Journal for Quality in Women's Health
DOI : https://doi.org/10.30994/jqwh.v7i2.255 https://jqwh.org/
ISSN: 2615-6660 (print); 2615-6644 (online) Vol.7 No 2. September 2024. Page.137-145

Tersedia *online* di https://jqwh.org/index.php/JQWH

Differences In Left Tilt Position With And Without Use Of Peanut Ball On The Length Of Labor Process In The 1st Stage In The Working Area Of The Panggungrejo Health Centre Blitar District

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ABSTRACT

Background : Giving birth naturally is every pregnant mother hope, some cases required minimal medical intervention. Normal labor and birth take place within 18-24 hours without complications for either mother or fetus. Peanut balls are one tools used to progress labor. The research aims to determine the difference between the left side position with and without using peanut ball on the length of first stage labor.
Method : Pre-experimental research design with 2 treatment groups. The population all 1st stage labor mothers in Panggungrejo Health Center is 30 people. Samples taken using accidental sampling technique. Independent variable oblique labor position with and without peanut ball, dependent variable length of 1st stage labor. SOP research instrument and partograph observation sheet. Data analysis used the t test.
Result : 1) The length of 1st stage labor oblique position without peanut ball was almost all respondents, namely 12 (80%) in the normal category. 2) The duration first stage labor tilted position with peanut ball for all respondents, namely 15 (100%) in the normal category.
Analysis : There is difference the length labor in the 1st stage labor in side position with and without the use of peanut balls in Panggungrejo Health Center, Blitar Regency, where independent t test statistical test produces P value Value = 0.026 which is smaller than α = 0.05 (0.026 < 0, 05).
Conclution : Using peanut ball by adjusting the mother's position during labor can reduce pain, strengthen uterine contractions and allow normal fetal descent to speed up the length of the first stage of labor.

Keywords : Length Of Labor, Left Tilt Position, c

1. INTRODUCTION

Giving birth naturally is the hope of every pregnant mother; in some cases, minimal medical intervention is necessary. Childbirth and normal delivery are the processes of expelling the fetus that occur during a full-term pregnancy (37-42 weeks), occurring spontaneously with the head presenting, lasting 18-24 hours without complications for either the mother or the fetus. One of the issues in childbirth is prolonged labor. Prolonged labor is defined as labor that progresses very slowly, with a duration of more than 20 hours for primiparas and more than 14 hours for multiparas (Prawirohardjo, 2016).

Prolonged labor in both the active phase and the second stage has effects on both the mother and the fetus. There is an increase in the incidence of uterine atony, laceration, bleeding, infection, maternal fatigue, and shock. The high birth rate with high-risk actions increasingly worsens the danger for mothers. During the prolonged labor, the mother experienced exhaustion due to not eating or drinking, which could lead to dehydration, sunken eyes, appearing ill, pale, and cold sweats, increased pulse, weakened contractions, and a distended abdomen. (Yuliasari, dkk, 2016). According to the WHO, there are cases of prolonged labor in women worldwide, amounting to 289 per 100,000 live births. Meanwhile, in Indonesia, the incidence of prolonged labor ranks the highest in ASEAN, with 359 per 100,000 live births resulting in maternal deaths due to prolonged labor. (Kemenkes RI, 2022). Based on the Health Profile data of East Java Province in 2021, the incidence of prolonged labor is 5% of the total 567 maternal deaths. (Dinas Kesehatan Provinsi Jawa Timur, 2022).

Based on a preliminary survey conducted by researchers at the UPT Puskesmas Panggungrejo district of Blitar obtained data on the average of mothers giving birth in the Working Territory of UPT puskesma PanggungREjo District of blitar per month in the year 2023 was 30 people, about 10% of the mothers having given birth experience when 1 extended. The results of the preliminary study indicate that one of the causes of prolonged first stage labor is ineffective positioning during delivery, where the average delivery position is either lying on the back or semi-sitting, leading to a longer labor process. It is not uncommon for prolonged labor to cause excessive anxiety for the mother in labor, her husband, or other family members. For that, alternative birthing positions are needed to expedite the labor process.

The causes of prolonged first stage labor include the position during delivery, incorrect presentation of the fetus, abnormal contractions, and inadequate positioning and management, which can lead to asphyxia in the baby, fetal death, uterine inertia, and maternal exhaustion (Rahmi, Ririn, 2020). If all birth attendants are trained to actively engage in prevention or early detection of various complications that may arise, they will be able to provide adequate and timely assistance during childbirth, ensuring quality maternal and neonatal health services. This requires skilled healthcare personnel as well as adequate facilities and infrastructure (Lail, 2019). In a primipara, labor lasts for about 12 hours, while in a multipara, it lasts around 8 hours. The cervical dilation rate is 1 cm per hour (for primipara) or more than 1 cm up to 2 cm. (multipara) (Nugroho, 2014).

The positioning of labor is one of the solutions to address the issue of prolonged labor. Some positions that can be chosen by mothers in labor include upright positions (standing, squatting, sitting) and lying down positions. (miring kiri). Previous research on labor position management aids in the acceleration of labor and improves the birthing position (Damayanti, 2019). The tilted position during childbirth can facilitate the descent of the baby's head to the pelvic floor, ease the mother's effort during pushing, reduce fatigue, shorten the labor process, and improve the circulation of blood from the mother to the placenta, thereby maximizing the oxygen supply to the baby (Hindriati et al., 2021).

The peanut ball is one of the tools used to aid in the progress of labor. The use of a peanut ball by adjusting the mother's position during labor can reduce pain, strengthen uterine contractions, and allow for the normal descent of the fetus to avoid other medical interventions such as cesarean sections. Using a peanut ball of the right size is preferable, as a size that is too large can place excessive force on the hip joints, leading to

muscle tension. The advantages of the peanut ball are that it is easy to apply during the labor process at a low cost, allowing it to be used multiple times for childbirth. Additionally, the peanut ball can also be applied in the labor process conducted in birthing facilities (Trihartiningsih & Munanadia, 2023).

Research (Yuria et al., 2023) found that the combination of complementary obstetric techniques during labor, specifically the Gym ball and Peanut ball, is effective in accelerating the first stage of active labor in primigravida, with an average duration of active labor lasting 3 hours and 39 minutes. It is hoped that mothers in labor without complications can apply the combination of Gym Ball and Peanut ball techniques when entering the first stage of active labor until the second stage of labor. Meanwhile, research (Anuhgera et al., 2021) shows that the birth ball technique with pelvic rocking can reduce the duration of active labor in the first stage by 52.61%, with a p-value of 0.001.

Based on the background above, the researcher is interested in conducting a study on "The Difference Between Left Lateral Position with and Without the Use of a Peanut Ball on the Duration of Labor in Stage 1 in the Working Area of UPT Puskesmas Panggungrejo, Blitar Regency."

2. METHODS

This study aims to determine the difference between the left lateral position with and without the use of a peanut ball on the duration of the first stage of labor. Pre-experimental research design using 2 treatment groups. The population of all mothers giving birth in the first stage in the Work Area of the Puskesmas Panggungrejo in Blitar Regency averages 30 people per month. The sample was taken using accidental sampling technique. The independent variable is the position of labor in a lateral position with and without a peanut ball, while the dependent variable is the duration of the first stage of labor. Research instruments SOP and partograph observation sheet. Data analysis using the t-test.

3. RESULTS

General Data of Respondents

Table 1 Distribution of Respondent Characteristics

Research Results	Frequency (f)	Percentage (%)
Age		
< 20 years	2	6.7
20-35 years	28	93.3
Education		
Senior High school	24	80.0
University	6	20.0
Work		
Household	20	66.7
Private sector	6	20.0
Entrepreneur	3	10.0
Civil servant	1	3.3
Pregnancy		
First pregnancy	22	73.3
Second pregnancy	8	26.7

Source: Research Questionnaire, 2023

Based on Table 1 above, it can be seen that out of a total of 30 respondents, almost all of the respondents, specifically 28 respondents (93.3%), are aged 20-35 years. Nearly all respondents, totaling 24 respondents (80%), have a high school education. The majority of the respondents, amounting to 20 respondents (66.7%), are housewives, and most of the respondents, totaling 22 respondents (73.3%), are experiencing their first pregnancy.

The duration of the first stage of labor in a lateral position without the use of a peanut ball in the Work Area of the Panggungrejo Health Center in Blitar Regency.

Table 2 Frequency distribution of the duration of the first stage of labor in a lateral position without the use of a peanut ball in the Work Area of the Panggungrejo Health Center in Blitar Regency.

The duration of the first stage of labor	Before	
	Frequency (f)	Percentage (%)
Normal	12	80
Abnormal	3	20
Total	15	100

Based on the table above, it was found that the duration of the first stage of labor in the lateral position without the use of a peanut ball resulted in almost all respondents, totaling 12

respondents (80%), having a duration of the first stage of labor categorized as normal, while a small portion of the respondents, totaling 3 respondents (20%), had a duration of the first stage of labor categorized as abnormal.

The duration of the first stage of labor in a side-lying position using a peanut ball in the Work Area of the UPT Puskesmas Panggungrejo, Blitar Regency

Table3 Frequency distribution of the duration of the first stage of labor in a side-lying position using a peanut ball in the Work Area of the UPT Puskesmas Panggungrejo, Blitar Regency

The duration of the first stage of	After	
	Frequency (f)	Percentage (%)
Normal	15	100
Abnormal	0	0
Total	15	100

Based on table 3 above, it was found that the duration of labor in stage 1 with a side-lying position using a peanut ball resulted in all respondents, totaling 15 respondents (100%), having a duration of labor in stage 1 categorized as normal.

The difference in the duration of the first stage of labor in the lateral position with and without the use of a peanut ball in the working area of the Panggungrejo Health Center in Blitar Regency.

Table 4 Results of the analysis of the difference in the duration of the first stage of labor in the lateral position with and without the use of a peanut ball in the working area of the Panggungrejo Health Center in Blitar Regency.

Tilted Position	The duration of the first stage of				Total	
	Normal		Abnormal			
	N	F	N	F	N	F
Without Peanut Ball	12	80	3	20	15	100
With Peanut Ball	15	100	0	0	15	100
Total	27	90	3	10	30	100
t test analysis	*2.351*	*P value*	*0,026*	*a*	*0,05*	

The research results in Table 4 above indicate that the duration of the first stage of labor in the lateral position without the use of a peanut ball was found in almost all respondents, totaling 12 respondents (80%) in the normal category. In contrast, the duration of the first stage of labor in the lateral position with the use of a peanut ball was found in all respondents, totaling 15 respondents (100%) in the normal category.

The results of the quantitative data analysis using the independent t-test with the assistance of SPSS software at a significance level of 0.05 yielded a P Value of 0.026, which is less than the alpha value of 0.05 (0.026 < 0.05). Therefore, H0 is rejected and H1 is accepted, indicating that there is a difference in the duration of the first stage of labor in the side-lying position with and without the use of a peanut ball in the Working Area of the Panggungrejo Health Center, Blitar Regency.

4. DISCUSSION

The duration of the first stage of labor in the lateral position without the use of a peanut ball in the Working Area of the Puskesmas Panggungrejo, Blitar Regency.

Based on table 2 above, it was found that the duration of the first stage of labor in the lateral position without the use of a peanut ball was categorized as normal for almost all respondents, totaling 12 respondents (80%), while a small portion of the respondents, totaling 3 respondents (20%), had a duration of the first stage of labor categorized as abnormal.

In a normal delivery, there are stages of labor: stage I, which is divided into the latent phase (cervical dilation of 1-3 cm) lasting about 8 hours, and the active phase (dilation of 4-10 cm) lasting about 6 hours; stage II, which occurs from complete dilation until the baby is born, lasting 1 hour for first-time mothers and 2 hours for those who have given birth before; stage III, which occurs immediately after the baby and placenta are delivered, lasting about 30 minutes; and stage IV, which occurs immediately after the placenta is delivered and lasts up to 2 hours postpartum. (Saiful & Fatmawati, 2019).The duration of labor for a primipara lasts about 12 hours, while for a multipara it is around 8 hours. The rate of cervical dilation is 1 cm per hour for primipara or more than 1 cm up to 2 cm for multipara (Nugroho, 2014).

The side-lying position is the direction of the mother's position depending on the baby's

fontanelle location. If you are on the left side, then the mother suggests taking a tilted position to the left so that the baby is expected to turn, and vice versa. This position requires the mother to lie on her left or right side. One of his legs is raised, while the other leg is straight in a position often referred to as the lateral position. The side position makes the mother feel more comfortable and the uterine contractions more effective, thus facilitating the mother's ability to push. The side position makes the mother feel more comfortable and the uterine contractions more effective, thus facilitating the mother's ability to push. The side-lying position can be used throughout the first and second stages (Indrasari, 2020).

The results of the observation regarding patient responses during interventions on laboring mothers who predominantly lie on their left side without the use of a Peanut Ball indicate that patients feel uncomfortable when laboring in a left-leaning position without any supportive tools. The abdomen, waist, and legs feel stiff if held in that position for too long, and this position also complicates the staff or doctors in conducting examinations. In this study, the duration of the first stage of labor in mothers giving birth in a lateral position showed that there is still a small portion of respondents whose labor duration exceeds the normal time for the first stage of labor. There were 3 primigravida mothers whose first stage of labor lasted more than 12 hours, whereas theoretically, the maximum duration for the first stage of labor is 12 hours. However, the side-lying position is very helpful when trying to avoid the lithotomy position; in this position, the mother lies on her side, either left or right, with one leg raised and the other leg straight. This position is usually adopted when the baby's head is not yet in the birth canal. In addition to facilitating the mother's blood circulation, the delivery of oxygen to the baby through the placenta is not disrupted; this position can prevent perineal laceration.

The duration of the first stage of labor in a lateral position using a peanut ball in the Work Area of the Puskesmas Panggungrejo, Blitar Regency.

Based on Table 3 above, it was found that the duration of the first stage of labor in a lateral position with the use of a peanut ball resulted in all respondents, totaling 15 respondents (100%), having a duration of the first stage of labor categorized as normal.

The peanut ball can help during the first and second stages of labor. Which means, this indicates that pregnant women can use it because the cervix is working to dilate up to 10 cm, and once again, this is the pushing stage during labor. A peanut ball can help pregnant women who are in bed to open their pelvis in a way similar to a birth ball, which can assist on the floor. Know that opening the pelvis is key for the baby to descend more easily into the birth canal; the easier it is, the better it is. Other benefits of using a peanut ball during labor include the following: 1) pain reduction, 2) shortening the duration of labor, 3) decreasing the cesarean birth rate, 4) reducing the level of other interventions, such as forceps and vacuum extraction (Sfidnfits.com, 2022).

The advantage of the peanut ball is that it is easy to apply during the labor process at a low cost, allowing it to be used multiple times for childbirth. Additionally, the peanut ball can also be applied in the labor process conducted in midwifery practices. (Bidan Praktik Mandiri). The use of a peanut ball by adjusting the mother's position during labor can reduce pain, strengthen uterine contractions, and allow for the normal descent of the fetus, thereby avoiding other medical interventions such as cesarean surgery. Using a peanut ball of the right size is preferable, as a size that is too large can place excessive force on the hip joints, leading to muscle tension (Trihartiningsih & Munanadia, 2023).

The results of the observations on mothers in labor in the left lateral position using a Peanut Ball indicate that mothers feel more comfortable during labor in this position because their legs and abdomen are supported, similar to using a bolster. The waist feels more relaxed, and pain is reduced. In this study, all respondents who adopted the lateral position with the Peanut Ball had a prolonged duration of the first stage of labor within the normal category. The lateral position with the Peanut Ball during the first stage of labor is preferred by mothers because it can reduce pain, allowing them to feel more relaxed and less fatigued. This position aids in the descent of the baby's head due to gravity, but without the strain of carrying the weight of the abdomen, enabling mothers to endure longer.

The difference in the duration of labor in the first stage in a lateral position with and without the use of a peanut ball in the working area of the Panggungrejo Health Center, Blitar Regency.

The research results in Table 4 above indicate that the duration of the first stage of labor in the lateral position without the use of a peanut ball was found in almost all respondents, totaling 12 respondents (80%) in the normal category. In contrast, the duration of the first stage of labor in the lateral position with the use of a peanut ball was found in all respondents, totaling 15 respondents (100%) in the normal category.

The results of the quantitative data analysis using the independent t-test with the assistance of SPSS software at a significance level of 0.05 yielded a P Value of 0.026, which is less than the alpha value of 0.05 (0.026 < 0.05). Therefore, H0 is rejected and H1 is accepted, indicating that there is a difference in the duration of the first stage of labor in the side-lying position with and without the use of a peanut ball in the Working Area of the Panggungrejo Health Center, Blitar Regency.

The labor process during the active phase of stage 1 generally sees an increase in the frequency and duration of uterine contractions. (kontraksi dianggap adekuat atau memadai jika terjadi 3x atau lebih dalam waktu 10 menit dan berlangsung selama 40 detik atau lebih). Starting from a dilation of 4 cm until reaching full dilation of 10 cm, it will occur at an average rate of 1 cm per hour (nulliparous or primigravida) or more than 1 cm up to 2 cm. (multipara). If the labor lasts too long, there is concern about the possibility of fetal hypoxia, lacerations or tears in the birth canal, and the baby's head not descending quickly into the pelvic floor, which is why the mother in labor needs to be in a left lateral position, as she is initially positioned on her left side (JNPK-KR, 2018).

The use of peanut balls for working women has become common in hospitals in the United States. Many nurses believe that a peanut ball can help reduce the duration of labor and the pushing time for mothers, and it may even decrease the risk of cesarean delivery. The use of a birth ball during the first stage of labor helps the primigravida mother feel more relaxed and calm, which in turn releases endorphins, reducing pain during childbirth and increasing oxygenation (Primihastuti & Romadhona, 2021).

The peanut ball is one of the tools used to facilitate labor (Supardi, 2022). The use of the peanut ball by adjusting the mother's position during labor can reduce pain, strengthen uterine contractions, and allow for the normal descent of the fetus, thereby avoiding other medical interventions such as cesarean sections. (Mutoharoh & Indrayani, 2019).

From the research results, there is 1 respondent, a primigravida mother aged 19, who experienced an abnormal first stage of labor, lasting longer than the normal limit, without the use of a peanut ball. Additionally, there is 1 respondent, also a primigravida mother aged 19, who experienced a normal first stage of labor with the use of a peanut ball. Furthermore, there are 2 respondents, primipara mothers aged 23 and 24, who also experienced an abnormal first stage of labor without the use of a peanut ball, lasting longer than the normal limit. The normal duration for the first stage of labor in primigravida or primipara is 12 hours. The three respondents without the use of a peanut ball had a first stage duration of more than 12 hours, indicating that it can be classified as abnormal. Meanwhile, the respondents who used the peanut ball, whether primipara or multipara, experienced a normal duration for the first stage of labor.

The peanut ball can help during the first and second stages of labor. Which means, this indicates that pregnant women can use it because the cervix is working to dilate up to 10 cm, and once again, this is the pushing stage during labor. A peanut ball can help pregnant women who are in bed to open their pelvis in a way similar to a birth ball, which can assist on the floor. Know that opening the pelvis is key for the baby to descend more easily into the birth canal; the easier it is, the better it is. Other benefits of using a peanut ball during labor include the following: 1) pain reduction, 2) shortening the duration of labor, 3) decreasing the cesarean birth rate, 4) reducing the level of other interventions, such as forceps and vacuum extraction (Sfidnfits.com, 2022).

This research is relevant to the study by Evie Trihartiningsih and Munaadia (Trihartiningsih & Munanadia, 2023) where the results showed that mothers aged 20-35 years accounted for 76.7%, 60% of mothers did not experience anxiety, and 56.7% of mothers received support from their husbands or families. The use of a peanut ball is more effective in accelerating the first stage of

labor, and mothers in labor can use the peanut ball as a non-pharmacological technique to reduce or minimize the duration of the first stage of labor. This research is also relevant to the study by Mella Yuria, Legina Anggraeni, Annisa K (Yuria et al., 2023) which shows that the combination of complementary midwifery techniques using a gym ball and a peanut ball is effective in speeding up the active phase of the first stage of labor in primigravida, with an average duration of 3 hours and 39 minutes. It is hoped that mothers in labor without complications can apply the combination of Gym Ball and Peanut Ball techniques when entering the active phase of the first stage until the second stage of labor. This research is also relevant to the study by Sri Mulyaningsih, Fifi Ishak (Mulyaningsih & Ishak, 2021) with titled Literature Study: Comparison of Peanut Ball and Birthing Ball on the Progress of Labor in the Active Phase of Stage I. The results of that study indicate that based on several journals discussed, it can be concluded that there is a comparison between the use of peanut balls and birthing balls in mothers in labor during the active phase of stage I.

5. CONCLUSION

Based on data obtained from research on the differences in the duration of the first stage of labor in the lateral position with and without the use of a peanut ball in the Working Area of the Panggungrejo Health Center in Blitar Regency, the following conclusions can be drawn: The duration of the first stage of labor in the lateral position without the use of a peanut ball in the Working Area of the Panggungrejo Health Center in Blitar Regency showed that almost all respondents, totaling 12 respondents (80%), had a duration of labor in the normal category. In contrast, the duration of the first stage of labor in the lateral position with the use of a peanut ball in the Working Area of the Panggungrejo Health Center in Blitar Regency indicated that all respondents, totaling 15 respondents (100%), had a duration of labor in the normal category. There is a difference in the duration of the first stage of labor in the lateral position with and without the use of a peanut ball in the Working Area of the Panggungrejo Health Center in Blitar Regency, where the independent t-test statistical analysis yielded a P Value of 0.026, which is less than the α value of 0.05 (0.026 < 0.05).

6. ACKNOWLEDGMENTS

This journal article is written by Shanty Trimukti Sayekti based on research findings on the differences in the duration of the first stage of labor in a lateral position with and without the use of a peanut ball in the working area of the Panggungrejo Community Health Center in Blitar Regency, guided by the Bachelor of Midwifery Program at the Faculty of Nursing and Midwifery, IIK STRADA Indonesia. The content is entirely the responsibility of the author.

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