The Effect of the Maternal Position on the Length of First Active Stage Labor

Ummi Kalsum S. Saleh, Mareta B. Bakoil
Health Polytechnic of Kupang
Email: ummikaltsun13@gmail.com

Abstract

Introduction Childbirth is a natural process for women that is felt like a very pleasant but painful experience. Mothers experience pain in labor, one of which is caused by discomfort and freedom in choosing a position in labor. The application of the position in labor as one of the care given to the mother is expected to help the progress of the labor process normally and naturally. This study aims to analyze the effect of the application of labor position on the length of first active stage labor. Method This research is an analytical study using cross-sectional design. The study sample was 30 multiparous mothers who came to the Sikumana Public Health Center in Kupang City as many as 30 people. Analysis of the data used unpaired t-test. Results The results of this study show that 21 people (70%) give birth to a lying position (lateral and supine) and 9 people (30%) in combination position (lateral, supine, standing and half sitting). Based on unpaired t-test is the length of labor when the first active stage in laying position is 107.38 minutes and 148.44 minutes in the combination position. Conclusion The conclusions of this study that there was no effect of labor position on the length of the first active phase labor (p = 0.401). Keywords: Duration of Labor, First Active Stage, Position

© The Author(s) 2018. This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The Creative Commons Public Domain Dedication waiver (http://creativecommons.org/publicdomain/zero/1.0/) applies to the data made available in this article, unless otherwise stated.
Introduction

The maternal mortality rate (MMR) is a barometer of maternal health services in a country. If the MMR is still high, it means that maternal health services are not good, whereas if the MMR is low it means that the maternal health service is good. Currently, MMR in Indonesia is still high at 359 per 100,000 live births. This number is the highest among the closest neighboring countries (ASEAN). The causes of maternal death are mostly due to bleeding, hypertension during pregnancy, infection, miscarriage complications, and old parturition. Prolonged labor is estimated at 8% of all mothers giving birth. The prevalence of prolonged labor was 33% in primiparas and 7% in multiparas. Research conducted in 2007-2008 which is a prospective longitudinal survey of three hospitals in the North Swedish obstetric ward showed a prevalence of prolonged labor in primiparas 35.6% and in multiparas 10.2%. The old part increases maternal complications in the form of postpartum bleeding and infection and can increase the risk of fetal distress and asphyxia in newborns.

Progress in labor is influenced by 5 P, namely passage (birth canal), passenger (fetus or baby), power (power of uterine contractions), psyche (psychological condition), and position (position) if one component changes the end result of labor harmful. An effective labor position is one that speeds up labor and reduces discomfort by aligning the baby perfectly and reducing unnecessary pressure and muscle effort. The application of the position in labor as one of the care given to the mother is expected to help the progress of the labor process normally and naturally.

Most women throughout the world give birth to babies by lying in bed. The lying position facilitates the management of labor by a doctor or midwife but has no benefits for the mother and fetus. Many physiological weaknesses that affect maternal health and fetal oxygenation are associated with lying position (lateral and supine). According to a 2010 survey by The Royal College of Midwives (RCM) in the United Kingdom about the position that women often make during labor shows that as many as 49% of women deliver in a recumbent position. While in the United States a national survey of “Listening to mothers” in 2002 stated that as many as 75% of women delivered in a supine position.

The observational cohort study by Gizzo et al., From January to December 2013 in Italy in 225 samples found that the upright position during labor can shorten the first stage 192.1 ± 125.8 minutes than supine position 336.1 ± 161.1 minutes. The results of a meta-analysis of 12 studies of 1,486 mothers in multiparas were shorter in upright positions about 30 minutes.
Method
The study method of observational analytic with design Cross-Sectional which aims to determine the effect of labor position on the duration of labor during the active phase of maternity at Sikumana Health Center. The research instrument used was an observation sheet starting from the opening of the cervix 4 cm to the complete opening (10 cm).

Results and Discussion
1. Characteristics of Research Subjects
The characteristics of the research subjects in this study were classified based on age, education, and parity. The description of the characteristics of the research subject can be presented in the following figure

The research subjects were multiparas during the active phase at Sikumana Health Center, Kupang City. The characteristics of the research subjects observed were age, education, and parity. The highest maternal age is in the reproductive age range of 21-35 years old (96.7%). Mother’s education is mostly in secondary education at 70%. The education is very influential on health conditions and can affect a person’s perception of getting better information, someone with a high education will easily receive the information provided, information about labor can improve the mother’s experience during childbirth so that the mother will concentrate more and her motor activities directed so that it can control pain due to uterine contractions, fear, and anxiety in the face

![Figure 1. Characteristics of Research Subject](image-url)
of labor. Labor pain, fear, and anxiety affect psychological responses that have an impact on the progress of labor.

The characteristics of most research subjects related to parity were parity 2 (53%). The state of the uterus in pregnant women will experience enlargement and stretching so that the uterine muscles cannot return as before in pregnancy. At parity more than three conditions, the uterus is usually weak as a result of which the uterus cannot contract properly so that it can cause long labor.

2. Overview of Position of Labor During First Active Stage

![Figure 2 Position of Labor During First Active Stage](image)

In figure 2, there were 21 mothers (70%) in the lateral position. While 9 mothers (30%) used a combination position that is lying, supine, standing and sitting. Maternal positions in labor can affect the length of labor at the first stage, mothers who move more and are allowed to choose their own position, experience a shorter labor process, and less pain.

3. Duration of Childbirth When First Active Stage

<table>
<thead>
<tr>
<th>Position</th>
<th>mean (sb)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lateral</td>
<td>107.38 (42.6)</td>
<td>0.401</td>
</tr>
<tr>
<td>Combination</td>
<td>148.44 (53.0)</td>
<td></td>
</tr>
</tbody>
</table>

* test unpaired t-test
The table shows, in the lateral position the average length of labor when first active phase 107.38 minutes and the length of labor when first active phase in the combination position 148.44 minutes.

The results of this study are different from the results of a study conducted by Gizzo et al, from January to December 2013 in Italy in 225 samples. The results of the study found that the upright position during labor can shorten the first stage 192.1 ± 125.8 minutes than supine position 336.1 ± 161.1 minutes. The results of the Gizzo study, et al., similar to the meta-analysis of 12 studies of 1,486 first-time mothers in multiparas, about 30 minutes shorter in the upright position than lying position.

The upright position results in the fundus pointing forward, causing an alignment of the axis extending the birth canal and directing the fetal head towards the pelvic top. Lumbar Lordosis, is a response in women to change the center of gravity and body shape during advanced pregnancy. In an upright position (walking, sitting, kneeling, or squatting) with a gravitational force petrified the fetus, uterine contractions are generally stronger and thinning and the opening of the cervix more efficiently causes shortened labor. The research conducted by Wigand and Leigh found that the upright position in labor during the first active phase can shorten labor time by approximately 1 hour and can provide relaxation in blood vessels and can also accelerate head reduction due to the Earth’s gravitational force so that it can shorten the time.

In the lying position (lying side to left, dorsal recumbent, and lithotomy) there is no help of the earth’s gravitational force so that the speed of fetal discharge is only determined by the force of the uterine muscle contraction and the mother’s era style. In other words, the speed of labor is very much determined by the strength of the mother. The results of statistical testing using an unpaired t-test, the probability value obtained is greater than the predetermined significance level (<0.05). This indicates that there is no effect on the length of labor in the mother who uses the lying position (lying on her left and supine side) and the position of the combination (lying on her left, supine, standing, walking, sitting). Progress in labor is influenced by 5 P, namely passage (birth canal), passenger (fetus or baby), power (power of uterine contractions), psyche (psychological condition), and position (position) if one component changes the end result of labor harmful.

Conclusions and Suggestions

There is no effect on the length of labor in the mother who uses the lying position (lying on the left and supine side) and the combination position (lying on her left, supine, standing, walking, sitting). The application of the position in labor as one of the care given to the mother is expected to be carried out well.
by the midwife and the active involvement of the maternity so that the delivery process takes place naturally and comfortably.

**References**


McKay, S. 1978. Maternal position during labor and birth. ICEA. Review. 2:10

Sauls DJ. Effects of labor support on mothers, babies, and birth outcomes. JOGNN. 2002; 31: 733-41.


Caldeyro-Barcia R, Noriega-Guerra L, Cibils LA, Alvarez H, Posiro JJ, Pose SV, et al.: Effect of position changes in the intensity and frequency of