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Differences In The Length Of Labor Stage II On Upright Position and Recumbent Position

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ABSTRACT
The delivery process is determined by several factors that influence it, one of which is from the mother and fetus side (Psychology, Power, Passage, Passanger, Position and Placenta). Childbirth can proceed normally (Euthocia) if these factors are met properly.
The purpose of this study was to see the difference between the length of time when two women gave birth who applied the upright position and those who applied the recumbent position.
This type of research is an observational study using a comparative study and a cross sectional approach, namely observing the position of labor (upright position and recumbent position) and observing the duration of second labor. The population in this study were mothers who gave birth at PMB Sari Nurhayati. The sampling technique used purposive sampling
The results of the Mann Whitney test analysis showed ρ value of 0.009 (ρ <0.05), which means that there is a significant difference between the upright position and the recumbent position. The average length of time II in the upright position was 11.3 minutes, while in the recumbent position group was 19.7 minutes.
Based on the results of the study, it can be concluded that the second period in the upright position group tends to be shorter than the recumbent position group.

Keywords: Duration of second labor, Recumbent Position, Upright Position

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BACKGROUND

Childbirth is a process of releasing the product of conception at term or can live outside the womb through the birth canal or through other means, with or without assistance (own strength) (Sulistyowati & Nugraheny, 2013). Childbirth is a very important and stressful process for almost all women. The delivery process often causes excessive anxiety, especially in primigravidas.

The delivery process is determined by several factors that influence it, one of which is the mother and the fetus (Psychology, Power, Passage, Passanger, Position and Placenta). Childbirth can proceed normally (Euthocia) if these factors are met properly. In addition, there are other factors that influence the delivery process, namely from the side of the Provider, Family, Companion, and Support System (Psychology, Patient, Persistence, and Practice / Skill) (Aprilia et al, 2018). Primigravida mothers undergoing the labor process, fear, anxiety, worry which results in increased pain during labor and can interfere with the smooth delivery process (Wijaya et al., 2014).

Obstruction of the second stage of labor or what can be called the long II stage is the cause of pain and trauma when facing childbirth, resulting in a lack of confidence during the next delivery. Various physiological efforts are made by providers so that mothers give birth, especially primigravidas, to feel comfortable and without excessive action. As a form of application of motherly care and in accordance with the concept or philosophy of the midwife who believes that pregnancy and childbirth are natural / physiological processes. One of the efforts to serve mothers in the labor process is to condition and seek such an upright position that supports labor so that it can run physiologically.

This is also one method that is very helpful in responding to labor pain in an active way and reduces the length of second stage labor and the occurrence of tears in the perineum. The survey results of several women in developing countries tend to choose to face childbirth in a recumbent position, this may still be influenced by habits, providers who are still not updated, and previous traditions. Several studies have concluded that if the mother gives birth in a sleeping position, it can have an effect against uterine contractions, thus hindering the progress of labor.

However, other studies have also argued that a lying position in labor can be done with the alternative of tilting the left or right even with the squat or upright position. The upright position in the second stage of labor is associated with benefits for both mother and baby, because it can provide relaxation and give a little pressure to the blood circulation so as to provide oxygen supply to the baby, besides that the upright position can also accelerate the decline of the head due to the gravity of the earth so that it shortens the second stage of labor. Women who choose an upright position, walk or squat (upright position) feel satisfaction and comfort during the labor process, besides that the upright position also makes it easier for the mother to bear down.

Trauma during childbirth is not only caused by the process that occurs during childbirth. Trauma can also appear during the postpartum process. A traumatic birth process will have an impact on mental health after childbirth for women. Not only that, a traumatic birth can also have an impact on family relationships. Labor trauma that is not detected and treated early on will cause mental and psychological disorders in the mother so that it can cause psychological disorders at the next stage such as the post partum blues or baby blues.

Based on the above background, the researcher wants to see the difference in the second stage of labor for mothers who apply the upright position and those who apply the recumbent position.

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METHODS

This type of research is an observational study using a comparative study and a cross sectional approach, namely observing the position of labor (upright position and recumbent position) and observing the duration of the second stage of labor. The population in this study were mothers giving birth at PMB Sari Nurhayati. The sampling technique used purposive sampling according to the calculation formula.

The inclusion criteria in this study were (1) mothers with normal delivery (2) sufficient amniotic fluid, (3) gestational age 38-42 weeks, (4) 20 years ≤ maternal age <35 years and (5) mothers who are willing to be respondents . Exclusion criteria (1) 2500 gr> TBJ ≥ 4000 gr, (2) Mother suspected of having a narrow pelvis (CPD). The research instrument used was the observation sheet and partograph to see the length of the second stage of labor.

RESULTS

This research was conducted within 3 months. The sampling location in this study was conducted at PMB Sari Nurhayati Sukorejo.

General data are the characteristics of respondents related to the differences in the duration of second stage labor in the Upright Position and Recumbent Position based on Age and Parity at PMB Sari Nurhayati.

1. Characteristics of Respondents Based on Gender

Table 1 Distribution of age frequency at PMB Sari Nurhayati Sukorejo in July-September 2020

No	Age	Frecuency	Percentage (%)
1	< 20 th	2	6,7
2	20-35 th	24	80
3	>35 th	4	13,3
Total		30	100

Based on Table 1, it shows that the characteristics of respondents based on age showed that most respondents (80%) were aged between 20-35 years.

2. Characteristics of Respondents Based on Parity

Table 2 Distribution of Respondents' Parity Frequency at PMB Sari Nurhayati in July-September 2020.

No	Parity	Frecuency	Percentage(%)
1	Primigravida	11	36,7
2	Multigravida	19	73,3
Total		30	100

Based on Table 2, it shows that the characteristics of respondents based on parity show that most respondents (73.3%) are multigravidas.

3. Differences in the Second Stage of Labor in Upright Position and Recumbent Position

Table 3 Bivariate analysis of the variable duration of second stage labor in the Upright Position and Recumbent Position using the Mann Whitney test at PMB Sari Nurhayati.

No	*Position*	*Frecuency* (N)	*Second stage of labor*		*P value (Mann Whitney)*
			Mean of Rank	*Sum of Rank*	
1	*Upright*	15	11,33	170	0.009
2	*Recumbent*	15	19,67	295	
Total		30			

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Based on table 3, the results of the analysis of the variable difference test (duration of labor II) in the Upright Position and Recumbent Position groups based on the Mann Whitney analysis test obtained ρ value 0.009 (ρ <0.05), which means that there is a difference in the duration of second stage labor significant enough between the Upright Position and Recumbent Position groups.

In this study, the average value of the second period of delivery in the Upright Position group was 11.3% while in the Recumbent Position group was 19.67%.

DISCUSSION

The labor process is determined by several factors, one of which is the position when giving birth. A comfortable position of holding down is very effective in accelerating the progress of labor and this is very beneficial for mothers who give birth (Simkin, 2011). Choosing the right and comfortable labor position during the labor process can also reduce the pain that is caused and can help the baby's head drop which affects the length of labor experienced (Rohani, 2010). In this case the upright position can shorten the duration of second stage labor.

Based on the research results above, the upright position has a shorter duration of labor than the recumbent position. This is in line with the results of research by Rahmawati (2014) which explains that position variations during labor are able to shorten the labor process with a p value of 0.019. According to Rohani (2011), the advantage of the upright position is that blood circulation is smoother when compared to the recumbent position so that oxygen intake from mother to fetus is not disturbed. The implementation of an upright or lateral position is claimed to be very beneficial because it is able to streamline the labor process, can reduce the episiotomy action so as to minimize the occurrence of tears caused by the delivery process (Sinclair, 2009).

Based on research conducted by Gizzo (2014) from the recumbent position and nonrecumbent position groups, it was found that there were differences in the length of the labor process between the two groups. The non-recumbent position group tends to shorten the labor process because it is caused by the effective gravity force which makes uterine contractions more effective and makes it easier for the fetus to adjust to the birth canal.

The upright position causes the baby's head that is in a posterior position to change to an anterior position and can reduce labor pain (Muray, 2010). According to Simkin (2011), the recumbent position is often used by mothers who give birth in the delivery process, because this position is considered very easy for health workers (birth attendants) to take action (Aprilia, 2011).

The results of this study are in line with research conducted by Zainiyah (2015) which states that the standing position of labor makes the second stage of labor take place faster when compared to the left tilt position. This is also supported by research conducted by Damayanti (2020), the results of the analysis show that the mean value of the squatting position is 22.13, while the mean value of the left tilt position is 81.88, with a difference. mean 57.50 and p value <0.05 (0.001). Based on the results of the research, respondents who were given a squatting position experienced a shorter period than the tilt position.

The results of this study are also in accordance with the theory presented by Fitriana (2018), which explains that the upright position (standing, squatting, sitting) is the most suitable position for childbirth, because the pelvic axis and fetal position are in the direction of gravity. The squat position helps accelerate the progress of labor and relieves pain, can

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help facilitate lowering of the fetal head, expands the pelvic area by 28% greater at the lower pelvis and strengthens the urge to push.

Lawrence (2014) in his research entitled "what affects women movements and use of various positions during labor and birth: prevew protocol" states that there is a significant difference between the upright position and the supine position during the second stage of labor and the second stage is 1 hour earlier at upright position.

The results of research conducted by Sulistiawati (2013) in her research entitled "Application of the Position of Delivery in Midwifery Care for Maternity Women" states that the supine position during pregnancy and birth has a negative impact on oxygen supply to the fetus. Therefore, the choice of alternative delivery positions must be made for the position of giving birth to the mother apart from supine and recumbent positions, various positions are given so that the mother can choose an alternative position that is considered safe and comfortable.

CONCLUSION

The duration of labor in the second stage in the upright position tended to be shorter when compared to the recumbent position with an average of 11.3 minutes in the upright position and 19.7 minutes in the recumbent position with a p value of 0.009 ($p < 0.05$).

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