

ANALYSIS OF THE FACTORS AFFECTING THE FIRST STAGE OF LABOR LENGTH PERIOD IN LILIK MATERNITY HOSPITAL SIDOARJO

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ABSTRACT

Introduction: Maternal mortality rates by Indonesia Demographic Health Survey (IDHS), was extremely high maternal mortality rate in Indonesia in 2013 228/100,000 live births. This figure shows that Indonesia is still the country with the highest maternal mortality rate in Southeast Asia this means more than 18,000 mothers die from a year or two women die every hour because of pregnancy, childbirth and postpartum. The first stage of labor is the dilatation that goes from zero to full dilatation. The first period to primigravid about 12 hours while at multigravida lasts for 8 hours. The purpose of this study was to analyze the factors that affect the first stage of labor length period in Lilik maternity hospital Sidoarjo. **Method:** This study is a quantitative study with a descriptive analytic cross sectional approach. Sampling using purposive sampling and research instrument uses observation sheets and questionnaires . Research sample as many as 30 mothers giving birth. Data analysis using chi -square test for relationship and logistic regression to examine the influence. **Results:** The results showed that factors associated with the first stage of labor length period is the age ($p = 0.013$) , parity ($p = 0.030$) and contraction ($p = 0.000$) . **Conclusions:** Variables associated together with the first stage of labor length period is the age, parity, and contraction . Variables associated most strongly is contraction (OR = 22,941 , 95% CI).

Keywords : the first stage of labor length period

INTRODUCTION

Every pregnant woman who faced some situations that may occur in connection with the pregnancy , such as the development and safety of the fetus in the womb until it was time to be born. Childbirth is a normal physiological occurrence traversed by the mother and the birth process requires the sacrifice of a mother (Erawati , 2010) .

One of the program targets the health of mothers and children (MMR) established in Indonesia Millennium Development Goal's (MDGs) is to reduce the maternal mortality rate to 102 per 100,000 live births in 2015. The maternal mortality rate by survei Indonesian Demographic Health (SIDH) is still very high ie in 2013 MMR in Indonesia 228/100,000 live births. This figure shows that Indonesia is still the country with the highest maternal mortality rate in Southeast Asia this means more than 18,000 mothers die from a year or two women die every hour because of pregnancy, childbirth and postpartum (Kemenkes RI, 2014).

Labor and birth are normal expenditure process that occurs in the fetus full-term pregnancy. The duration of normal pregnancy is 280 days (40 weeks), born spontaneously with a presentation that took place in the back of your head 18 hours in primipara mothers, without complications for both the mother and the fetus (Saifuddin , 2008).

Childbirth is divided into 4 stages. At the first stage the cervix opens from 0 to 10 cm. The first stage is also called dilatation. The second stage is also called the expenditure when the fetus is pushed out by his force and strength straining. In the third stage or also called urie period. The placenta separates from the uterine wall and be born. The fourth stage starting from the birth of the placenta until 2 hours later (Sumarah, 2008).

Some factors that affect labor, among others : power factor include : contraction, age, parity. Passanger factors include: large fetus, fetal weight. Factors passage includes: the hard parts of the pelvis (pelvic bones) and soft parts (muscles, tissue, and ligament). Helper factors : skill birth attendants, Psychological factors

include: anxiety, fatigue, exhaustion, and concern (JNPK-KR, 2008; Siswosudarmo 2008; Varney, 2008; Wiknjosastro 2007; Yanti, 2010).

The first stage labor is the opening that goes from zero to full opening. the first stage period to primigravid about 12 hours while at multigravida lasts for 8 hours. Based Battle opening friedman primi 1 cm / hour and multi 2cm / hour (Manuaba , 2007).

Based on the above background, researchers interested in conducting research titled "Analysis of Factors Affecting the first Stage of Labor length period In Lilik maternity hospital Sidoarjo regency."

RESEARCH METHODS

This research is descriptive analytic through a survey conducted to explain the relationship between the independent variables are the factors that influence the first stage of labor length period (age, parity, contraction, the outer pelvis size, estimated fetal weight, skill birth attendants and anxiety) with the dependent variable is a the first stage of labor length period and explain the influence jointly independent variable on the dependent variable. This research is a quantitative study with cross sectional approach.

Primary data collection was done by direct observation of respondents use observation sheets and questionnaires . The data collection also with documentation study guide KIA. This research was carried out from 1 December 2015 until 29 February 2016 in Lilik maternity hospital Sidoarjo. Samples obtained are 30 mothers who gave birth normally and taken with Purposive Sampling technique.

RESULTS

Bivariate analysis using Chi Square test analysis to determine the influence of independent variables with the variable

Table 1 Results of bivariate analysis of factors affecting long first stage of labor

Variabel Independen	Variabel Dependen	Pearson Chi Square	P value
Age	Duration first stage	6.111	0.013
Parity	Duration first stage	4.693	0.030
Contraction	Duration first stage	22.941	0.001
Outer Pelvic size	Duration first stage	0.197	0.657
Fetus Weight interpretation	Duration first stage	0.039	0.844
skill birth attendance	Duration first stage	0.679	0.410
Anxiety level	Duration first stage	2.861	0.414

Source : Primary Data , December 2015

dependentnya will be evidenced in the table 1. Based on Table 1 it can be concluded that age had a positive relationship with the first stage of labor length period, this is evidenced by Chi Square test (χ^2) and $p = 0.013$; $P < 0.05$. Variable Parity also have a positive relationship with the first stage of labor length period as evidenced by the value of $p = 0.030$; $P < 0.05$. Variable contractions have a positive relationship with the first stage of labor length period and very significant first, this is evidenced by the results of Chi Square test (χ^2) and the p-value < 0.001 .

Unlike the other four independent variables , the results of the statistical test Chi Square (χ^2) showed there was no correlation between the outer pelvis size, interpretation Fetal Weight, skill birth attendants and Mother Maternity Anxiety Level with the first Stage of Labor length period. This is evidenced by the value of p value is more than 0.05 so it can be concluded that there is no relationship between the four variables with the first stage of labor length period in Lilik maternity hospital Sidoarjo.

DISCUSSION

Relationships between age with first stage of labor length period in Lilik maternity hospital Sidoarjo.

Chi square correlation test results showed there is a significant relationship between age old first stage of labor in Lilik maternity hospital Sidoarjo ($p = 0.013$). According Manuaba, healthy reproductive age is 20-35 years. The age factor cited as a cause and predisposing to a variety of complications in pregnancy and childbirth, among other things led to his abnormalities, placenta previa and others (Wiknjosastro, 2002). Age < 20 years and > 35 years is considered as the age range at risk for complications during pregnancy, delivery and post-partum.

Table 2 Results of multivariate logistic regression analysis of the factors that affect the first stage of labor length period

Variabel	Interval Significan 95 %		
	Exp (B/OR)	B	Nilai p
Konstanta		-37.991	0.000
Age	6.111	36.382	0.013
Parity	4.693	18.938	0.030
Contractions	22.941	55.748	0.000
N Observasi			30
Nagelkerke			0.933
R Square			

Sumber : Data Primer, Desember 2015

Relationship between parity first stage of labor length period in maternity hospital Lilik Sidoarjo.

The results of correlation test by using chi square showed that there was a significant relationship between parity with the first stage of labor length period in maternity hospital Lilik Sidoarjo regency as evidenced by the value ($p = 0.030$). Obstructed labor often djumpai in primigravida with age > 35 years. Parity 2-3 (multigravida) is the safest in terms of maternal mortality, primigravidas donations or grandemulti deemed to have a higher maternal mortality. Prolonged labor often occurs in primigravida due to the lack of preparation in the face of labor (Wiknjosastro, 2002).

Relationship between Labor contractions with the first stage of labor length period in maternity hospital Lilik Sidoarjo.

The results of correlation test by using chi square showed a significant correlation between labor contractions with the first stage labor of length period in maternity hospital Lilik Sidoarjo as evidenced by the value ($p = 0.000$). State labor contractions that push the fetus out is a very important factor in labor, which is not normal either his strength or nature can hinder the smooth delivery (Manuaba, 2001).

Relationships between outer pelvis size with the first stage of labor length period in Lilik maternity hospital Sidoarjo.

The test results by using chi square correlation showed there was no correlation between the first stage of labor length period in Lilik maternity hospital Sidoarjo as evidenced by the value ($p = 0.657$). This differs from the theory by showing that the size of the pelvis that does not conform to normal standards may lead to

prolonged labor. Researchers found outside the pelvis size that do not represent the size of the pelvis in the maternity so that in this case the outer flanks size is not related to the old one stage of labor.

Relationship between interpretation of fetal weight with the first stage of labor length period in Lilik maternity hospital Sidoarjo.

The results of correlation test by using chi square showed no significant relationship between the interpretation of fetal weight with the first stage of labor length period in Lilik maternity hospital Sidoarjo as evidenced by the value ($p = 0.844$). Based on the theory of fetal magnitude of > 4000 g will lead to prolonged labor. In normal pelvis, a fetus weighing 2500 - 4000 grams is generally no difficulty in childbirth. In this study did not find the interpretation of fetal weight above 4000 g so that the results of this study states that there is no relationship between the interpretation of fetal weight with the first stage of labor length period.

Relationship between skill birth attendants with old first stage of labor length period in Lilik maternity hospital Sidoarjo.

The results of correlation test by using chi square showed no significant correlation between the helper skills and the first stage of labor labor length period in Lilik maternity hospital Sidoarjo as evidenced by the value ($p = 0.410$). Skill birth attendants is no direct influence in labor but with professional help that can provide support and early detection of complications in childbirth .

Relationship between anxiety level with the first stage of labor length period in Lilik maternity hospital Sidoarjo.

The results of correlation test by using chi square showed no significant correlation between anxiety level with the first stage of labor length period in Lilik maternity hospital Sidoarjo as evidenced by the value ($p = 0.14$). Fear mother during childbirth causes anxiety and endocrine responses that cause sodium retention, potassium excretion, and decreased glucose needed by contractions of the uterus. These responses also cause disekresinya epinephrine, which inhibits the activity of miometrial, and release norepinephrine which causes or is not coordinated uterine activity. Increased physical distress and ineffective labor causes more fear and discomfort (Hamilton, 2005). This contrasts with the results of research that has been done because researchers did not control the other psychological factors such as labor companion and others.

Relationships independent variable on the dependent variable.

Based on logistic regression statistical tests obtained related variables together on one long stage of labor is the age, parity and labor contractions. Variable having the most significant relationship was the contraction in the first stage of labor.

Based on the analysis of the value of OR = 22,941 and CI 95 %, meaning that pregnant women who contracted the delivery Inadequate 22,941 times has the opportunity to experience first stage of labor is long when compared to mothers who contractions adequate. This is in line with the theory put forward by Manuaba (2001) that the state of his or forces that push the fetus out is a very important factor in labor, which is not normal either his strength or nature may hamper the smooth delivery.

CONCLUSION AND RECOMMENDATIONS

Variables associated together against old first stage of labor is the age, parity, and contraction. Research variables most associated is contractions. It is therefore expected his helper were able to observe exactly so they can know that the first stage of labor lasted physiological or not.

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