



The Correlation of the Level of Anxiety of Nulliparous Women to the Length of the First Stage of Spontaneous Labor at Private Maternity Clinics in the Working Area of Delitua Puskesmas, Deli Serdang District in 2013

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Abstract: Abnormal length of the first stage of labor in nulliparous women (first pregnancy) can be related to severe anxiety during labor. Based on the preliminary survey in several private maternity clinics at the working area of Delta Puskesmas, Deli Serdang District, it was found that there was a prolonged first stage of labor (27.65%) in nulliparous women. The purpose of this study was to analyze the influence of anxiety level to the length of the first stage of labor. The type of this study was an analytic survey with explanatory research type. The samples comprised 40 childbearing women in private maternity clinics of Kasih Ibu, Kurnia, Tanjung, Wanda, and Mayana which were located in the working area of Delitua Puskesmas, Deli Serdang District, using accidental sampling technique. The data were gathered by using questionnaires and analyzed in the univariate analysis by using frequency distribution form, and bivariate analysis using Chi-Square test. The result of this study showed that the level of anxiety ($p = 0.001$) significantly related the length of the first stage of labor in which mothers who had severe anxiety. It is recommended that health providers should provide standardized services to childbearing women, especially to nulliparous women, so that their level of anxiety can be decreased facing the first stage of the labor process. It is also recommended that the husbands should support their wives by positive behaviors so they will not think about negative things on their babies and on themselves.

Keywords: Level of anxiety, Nulliparous women, Length of first stage of labor

1. Introduction

Maternal mortality rate in Sumatera Utara in last 6 years showed the downward trend from 360 in every 100.000 live birth in 2002 into 345 in every 100.000 live birth in 2003, 330 dead in every 100.000 live birth in 2004, 320 in every 100.000 live birth in 2005, 315 in every 100.000 live birth in 2006 and 275 in every 100.000 live birth in 2007 (DINKES PROVSU, 2008).

We estimated that there were 342 900 (uncertainty interval 302 100–394 300) maternal deaths worldwide in 2008, down from 526 300 (446 400–629 600) in 1980. The global MMR decreased from 422 (358–505) in 1980 to 320 (272–388) in 1990 and was 251 (221–289) per 100 000 live births in 2008. The yearly rate of decline of the global MMR since 1990 was 1.3% (1.0–1.5). During 1990–2008, rates of yearly decline in the MMR varied between countries, from 8.8% (8.7–14.1) in the Maldives to an increase of 5.5% (5.2–5.6) in Zimbabwe. More than 50% of all maternal deaths were in only six countries in 2008 (India, Nigeria, Pakistan, Afghanistan, Ethiopia, and the Democratic Republic of the Congo) (WHO, 2008). Maternity mortality rate based on SDKI in 2012 there is 359/100.000 live birth (KEMENKES RI, 2014).

Labor is an important occurrence for parents and family. It's well known, easiness in labor is highly dependent on mother's condition but very important to know that there is almost no human behavior and biological progress unaffected by the psychological condition. Fetal growth will make a mother more easily exhausted, hard to sleep and breathless. Even the strongest woman felt the same thing.

Fear and too much worry would make concentration disturbance on preparing to face labor. If this condition happened unexpectant mother would not have an optimal preparation to labor her first baby (Utami, 2009).] Every unexpectant mother who never gives birth before would felt fear and worry more than an expectant mother who had given birth (Ambarwati, 2001 dan Utami, 2009). The anxiety factor on mothers could make labor progress become longer and it will impact on morbidity and mortality rate because of painful feeling (Nayak, 2014). Prolonged labor usually happened in the first stage of labor. This stage is a progress of cervical dilatation until complete (American Pregnancy Association, 2015).

Preliminary survey taken on Juli-September 2012 from several private maternity clinics in Delicia Public Health Center working area showed: There are 94 nulliparous mothers and 42,55% from them experiencing normal length of the first stage of labor (4-8 hour), 27,65% experiencing prolonged first stage of labor (>8-12 hour), 10,63% experiencing 20-24 hour first stage of labor, 19,15% referred to hospital because experiencing more than 24 hours. On the other side, there are 112 mothers who had given birth, 79,46% experiencing a normal first stage of labor, 12,25% experiencing a prolonged first stage of labor, 5,36 experiencing 12-16 hour first stage of labor and 2,68% experiencing 16-hour first stage of labor and referred to hospital.

Based on this background, the study showed the correlation between the level of anxiety of nulliparous women to the length of the first stage of spontaneous labor at Private Maternity Clinics in the Working Area of Delitua Puskesmas, Deli Serdang district in 2013.

2. Research Method

This is a quantitative study with explanatory method approach. This study is located in private maternity clinic in Delitua Public Health Center working area, Deli Serdang District. The population constitutes first pregnant mother (nulliparous) who will give birth in private maternity clinic in Delitua Public Health Center working area. The number of samples is 40 people taken by Accidental Sampling. Data were analyzed using Chi-Square test.

3. Result and Discussion

3.1 Respondents Characteristics Distributions

40 samples in this study are in age interval of 18-29 years. Samples characteristic included age, religion, ethnic, marriage status, education, occupation, income, maternity checkup and complaints during pregnancy. The result of this study showed that most of the nulliparous women are in aged 22-25 years, 20 people (50,0%) belongs to Islam religion, 23 people (57,5%) belongs to Java ethnic, 16 people (40,0%) have Senior high school, 29 people (72,5%), most of nulliparous are housewives about 29 people (72,5%).

Table 1: Respondent Characteristics Distributions

Respondents Characteristics	N	%
Age (years)		
18-21	16	40,0
22-25	20	50,0
26-29	4	10,0
Religion		
Islam	23	57,5
Catholic	9	22,5
Protestant	8	20,0
Ethnics		
Java	16	40,0
Malay	12	30,0
Batak Karo	9	22,5
Batak Toba	3	7,5
Marriage Status		
Married	39	97,5
Unmarried	1	2,5

Education		
Elementary	2	5,0
Junior High School	5	12,5
Senior High School	29	72,5
College	4	10,0
Occupation		
Housewives	29	72,5
Entrepreneur	5	12,5
Teacher/lecture	2	5,0
Farmer	2	5,0
Housekeeper	2	5,0
Income		
<Rp.1.500.000	28	70,0
Rp.1.500.000-Rp.3.000.000	6	15,0
Rp.3.100.000-Rp.4.500.000	6	15,0
Maternity Checkup		
Once	1	2,5
2 times	2	5,0
3 times	5	12,5
>= 4 times	32	80,0
Complaints During Pregnancy		
Yes	38	95,0
No	2	5,0

3.2 Respondent Variable Distributions

Measuring result showed, number of nulliparous women who are experiencing normal duration of the first stage of labor about (62,5%), and abnormal about (37,5%). Anxiety levels measured on nulliparous women in moderate level (47,5%), hard (50,0%), and panic (2,5%).

Table 2: Variables Frequency Distributions

No	Variable	N	%
Dependent variable			
1	Lenght of first stage		
	Normal	25	62,5
	Abnormal	15	37,5
Independent variable			
2	Level of Anxiety		
	Moderate	19	47,5
	Hard	20	50,0
	Panic	1	2,5

1.3. Correlation of Level of Anxiety with Length of First Stage Labor at Private Maternity Clinics in the Working Area of Delitua Puskesmas, Deli Serdang District in 2013

Chi-Square test result showed there is a correlation between anxiety level with the length of the first stage spontaneous labor primigravidae with $p=0,001$.

Table 3. Correlation of Level of Anxiety with Length of First Stage Labor at Private Maternity Clinics in the Working Area of Delitua Puskesmas, Deli Serdang District in 2013

Level Of Anxiety	Length of First Stage Labor				Total		P
	Normal		Abnormal		n	%	
	n	%	n	%			
Moderate	17	89,5	2	10,5	19	100,0	0,001
Hard+Panic	8	38,1	13	61,9	53	100,0	
Total	25	62,5	15	37,5	40	100,0	

Table 3 showed a significant correlation between level of anxiety with length of first stage spontaneous labor, mother's anxiety from nulliparous women had given contribution to length of first stage labor it usually happened because of many pressure, high anxiety, instability feeling and own fear feeling if babies born in abnormal condition, birth defects or died. Sometimes, young mothers felt too worried about how to caring a baby. Moreover, women who did not get attention and moral support from family especially from husbands are easily getting anxiety in labor.

These result is corresponding with Jatmika Research in 1999 who found a high correlation between anxiety with the length of the first stage of labor and vice versa (Jatmika, 1999).] Anxiety will higher by the time give birth. This situation will make mothers become not cooperative. Stress in labor and reflex can cause increased level of catecholamin. Psychological stress and hypoxia-related to pain and anxiety would increase adrenaline secretion. Adrenaline secretion increasing would make a vast konstriksi as a result uterus blood stream would decrease and finally, hypoxia happened, labor complication occurs and results in fetal death (Chapman, 2006).

4. Conclusion

Univariate analysis from a length of the first stage of labor showed 25 respondents (62,5%) experiencing the normal length of the first stage of labor and 15 respondents (37,5%) experiencing the abnormal length of first stage labor. Bivariate analysis showed that there is a significant correlation between the level of anxiety with the length of first stage labor with $p=0,001$.

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