EFFECTIVENESS OF THE REBOZO METHOD AND ZILGREI METHOD ON THE DURATION OF THE FIRST STAGE IN VAGINAL DELIVERY

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ABSTRACT

Background: Childbirth is considered a stressful and frightening process, especially for first-time mothers or even those who have already given birth, because the process causes pain, anxiety, and discomfort, resulting in the labor process taking longer. The rebozo method and zilgrei method are nonpharmacological methods that, according to several studies in Indonesia and abroad, are effective for preventing prolonged labor.

Purpose: This study aimed to determine the effectiveness of the rebozo method and zilgrei method on the duration of the first stage of vaginal delivery.

Method: This study used a quasi-experimental design with a post-test-only non-equivalent group design conducted in October-December 2023. The total sample was 26 respondents using a purposive sampling technique.

Results: The difference test using Mann Whitney obtained an Asymp.Sig.(2-tailed) value of 0.02<0.05. It showed a significant difference between the effectiveness of the rebozo method and the zilgrei method on the duration of the first stage of vaginal delivery at Akhmad Berahim Hospital, Tana Tidung Regency. Furthermore, the mean rank value of the rebozo group (16.5) was greater than the zilgrei group (10.5), indicating that the rebozo method was more effective than the zilgrei method in accelerating the duration of the first stage of vaginal delivery.

Conclusion: This indicates that the rebozo method and the zilgrei method can be used as effective interventions nonpharmacological in accelerating the duration of the first stage of vaginal delivery.

Suggestion: Can use the Rebozo and Zilgrei methods to reduce the number of referrals due to old partus and apply them in midwifery practice and can use this research as a literature reference and reference for students in...
further research and enrich experience and knowledge in the application of complementary therapies for maternity mothers.

Keywords: Rebozo, Zilgrei, Duration of First Stage of Labor

INTRODUCTION

Childbirth is an important moment that is happy for every prospective parent, especially for prospective mothers. However, on the one hand, childbirth is also considered a stressful and frightening process, especially for first-time mothers or even those who have given birth though, because the process that causes pain, anxiety, and discomfort has an impact on making the labor process longer. The stages of normal labor are determined by several factors, namely power (his and thrust) coming from the mother that pushes the fetus out of the birth canal, passage (birth canal) where the size of the mother's pelvis plays an important role. Passanger (fetus, placenta and amniotic membranes) namely the position of the fetus, the location of the fetus and presentation, psychic includes feelings of fear, worry, or anxiety, especially in the mother, then the helper factor which is a factor that also affects the occurrence of long partus, where it takes the ability and skills of labor helpers to make the duration labor becomes faster (Wijayanti & Safitri, 2022).

Many alternative ways are an effort to deal with and prevent the occurrence of old partus, namely by pharmacological and nonpharmacological methods. The rebozo technique and zilgrei technique are nonpharmacological methods that according to several studies in Indonesia and abroad are effective in preventing old partus. The rebozo technique is by wrapping the rebozo (long cloth) around the mother's pelvis and buttocks and shaking it during labor. This swing from rebozo can help make the pelvic space wider so that the baby is easier to descend the pelvis and the duration of labor becomes faster, besides that it also makes the mother more relaxed and able to position the baby into the birth canal (Munafiah, Astuti, et al., 2020). While the zilgrei method is a well-known method in Germany and is a method used by doctors and midwives. This method has been benefited by thousands of maternity mothers in Germany. Thanks to this method, maternity mothers only need a fairly short delivery time and feel their labor process becomes lighter and more beautiful. This can be seen from the data on maternal mortality in Germany which is only 4 per 100,000 live births. The application of the zilgrei method with breathing techniques with certain rhythms and positions that can push the fetus in an ideal position and make the opening process in labor smoother (Danuatmaja, 2018).

Globally, the mortality rate due to prolonged partus reaches 3-8%, where there are about 8-11% of pregnant women experiencing abnormalities at the time of childbirth. Slowing labor in the active phase was found in 25% of nullipara women and 15% in multiparous women. A Swedish study found that 23% of patients who went into labor experienced a slowdown in progress in both the latent and active phases. The study also found that the slowdown in labor progress that occurred was more common in nullipara women (29.2%) than multiparous (17%) (Ängeby, K. et al., 2018). In Indonesia, based on data from the Indonesian Demographic and Health Survey (2020) states that old partus causes 1-1.8% of maternal deaths in 2016 – 2019. The number of maternity mothers in North Kalimantan in 2021 was 12,998 deliveries with the number of maternal deaths of 29 people, while the causes of death included bleeding 10.3%, hypertension in pregnancy 17.2%, Covid 19 24.1%, and other causes of 48.2% including old partus (Ministry of Health RI, 2021). Based on data from the Tana Tidung Health Office (2023), the number of maternity mothers in 2022 is 461 deliveries with the number of maternal deaths consisting of 2 people. At RSUD Akhmad Berahim Tana Tidung in 2022, there were 187 maternity mothers with a total of 83% vaginal delivery and 17% referrals with cesarean delivery with a long partus. When compared to the RSUD in Bulungan Regency with a birth rate of 338 / 100,000 kh, the number of referral cases only 5% (Badan Pusat Statistik Kabupaten Bulungan, 2021). This is what causes high interventions for labor induction and surgery (SC) because the principle of old partus management is to speed up the labor process, both using medicamentose in this case labor induction and surgery (SC) (IDHS, 2018). This cause of maternal death shows that maternal death can be prevented if the coverage of services is accompanied by good quality of service.

Primiparous mothers are expected to experience dilatation of at least 1 cm / hour and multiparous mothers slightly faster at 1.5 cm / hour. According to Friedman, the average duration of active phase labor in primiparous mothers is 5.8 hours or 348 minutes, while according to Kilpatrick and Laros the average duration of the active phase
in primiparous mothers is about 8.1 hours or 486 minutes. When monitored through a partograph, the active phase starting from the opening of 4 cm to 10 cm is normally 6 hours or 360 minutes. One of the factors causing prolonged partus is discomfort, anxiety and pain felt by the mother as labor progresses. Therefore, along with the times, scientists have developed various kinds of treatments to reduce pain and fear during labor so that the duration of labor is faster. Actually, this effort can not only be done by pharmacological means, but can also be overcome nonpharmacologically. In terms of risks and side effects, nonpharmacological methods are considered safer, although the success is individual (Rosyati, 2017).

In Indonesia there are several studies that examine the effectiveness of the rebozo method and zilgrei method, including the results of research from Nurpratiwi, et al (2020) entitled Rebozo Technique on Pain Intensity During the Active Phase and Duration of Labor in Multigravida Mothers. The results of the dependent sample t-test analysis showed a significant value of 2-tailed< 0.05, so there is a significant difference between pre and post in the rebozo technique intervention. According to Td & Masini (2019) about the Effect of the Pelvic Rocking Technique using the birthing ball and the Rebozo Technique on the length of labor when I. The results of this study showed that respondents who used conventional techniques by walking had a mean of 19.73 and respondents who used the Pelvic Rocking technique with Birthing Ball had a mean of 11.27 and an average value after the rebozo technique of 3.80 and a control of 3.30. Statistical tests using Mann-Whitney obtained p-value results for the difference between the intervention group (rebozo technique) and control of 0.028 < 0.05 concluded that there was a difference in cervical opening in maternity mothers before and after the rebozo technique when compared to the control group which means that this rebozo technique is more effective in increasing the cervical opening of maternity mothers during the active phase I.

On the other hand, with different methods, based on research conducted by (Wijayanti & Safitri, 2022) regarding the effect of the zilgrei method on the length of time 1 active phase in maternity mothers, it was found that almost all samples experienced 1 fast active phase (≤ 6 hours) of 13 samples (61.3%) and a small part experienced 1 normal active phase (6 hours) of 3 samples (18.7%). Referring to the study with the zilgrei method, the work of the pelvic muscles becomes aligned so that the opening stages become smooth.

Based on a preliminary study conducted by researchers in August 2023 at Akhmad Berahim Hospital, based on the monthly report of maternity mothers in 2023, data was obtained from January to April 2023, there were 18 cases of old partus (12.4%) from 145 vaginal deliveries. Then for labor induction there were 12 cases (66.6%) and referrals with diagnosis of old partus and fetal distress due to induction failure recorded 5 cases (41%) from a total of 12 referrals. The above data illustrate that the old partus causes some complications during childbirth for both mother and fetus. Treatment for old partus cases at RSUD Akhmad Berahim is only limited to pharmacological treatment from a specialist doctor and leads to referral action if the general condition of the mother and fetus worsens because there is no OK installation (operating room). On the other hand, the distance that must be traveled from Akhmad Berahim Hospital, Tana Tidung Regency to the referral hospital is quite far, which is about 4-5 hours by road and cross-district road infrastructure which on average is damaged.

So far there has been no non-pharmacological action given by midwives to inpartu mothers to prevent and treat old partus cases. In fact, there are many studies that prove that providing certain complementary care is effective in preventing the occurrence of old partus, including the rebozo method and the zilgrei method. This makes researchers interested in conducting research on the Effectiveness of the Rebozo Method and the Zilgrei Method on the Duration of Kala I in Vaginal Delivery at Akhmad Berahim Hospital in 2023.

RESEARCH METHODS
Type of quantitative research with Quasy-experimental research method with post test only nonequivalent groups design approach. To see the effectiveness of the rebozo method, namely the use of long cloths to provide support and comfort to pregnant women and the zilgrei method, which is a therapeutic technique that combines breathing and body movements to relieve pain and Tension. The population of all mothers who gave birth at Akhmad Berahim Hospital between June and August 2023 is 78 patients. The sample used 26 respondents with purposive sampling techniques. The research was conducted at RSUD Akhmad Berahim, Samarinda. The instrument uses partograph sheets and observation sheets. Analysis of univariate and bivariate data (t-test).

RESEARCH RESULTS
Univariate Analysis

Table 1

Vivi Sari Diastuti, Dwi Hartati, Tuti Meihartati, Heni Purwanti

Frequency Distribution Overview of Respondent Characteristics By Age, Education and Occupation

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of Respondents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 20 years</td>
<td>5</td>
<td>19.2</td>
</tr>
<tr>
<td>20-35 years</td>
<td>18</td>
<td>69.2</td>
</tr>
<tr>
<td>&gt;35 years</td>
<td>3</td>
<td>11.5</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary School / MI</td>
<td>2</td>
<td>7.7</td>
</tr>
<tr>
<td>Junior High School / MTs</td>
<td>5</td>
<td>19.2</td>
</tr>
<tr>
<td>Senior High School / MA</td>
<td>12</td>
<td>46.2</td>
</tr>
<tr>
<td>College</td>
<td>7</td>
<td>26.9</td>
</tr>
<tr>
<td>Job</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housewives</td>
<td>15</td>
<td>57.7</td>
</tr>
<tr>
<td>Self Employed</td>
<td>3</td>
<td>11.5</td>
</tr>
<tr>
<td>Civil Servants</td>
<td>8</td>
<td>30.8</td>
</tr>
</tbody>
</table>

Based on table 1, data was obtained that most respondents aged 20-35 years, namely 18 respondents (69.2%), based on education, almost half had the last high school / MA education, namely 12 respondents (46.2%) and most of the respondents’ jobs as housewives, namely 15 respondents (57.7%).

Table 2

Bivariate Analysis

Frequency Distribution of Duration of Labor Period I After Rebozo Method Given to Maternity Women

<table>
<thead>
<tr>
<th>Duration</th>
<th>Frequency (f)</th>
<th>Presentase (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 6 hours</td>
<td>3</td>
<td>23.1</td>
</tr>
<tr>
<td>&lt; 6 hours</td>
<td>10</td>
<td>76.9</td>
</tr>
</tbody>
</table>

Based on table 2, it is known that most respondents given the rebozo method intervention experienced a long period I with a fast duration of 76.9% and a small part experienced a long duration of labor (23.1%).

Table 3

Frequency Distribution of Duration of Labor When I After Zilgrei Method Given to Maternity Women

<table>
<thead>
<tr>
<th>Duration</th>
<th>Frequency (f)</th>
<th>Presentase (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 6 hours</td>
<td>9</td>
<td>69.2</td>
</tr>
<tr>
<td>&lt; 6 hours</td>
<td>4</td>
<td>30.8</td>
</tr>
</tbody>
</table>

From table 3 it can be seen that respondents who were given the zilgrei method intervention mostly experienced a long duration of time I (69.2%), namely 9 respondents.

Table 4

Normality Test of Labor Duration Kala I In the Rebozo Method Group and the Zilgrei Method Group in Maternity

<table>
<thead>
<tr>
<th>Duration of Kala I</th>
<th>Intervention Group</th>
<th>Shapiro - Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Statistik</td>
</tr>
<tr>
<td></td>
<td>Rebozo</td>
<td>0.533</td>
</tr>
<tr>
<td></td>
<td>Zilgrei</td>
<td>0.592</td>
</tr>
</tbody>
</table>

Based on the normality test conducted by researchers on the duration of labor duration data on the first batch of the rebozo method and zilgrei method interventions using the Shapiro Wilk test, a significant value of 0.000 was obtained from each group. Because the p-value < from 0.05, the data is not normally distributed.
The results of the study in table 4.5 show that based on the output of statistical tests, the Asymp value is known. Sig. (2-tailed) of 0.02 < 0.05 which means that Ha is accepted. Thus, it can be concluded that there is a difference in the effectiveness of the rebozo method and the zilgrei method on the duration of vaginal delivery at Akhmad Berahim Hospital, Tana Tidung Regency in 2023.

From this data, it is also known that the mean rank value of the rebozo method is greater (16.5) when compared to the zilgrei method (10.5). This means that it can be concluded that in this study the rebozo method is more effective than the zilgrei method to accelerate the duration of time I in vaginal delivery.

**DISCUSSION**

**Duration of Labor After Rebozo Method Given to Maternity Women**

In this study, the duration of time I was seen from the opening phase with his < 2 times and 10 minutes in labor. In the group given the rebozo method intervention, namely by placing the cloth wide in the pelvic area to under the buttocks, then moving the cloth in short movements slowly and increasing the speed which is done for 5-10 minutes when contractions take place.

Based on the results of the analysis, it was found that the duration of labor when I in the group given the intervention of the rebozo method was as many as 11 respondents that most respondents experienced time I with a fast duration with a percentage of 76.9%, which is as many as 10 respondents. Then data were obtained that the average duration of labor when I experienced respondents after getting the rebozo method intervention was 5 hours 47 minutes and the average intervention given was 5.8 times.

This is in line with research conducted by Munafiah, et al., (2020) entitled "Benefits of the Rebozo Technique on the Progress of Labor". The results showed that the rebozo technique was more effective against lowering the fetal head during labor.

The rebozo method can be used during labor to help the muscle fibers in the uterine ligaments relax so as to reduce pain and can create positive psychological and social effects, so that mothers who give birth in a relaxed state, all muscle layers in the uterus will work together harmoniously so that labor goes smoothly, easily, and comfortably. This swing from rebozo can help make the pelvic space wider so that the baby is easier to descend the pelvis and the duration of labor becomes faster, besides that it also makes the mother more relaxed and able to position the baby into the birth canal (Afrilia & Suksesty, 2021).

The same thing was also stated by Iversen et al., (2017) in their book entitled "Danish women's experiences of the rebozo technique during labour" that the rebozo method in labor aims to help calm the mother without the use of drugs, make the mother comfortable and also reduce pain during labor. Another goal is to help the optimal fetal position by helping the fetal head descend into the pelvis, reduce contraction pain caused by pressing the fetal head in the pelvis and make the mother learn to release tension with rhythmic movements and relax, freedom of movement and also the use of light massage on the buttocks and thighs, which will make the ligaments in the uterus and abdominal muscles relax causing comfort and reducing labor pain so that labor time becomes more fast.

However, there was a small percentage (23.1%) of respondents who experienced a long duration of labor during the first period, which was as many as 3 respondents. This is because respondents have babies with a larger weight when compared to other respondents. In addition, there are also respondents who have inadequate contractions. According to Marmi (2018) there are 3 important factors that play a role in childbirth, namely pasanger, passage and power. Where the passanger in labor is the fetus, amniotic fluid and placenta. In this case, the fetus of the respondent with a greater weight. Then power in this case is contraction of the abdominal muscles, contraction of the diaphragm and strength in the ligaments. Uterine contractions that occur regularly, gradually and adequately can open the cervix so that the fetus can exit the birth canal. In respondents there were inadequate contractions, thus making the process of...
lowering the fetal head and opening of the cervix longer. This affects the labor in 3 respondents to be longer.

Duration of Labor After Zilgrei Method Given to Maternity Women

In this study, the group was given the zilgrei method intervention, which is a movement and breathing exercise technique performed on pregnant women to help speed up the opening of the cervix and reduce labor pain at time I. Based on data analysis, it was found that the duration of labor during I in the group given the intervention of the zilgrei method almost all experienced a long duration of time I (69.2), which was 9 people and a small number who experienced a rapid duration of time I (30.8%) as many as 4 people. The average duration of labor when I experienced by respondents after receiving treatment with the zilgrei method was 7 hours 58 minutes and the average intervention given was 7.3 times. In the zilgrei group, there were several factors that caused respondents to experience a long duration of labor.

The baby's weight is greater when compared to other respondents who experienced a rapid duration of labor when I. Prawirohardjo (2018) mentioned that a large fetus is a factor in the occurrence of a longer duration of labor because it will be difficult to pass through the birth canal. The contractions experienced by respondents were inadequate. Setyorini (2017) said there are several factors that cause labor including hormonal factors and uterine muscle factors that make contractions arise in labor so that if there are no regular and repeated contractions, the duration of labor will be longer. The position of the mother and the mobilization of the mother are lacking. Mothers with improper positions and less mobilization will also prolong the duration of labor, this is in line with the theory put forward by Marmi (2018) that the position of the mother can affect the anatomical and physiological adaptations of labor. The change of position in the mother aims to reduce fatigue, provide comfort and improve circulation. Upright positions (example: standing, walking, sitting and squatting positions) can provide several benefits, one of which is to allow the force of gravity to help the fetus decline. In addition, this position is considered to reduce the incidence of pressure on the umbilical cord. The psychological condition of the mother because she is not accompanied by a partner and family. Psychology is one of the factors that influence childbirth. It is important for mothers who are in labor to feel positive and feel joy, a sense of pride and certainty so that mothers become confident and truly become real women when understanding their condition from pregnancy to childbirth and will meet the child. One of the influences is the support from the closest people in the mother's life such as husbands, friends, and family.

On the other hand, some studies show that the application of the zilgrei method to inpartu mothers can accelerate the progress of cervical opening. In addition, the zilgrei method can also help reduce tension in the pelvic muscles and increase the potential of the muscles in the uterus to push the fetus towards the birth canal (Saputri et al., 2018). As research conducted by Janah (2021) shows that based on the results of the One-Sample Test test Most of the respondents (81.3%) experienced a fast active phase I (≤ 6 hours), a small percentage (18.7%) of respondents experienced a slow active phase I (≥26 hours). Based on the results of the One Sample Test test analysis, a significant value of 0.000 p value of 0.05 was obtained. Because the p value (0.000) < (0.05), it can be concluded that there is an influence of the Zilgrei method on the acceleration of the length of time I active phase in maternity mothers.

According to researchers, the zilgrei method cannot be used as the only method in reducing pain and speeding up the progress of labor. The use of zilgrei method along with other methods, such as the rebozo method, birth ball, labor position, masase, and breathing relaxation technology can increase effectiveness in reducing labor pain and accelerate labor progress. Like a study conducted by Yuliandari (2020) entitled "The Effect of the Combination of the Zilgrei Method and Lumbar Massage on the Progress Process of Labor in Primigravida", with the results of the duration of labor during the latent phase I, the average control and intervention group was 368 minutes and 307 minutes each with a time difference of 61 minutes (p = 0.002) so that the combination of the zilgrei method and lumbar massage affected the progress of the labor process during the latent phase I in primigravida.

This suggests that zilgrei interventions can be very effective when combined with other interventions. Although some studies show positive results related to the application of the zilgrei method, there are variations in the progress of labor between participants. So it can be concluded that the effectiveness of the zilgrei method may vary depending on the combination with other interventions, individual characteristics and conditions of labor.
The effectiveness of the Rebozo method and the Zilgrei method on the duration of vaginal labor

In the results of different tests conducted to analyze the difference in the effectiveness of the rebozo method and the zilgrei method on the duration of vaginal delivery, data were obtained based on the output of statistical tests known Asymp values. Sig. (2-tailed) of 0.02 < 0.05. Thus, it can be concluded that there is a significant difference in the effectiveness of the rebozo method and zilgrei method on the duration of vaginal delivery at Akhmad Berahim Hospital, Tana Tidung Regency in 2023.

Furthermore, from the results of statistical tests in this study, the mean rank value in the rebozo treatment group was 16.5 greater when compared to the mean rank value of the group that received the zilgrei method intervention, which means the rebozo method is more effective for accelerating the duration of time I in vaginal competition when compared to the zilgrei method.

The rebozo method is a non-pharmacological therapy to accelerate the opening of the cervix of maternity mothers. In this study proved the effectiveness of the rebozo method for cervical opening thereby accelerating the progress of labor. The rebozo method serves as an optimization of fetal position because 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. In this study, researchers used a type of apple tree rebozo shake method. Rebozo shake apple tree will provide relaxation to the ligaments of the pelvic muscles. If the mother’s ligament muscles are tense and with a poor childbirth position, it will result in the uterus in an oblique position so that the baby is difficult to descend into the pelvis. Where it should be at 37 weeks gestation, the fetus has descended into the pelvis. So the rebozo technique is very helpful for mothers in the labor process.

This is in line with a study on the effectiveness of the rebozo method in labor conducted by Simbolon & Siburian (2021), showing that the rebozo method is believed to reduce labor pain and speed up the labor process. In addition, Rahmawati, et al (2023) also stated in their research that the rebozo method is also known to be effective in managing and controlling pain management in maternity mothers. The results showed that the rebozo technique can provide benefits in speeding up the labor process and reducing pain, so it can be considered effective in helping labor progress.

In this study, overall respondents from two groups both treated with the rebozo method and the zilgrei method stated that the intervention provided by the researcher made respondents feel calmer, more comfortable and pain when contractions could be diverted. In addition, respondents also felt more cared for by midwives, because each respondent felt painful contractions in addition to being given the intervention and accompanied by positive affirmations by midwives. This makes mothers become more excited and focused when receiving instructions given by midwives so that respondents can be better prepared to face and undergo the labor process. As a result, labor becomes easier and the duration of labor can also be faster.

CONCLUSION

Research at Akhmad Berahim Hospital, Tana Tidung Regency in 2023 on 26 respondents showed that the Rebozo Method was more effective in accelerating the duration of time I in vaginal delivery compared to the Zilgrei Method. The majority of mothers given the Rebozo intervention experienced rapid labor duration (76.9%), while most who were given Zilgrei experienced long duration (69.2%). Statistical tests confirm this significant difference with Asymp values. Sig. (2-tailed) of 0.02, indicating that the Rebozo Method is superior in accelerating the labor process when

SUGGESTION

Can use the Rebozo and Zilgrei methods to reduce the number of referrals due to old partus and apply them in midwifery practice and can use this research as a literature reference and reference for students in further research and enrich experience and knowledge in the application of complementary therapies for maternity mothers.

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