo technique the pain experienced by the mother is reduced and this has an impact on the relaxation process experienced by the mother. Through the Rebozo technique, it can create a positive psychological effect from the feelings and support that laboring mothers get from the labor support team such as midwives, husbands, and families when they use Rebozo. Moreover, the slight swaying of the fabric swing on the mother helps provide a wider pelvic space for the mother so that the baby descends the pelvis more easily and the delivery process is faster. Looking at the results of the study, it can be seen that Rebozo can be used during labor to help the muscles and muscle fibers in the uterine ligament relax so as to reduce pain during contractions [15]. However, there were two respondents who experienced a slow active Phase I labor despite receiving the Rebozo technique. One of the reasons could be psychological factors, such as the mother's unfocused behavior during body positioning or excessive fear and worry about the labor process, which can also affect the progress of labor.

CONCLUSION

The conclusion of this study is that there is a significant positive effect of the Rebozo technique on the duration of active Phase I labor in laboring mothers. It is better if the rebozo technique can be applied to mothers during labor, so that head descent can be maximized and pain can be minimized, this can affect the psychology of the mother and the first stage can be faster.

CONFLICT OF INTEREST

No conflict of interest has been declared by any of the authors.

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