



The Effect of Left Lateral Position and Squatting Position on The Progress of The Active Phase of The First Stage of Labor Among Primigravida Women at Private Practice Midwife Istikomah, Amd. Keb, Sampung Subdistrict, Ponorogo District



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Article Information

Abstract

History Article:

Received, 04/06/2021
Accepted, 21/07/2021
Published, 05/08/2021

Keywords:

Labour Position, First Stage of Labor, Primigravida

Primigravida women mostly experience prolonged progress of labor due to the stiff birth canal. There are several positions of labor that may accelerate cervix dilatation process including squatting. This study aimed to determine the effect of left lateral position and squatting position on the progress of the active phase of the first stage of labor among primigravida women. This was a pre-experimental study with Pre test - post test approach. The population was all primigravida women in labor at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District, taken with an accidental sampling technique which obtained 9 respondents. The independent variable was labour position, while the dependent variable was duration of the active phase of the first stage of labor. The data collection instrument used here was observation sheet. The results were analyzed using Paired sample T-test ($\alpha=0,05$). The results showed that before the application of left lateral and squatting positions in VT 1, all 9 respondents (100%) had normal labour progress and after the application of left lateral and squatting positions in VT 2, most respondents (77.8%) had labour progress in short category. The analysis obtained a p-value=0.000 < $\alpha=0.05$. Thus, there was an effect of left lateral position and squatting position on the progress of the active phase of the first stage of labor among primigravida women. The combination of squatting and left lateral positions during labour seems to accelerate the progress of the active phase of the first stage of labor with minimal side effects.

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P-ISSN : 2355-052X

E-ISSN : 2548-3811

DOI: 10.26699/jnk.v8i2.ART.p211-216

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INTRODCUTION

The labor process is divided into four stages, at each stage a standard management has been established which aims to overcome complications and reduce the increase in the rates of maternal and infant mortality. However but in reality, one stage of the labor processes. One of which is the first stage of labor, there are still frequent various problems that contribute to the high rate of maternal mortality due to prolonged labor (Bahiyatun, 2011)

Prolonged first stage labor is a labor in which the latent phase lasts more than 8 hours and with an inadequate cervix dilation rate in the active phase. The whole process of the first stage of labor in primigravida lasts about 13 hours (JNPK, 2014). The management of prolonged first stage of labor includes continuing woman-friendly care for woman in labor through a recommendation that a woman should be accompanied by her family and to help the woman to have a comfortable position of labor (Rukiyah, 2014)

Maternal Mortality Rate (MMR) is an important indicator in determining the degree of public health. Based on WHO data (2017), in Indonesia, there are four women in a day who die due to childbirth, or in other words there is one woman in Indonesia who dies every six hours. Data derived from the ASEAN Millennium Development Goals (MDGs) in 2017 showed that the maternal mortality rate in Indonesia in 2017 was 305/100,000 live births. This number is three times higher than Indonesia's MDGs target of 102/100,000 live births. The biggest contributor to MMR in Indonesia is bleeding (30.3%), hypertension (27.1%), infection (7.3%), prolonged labor (1.8%), abortion (1.6%) and other causes (40.8%). Other causes referred to are indirect causes of maternal death such as cancer, kidney disease, heart disease, tuberculosis or other diseases suffered by women ((JNPK, 2014)).

Labor and delivery can not only be done in supine position, wherein the medical community is familiar with calling it the lithotomy position, but also in various other positions. Each position has its advantages or disadvantages, and there is no single good or bad position. In other words, there is no perfect birth position (Sumarah, 2013)

The left lateral position of labor can be done if the mother is tired, because she can rest easily between two contractions. Lateral position can reduce the pressure on the inferior vena cava, thus

reducing the possibility of fetal hypoxia because oxygen supply is not interrupted. Furthermore, it can provide a relaxed atmosphere for tired women, and can prevent the birth canal laceration ("Health Profile Of East Java Province in," 2018).

In addition to the oblique position, there is a squatting position. The advantage of this position is that it makes it easier to give birth to the baby's head. This position is very useful in helping to lower the lowest part of the fetus when labor runs slow (JNPK, 2014)

Efforts that can be applied by midwives to prevent the occurrence of prolonged labor which is accompanied with the risk of various complications of labor is to inform the mother that she can choose the most comfortable position of labor (Arikunto S, 2014). However, midwives must also pay attention to the level of progress in the first stage of labor that occurs so that if a change in the position of labor is needed, it must be immediately notified to the woman. Midwives should provide a comfortable atmosphere and not show hasty expressions, while providing pleasant assurance and other compliments (Sumarah, 2013)

METHODS

Research design is a research strategy in identifying problems before the final planning of data collection and identification of the structure in which the research is conducted (Nursalam, 2016). The type of experimental research applied for this study was Pre Experimental, which was a quasi-research design to find a cause-effect relationship with the involvement of research in manipulating the independent variables. The approach used here was pre-

Table 1. Study Design Scheme

Subject	Pre-test	Treatment	Post-test
S	O Dilation	I	OI Dilation

Information

S : Subject (Women in the active phase of the first stage of labor)

O : Progress of labor before the application of left lateral and squat positions

I : Intervention (left lateral position and squatting position)

OI : Progress of labor after the application of left lateral and squat positions

post test in one group (One-group pre-post test), namely research that reveals a causal relationship by involving one group of subjects.

This study was conducted at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District. In the early stage the researcher coordinated with the owner of the Private Practice Midwife regarding permission for conducting the study process. Then the researcher together with the midwife collected data on primigravida women.

Population is the entire object of research or objects to be studied (Notoadmodjo s, 2015)The population in this study was all primigravida women at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District.

Sample is the part of population selected with certain sampling technique to be able to meet the requirement or represent the population (Nursalam, 2016)The samples in this study were some primigravida women at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District during the study that was conducted in January 2020. To select the samples in this study, the researcher used an accidental sampling technique, namely taking cases or respondents who were available in a predetermined place in accordance with the research context (Notoadmodjo s, 2015)The instrument is a tool used by the researcher at the time of research using a certain method(Prawiroharjo, 2016). The instrument for collecting data on positions of labor used here was an observation sheet, along with a partograph for collecting data on the period of the first stage of labor.

RESULTS

This chapter presents an overview of the study site and the study results on the effect of the left lateral position and the squatting position on the progress of the active phase of the first stage of labor among primigravida women at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District, which involved 14 respondents.

General Data

1) Characteristics of Respondents by Age

Based on Table 2, it is known that almost all respondents aged 20-35 years, as many as 8 respondents (88.9%).

Table 2. Characteristics of Respondents by Age at Private Practice Midwife Istikomah, Amd. Keb., Sampung Subdistrict, Ponorogo District Januari 2020

No.	Age	Frequency	Percentage (%)
1	<20 years	1	11.1
2	20-35 years	8	88.9
3	>35 years	0	0.0
Total		9	100.0

2) Characteristics of Respondents by Education

Table 3. Characteristics of Respondents by Education at Private Practice Midwife Istikomah, Amd. Keb., Sampung Subdistrict, Ponorogo District Januari 2020

No.	Education	Frequency	Percentage (%)
1	Elementary School	0	0.0
2	JHS	2	22.2
3	SHS	7	77.8
4	Higher Education	0	0.0
Total		9	100.0

Based on Table 3, it was known that most of respondents had Senior High School education, as many as 7 respondents (77.8%).

3) Characteristics of Respondents by Occupation

Table 4. Characteristics of Respondents by Occupation at Private Practice Midwife Istikomah, Amd. Keb., Sampung Subdistrict, Ponorogo District Januari 2020

No.	Occupation	Frequency	Percentage (%)
1	Housewife	2	22.2
2	Private	3	33.3
3	Entrepreneur	4	44.4
4	Civil servants	0	0.0
Total		9	100.0

Based on Table 4, it is known that almost half of respondents worked as entrepreneurs, as many as 4 respondents (44.4%).

Specific Data

1) Progress of labor at VT 1

Progress of labor during the active phase of the first stage of labor at VT 1 before the application of left lateral position and squatting position among primigravida women is presented in the following Table.

Table 5. Progress of labor during the active phase of the first stage of labor at VT 1 before intervention at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District Januari 2020

No.	Progress of labor (VT 1)	Frequency	Percentage (%)
1	Short	0	0.0
2	Normal	9	100.0
3	Long	0	0.0
Total		9	100.0

Based on Table 5, it is known that before the application of left lateral position and squatting position, all 9 respondents (100.0%) had progress of labor in the normal category.

Data Analysis

1) Cross Tabulation of the Progress of Labor

Table 7. Cross Tabulation on the effect of left lateral position and squatting position on the progress of the active phase of the first stage of labor among primigravida women at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District

Progress of Labor (VT 1)		Progress of Labor (VT 2)			Total
		Short	Normal	Long	
Short	Frequency	0	0	0	0
	%	0.0%	0.0%	0.0%	0.0%
Normal	Frequency	7	0	2	9
	%	77.8%	0.0%	22.2%	100.0%
Long	Frequency	0	0	0	0
	%	0.0%	0.0%	0.0%	0.0%
Total	Frequency	7	0	2	9
	%	77.8%	0.0%	22.2%	100.0%

2) Progress of labor at VT 2

Progress of labor during the active phase of the first stage of labor at VT 2 after the application of left lateral position and squatting position among primigravida women is presented in the following Table.

Based on Table 6, it is known that at VT 2 after the application of left lateral position and squatting position, most of respondents had progress of labor in the short category, as many as 7 respondents (77.8%).

Table 6. Progress of labor during the active phase of the first stage of labor at VT 1 after intervention at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District Januari 2020

No.	Progress of labor (VT 2)	Frequency	Percentage (%)
1	Short	7	77.8
2	Normal	0	0.0
3	Long	2	22.2
Total		9	100.0

Table 8. Cross Tabulation on the effect of left lateral position and squatting position on the progress of the active phase of the first stage of labor among primigravida women at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District Januari 2020

	Mean	Mean diference	95% C.I.		t	p-value
			Lower	Upper		
Progress of labor at VT 1	0.50	1.37	-1.62	-1.11	-12.362	0.000
Progress of labor at VT 2	1.87					

Cross Tabulation of the Progress of the active phase of the first of labor at VT 1 and VT 2 among primigravida women at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District is presented in the following table:

Based on Table 7 above, it is known that most of respondents or as many as 7 respondents (77.8%) who initially had the progress of the first stage of labor in the normal category at VT 1, then at VT 2 or after the application of left lateral position and squatting position, it was found that they had progress of labor in the short category.

The results of the paired sample T-test analysis obtained a $p\text{-value}=0.000 < \alpha=0.05$, so H_0 was rejected and H_1 was accepted, which indicated that there was an effect of left lateral position and squatting position on the progress of the active phase of the first stage of labor among primigravida women at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District. The mean progress of labor that occurred was 1.37 cm in of the range the lower limit of -1.62 cm and the upper limit of -1.11 cm.

DISCUSSION

Cervix dilation and period before the application of left lateral position and squatting position during the active phase of the first stage of labor among primigravida women at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District

Based on the progress of the active phase of the first stage of labor among primigravida women described in Table 5, it was known that at VT 1 or before the application of left lateral position and squatting position, all respondents or as many as 9 respondents (100.0%) had a normal progress of labor.

The first stage of labor (the cervix dilation stage) is characterized by the cervix effacement and dilation starting from regular uterine contractions to

complete dilation, and during this period, the woman experiences intermittent pain.

The results showed that at VT 1 before the application of left lateral position and squatting position, most of the respondents had normal progress of labor. Normal category of the progress of labor was due to all women had the same parity, namely primigravida. Primigravida women generally do not have previous experience of labor and delivery, so that they often have cervical stiffness which may cause prolonged active phase of labor which theoretically generally lasts 8 hours (Kemenkes, 2014). Cervix dilation occurs very slowly until it reaches 3 cm in diameter.

Cervix dilation and period after the application of left lateral position and squatting position during the active phase of the first stage of labor among primigravida women at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District

Based on the progress of the active phase of the first stage of labor among primigravida women at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District as presented in Table 6, it was known that at VT 2 or after the application of left lateral position and squatting position, most of the respondents or as many as 7 respondents (77.8%) had progress in the short category (Machmudah, 2010).

Effect of left lateral position and squatting position on the progress of the active phase of the first stage of labor among primigravida women at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District

The results of the paired sample T-test analysis obtained a $p\text{-value}=0.000 < \alpha=0.05$, so H_0 was rejected and H_1 was accepted, which indicated that there was an effect of left lateral position and squatting position on the progress of the active phase of the first stage of labor among primigravida women at Private Practice Midwife Istikomah, Amd.Keb.,

Sampung Subdistrict, Ponorogo District. As presented in Table 8, the mean progress of labor that occurred was 1.37 cm in of the range the lower limit of -1.62 cm and the upper limit of -1.11 cm. The results of the cross tabulation showed that 8 respondents (57.1%) who initially had a duration of the first stage of labor in the long category, then after the appliaction of left lateral and squatting positions, they had a duration of the first stage of labor in the normal category(Bahiyatun, 2011).

CONCLUSIONS

Based on the results of the study on the effect of the left lateral position and the squatting position on the progress of the active phase of the first stage of labor among primigravida at Private Practice Midwife Istikomah, Amd.Keb. Sampung Subdistrict, Ponorogo District, the authors has formulated several conclusions as follows:

Characteristic of respondents by age revealed that most of them aged 20-35 years, as many as 8 respondents (88.9%), characteristic of respondents by education revealed that most them had high school education as many as 7 respondents (77.8%), characteristic of respondents by occupation revealed that some respondents were self-employed as many as 4 respondents (44.4%), As many as 9 respondents (100%) performed left lateral position during labor. Based on the results of the study it can be seen that most respondents had progress in the short category, as many as 7 respondents (77.8%).

There has been evidenced an effect of the left lateral position and the squatting position on the progress of the active phase of the first stage of labor among primigravida women at Private Practice Midwife Istikomah, Amd.Keb., Sampung Subdistrict, Ponorogo District ($p\text{-value}=0.000 < \alpha=0.05$) (95% C.I.=1.37 (-1.62-1.11)).

SUGEGSTIONS

For the Respondents

It is expected that women in labor can choose the most comfortable position for labor with a combination of left lateral and squatting positions in subsequent labor which have been evidenced to be the most effective way in accelerating the progress of the active phase of the first stage of labor.

For The Study Site

It is expected that the study findings can be an input for midwives to further improve their services in the form of determining or directing the left lateral and squatting positions in childbirth care. However, they must still pay attention to the condition of the woman in labor and the baby(Bobak, 2014).

For the Education Institutions

It is expected that the study findings can improve learning for students in order to prevent prolonged first stage of labor to be implemented in the community.

For Further Researchers

It is expected that the study findings can be used as information or reference material for future researchers to determine the effect of other positions of labor on the acceleration of the progress of the active phase of the first stge of labor, such as the effectiveness of standing position and hands and knees position.

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