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## RESEARCH ARTICLE

# RELATIONSHIP BETWEEN CHILDBIRTH ASSISTANT AND PREGNANT GYMNASTICS WITH SMOOTH DELIVERY TO MOTHERS AT THE WORK AREA HEALTH OFFICE OF SIMALINGKAR IN 2019

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### ABSTRACT

**Background:** the causes of high maternal and perinatal deaths in Indonesia and other developing countries are due to the length of labor. Efforts can be made by pregnant women so that labor runs smoothly by doing pregnancy exercises. Maternal needs in childbirth: assistant by husband/family, who can greatly provide support both physically, emotionally and advocately. **Aims:** to identify relationship between childbirth assistant and pregnant gymnastics with smooth delivery. **Methods:** The study was retrospective with approach case control. The respondents were selected by purposive sampling numbered 132. The research instrument used in this study was made in the form of a questionnaire. Data analysis used chi-square test. **Results:** there was a relationship between labor attendants and the smooth delivery ( $p = 0.015$ ); there was a relationship between pregnancy gymnastic and smooth delivery ( $p = 0.002$ ). **Conclusion:** It is expected that improve health promotion and education to mothers and labor assistants (husbands) about the importance of assisting childbirth and pregnancy exercises to increase the chances of a smooth delivery.

## INTRODUCTION

Indonesia is a country with the highest Maternal Mortality Rate (MMR) and perinatal which means the ability to notify health services still requires improvements that are comprehensive and of higher quality. One reason for the high maternal and perinatal mortality in Indonesia and other developing countries is the result of long labor (Kemenkes, 2013). One reason for the high maternal and perinatal mortality in Indonesia and other developing countries is the result of prolonged labor. There are three factors that cause prolonged labor or prolonged labor, namely energy, birth canal and fetus. Abnormalities in the power factor can be caused by inertia (his not suitable with the phase), coordinating (his irregular, no coordination and synchronization between the contractions of his parts) and tetanic (his which is too strong and too frequent so there is no relaxation of the uterus). The foregoing can cause labor congestion, if not immediately treated will result in fetal distress. Efforts can be made by pregnant women so that labor runs smoothly by doing pregnancy exercises (Yuliasari, 2010). Another factor that is the cause of maternal mortality in Indonesia is the lack of attention from the family, especially the role of the husband in the process during pregnancy. Even though the husband is very instrumental in helping to calm the physical and psychological conditions of a wife. As a result of

lack of attention and support from the husband, making the mother feel afraid, anxious and worried in the face of childbirth. The impact of anxiety experienced by mothers during childbirth is that the mother will become tired and lose strength so that it can interfere with labor (Musbikin, 2005). Maternal needs in childbirth: a companion by husband / family, who is very able to provide support both physically, emotionally and advocately. Physical support that can be given can be in the form of eye contact, holding hands and rubbing your back. This support can be provided by realizing a sense of love, trust, understanding the openness and willingness of the husband to help with problems faced by the mother during labor (Sari, 2010). Based on the results of a survey conducted by researchers at Simalingkar Community Health Center, it was found that the number of deliveries during January to December 2016 was 538 deliveries, it was also known that pregnant women who took part in pregnancy in 2017 were 203 people who took part in pregnancy. Pregnant exercise is done regularly 3 times a week. Based on the results of interviews conducted on 10 mothers who had given birth and were previously involved in pregnancy exercise during pregnancy, 6 of them said that they experienced spontaneous and smooth labor, the delivery process was accompanied by their husbands, while 1 person had a vacuum because the mother was not again has the power to strangle because the labor

process is long and tiring and the baby's head is on the birth canal and 3 people give birth by caesarean section because the mother feels tense and worried that the labor process lasts a long time and does not progress so the mother has to undergo surgery. Mothers who experience a caesarean delivery process due to labor takes a long time because of irregular uterine contractions and non-progressive labor so that maternal stress increases and fatigue so labor must go through a cesarean section. Based on the description above, the researcher was interested in conducting a study on "Relationship between Childbirth Assistance and Pregnant Gymnastics with Smooth Delivery to Mothers in the Simalingkar Community Health Center Working Area in 2019".

## METHODS

The study was retrospective with approach case control from February to April 2019. The respondents were selected by purposive sampling numbered 132 consisting of 44 respondents in the case group and 88 respondents in the control group. Inclusion criteria for case group: 1) age of mother giving birth 20-35 years; 2) the last spontaneous vaginal delivery with a gestational age of 37-42 weeks; 3) multigravida history in the last pregnancy; 4) the condition of pregnancy at the time of delivery is good (no abnormalities such as placenta previa, solutio placenta or hydramnios); 5) maternal condition prior to delivery (not having preeclampsia or eclampsia, diabetes mellitus, heart disease, hypertension); 6) there is no complication of pregnancy such as bleeding, pregnancy with location abnormalities, a history of a single pregnancy; 7) delivery time in the last pregnancy > 24 hours; and 8) willing to participate in research.

Inclusion criteria for control group:

1) age of maternal pregnancy with a history of gymnastics pregnant 20 weeks; 2) the last spontaneous vaginal delivery with a gestational age of 37-42 weeks; 3) the condition of the mother at the time of delivery is good (no abnormalities such as placenta previa, solutio placenta or hydramnios); 4) the condition of the mother at the time of delivery is good (not experiencing preeclampsia or eclampsia, diabetes mellitus, heart disease, hypertension); 5) there is no complication of pregnancy such as bleeding, pregnancy with location abnormalities, history of a single pregnancy; and 6) willing to participate in research. The research instrument used in this study was made in the form of a questionnaire. Data analysis used chi-square test.

## RESULTS

Based on the distribution of the characteristics of respondents in the Simalingkar Community Health Center Working Area most respondents had ages in the range of 26-30 as many as 56 people (42.4%), most education at the senior high school level 75 people (56.8%), most work as housewives as many as 88 people (66.7%), and most number of children had a total of 73 (55.3%).

Based on the results of the study, it was found that more mothers received good childbirth assistance in the amount of 78 people (59.1%) and fewer mothers obtained less maternity assistance as many as 54 people (40.9%).

**Table 1. Distribution of Characteristics of Respondents in Simalingkar Health Center Working Areas in 2019**

Characteristics	Frequency	%
<b>Ages</b>		
• 20-25 years	36	27.3
• 26-30 years	56	42.4
• 31-35 years	40	31.3
<b>Education</b>		
• Elementary school	17	12.9
• Junior high school	20	15.2
• Senior high school	75	56.8
• Diploma 3	9	6.8
• Bachelor	11	8.3
<b>Work</b>		
• Housewives	88	66.7
• Private employees	13	12.1
• Civil officer	11	8.3
• Entrepreneur	17	12.9
<b>Number of children</b>		
• One	73	55.3
• Two	46	34.8
• Three	13	9.8

**Table 2. Frequency Distribution of Delivery Assistants in the Simalingkar Community Health Center Working Area in 2019**

Childbirth assistant	Frequency	%
Good assistant	78	59.1
Less assistant	54	40.9
Amount	132	100.0

Based on the results of the study it was found that more mothers who were inactive participating in pregnancy gymnastic many as 77 people (58.3%) and fewer mothers who were active participating in pregnancy gymnastic as many as 55 people (41.7%).

**Table 3. Frequency Distribution of Pregnancy Gymnastic in Simalingkar Health Center Working Area in 2019**

Pregnancy gymnastic	Frequency	%
Active	55	41.7
Inactive	77	58.3
Amount	132	100.0

Based on the previously determined sample in this study, more groups experienced not-smooth delivery, namely as many as 88 people (66.7%) and fewer mothers who experienced smooth delivery as many as 44 people (33.3%).

**Table 4. Frequency Distribution of Smooth Delivery in Simalingkar Community Health Center Working Area in 2019**

Smooth delivery	Frequency	%
Smooth	44	33.3
Not smooth	88	66.7
Amount	132	100.0

Based on the analysis of the relationship between the assistance of childbirth with the smooth delivery, it is known that from 78 respondents with good delivery assistance, there were as many as 33 people (42.3%) and those who did not have smooth deliveries as many as 45 people (57.7%). While from 54 respondents with less birth attendants who experienced smooth labor there were as many as 11 people (20.4%) and there were 43 not smooth deliveries (79.6%). The results of the statistical test with chi-square showed that there was a relationship between labor attendants and the smooth delivery ( $p = 0.015$ ). The results of cross tabulation analysis obtained an Odds ratio of 2,867 with Confidence Interval

1,288-6,381 meaning that mothers who received good maternity care had a chance of having 2.8 times having a smooth delivery compared to getting good labor assistance.

**Table 5. Cross Tabulation of Assistance in Delivery with Smooth Delivery in Simalingkar Community Health Center Working Area in 2019**

Childbirth assistant	Smooth delivery						P	OR (95% CI)
	Smooth		Not smooth		Total			
	f	%	F	%	f	%		
Good	33	42.3	45	57.7	78	100.0	0.015	2.867 (1.288-6.381)
Less	11	20.4	43	79.6	54	100.0		

Based on the results of the analysis of the pregnancy gymnastic with the smooth delivery, it is known that of the 55 respondents who actively participated in pregnancy gymnastic, there were 27 people (49.1%) and those who did not have smooth deliveries there were 28 people (50.9%). While from 77 respondents who actively participated in pregnancy gymnastic, there were as many as 17 people (22.1%) who had smooth deliveries and 60 people (77.9%) who did not have smooth deliveries. The results of the statistical test with chi-square showed that there was a relationship between pregnancy gymnastic and smooth delivery ( $p = 0.002$ ). The results of cross tabulation analysis obtained an Odds ratio of 3.403 with Confidence Interval of 1,600-7,238, meaning that mothers who actively participated in pregnancy exercise had a 3.4 times chance of having a smooth delivery compared to women who actively participated in pregnancy gymnastic.

**Table 6. Cross Tabulation of Pregnant Gymnastics with Smooth Delivery in Simalingkar Community Health Center Working Area in 2019**

Pregnant gymnastic	Smooth delivery						p	OR (95% CI)
	Smooth		Not smooth		Total			
	f	%	f	%	f	%		
Active	27	49.1	28	50.9	55	100.0	0.002	3.403 (1.600-7.238)
Inactive	17	22.1	60	77.9	77	100.0		

## DISCUSSION

Childbirth is a process of spending months of conception (fetus and placenta) or can live outside the womb through the birth canal or through another road, with help or without assistance (own strength) (Sulistiyowati, 2010). By age, labor is influenced by three factors, namely passage (birth canal), passanger (fetus), power (strength). Childbirth can run normally (Euthocia) if all three factors are met properly. In addition there are other factors that influence labor, namely psychological and helper (Rohani, 2011). Mothers who first undergo labor will be afraid, anxious, worried, resulting in an increase in pain during labor and can interfere with the way the labor is not smooth (Yulianti, 2014). So that in a labor a wife needs physical and psychological support in order to relieve the psychological condition of an unstable mother, the role of the husband is needed during labor.

In this study there are two important factors studied related to the smooth delivery of labor, namely the delivery assistant and pregnant gymnastics (Yulianti, 2014). The role of assistance or husband when his wife gives birth is to provide support in the form of assistance during the labor process, so that it can facilitate the delivery process, provide a feeling of comfort, enthusiasm, increased mother's confidence, and reduce medical action. The support of a husband during labor is a source of

strength that cannot be provided by health workers. Husband's support is in the form of strengthening, giving wife morale both morally and materially such as providing physical, psychological, emotional, information, valuation and financial or financial support (Marmi, 2012). In addition to providing support and assistance for the role of a husband during labor, including making decisions about the place of delivery / place of birth delivery, preparing transportation to get to the right delivery and also the most important thing is knowing the complications during pregnancy and childbirth (Smith, 2017).

The role of the assistance in the labor process is often ignored, one of them is due to factors of customs and hospital policies that are less supportive (Smith, 2017). Labor is a stressful situation, a mother needs strong support, one of which is support from a husband. This was shown in a research journal about the experience of mothers accompanied by their husbands during labor. The benefits of the presence of the husband during labor according to the mother's perception that the husband can provide a feeling of calm and strengthen psychological mother because the husband is considered able to provide support and enthusiasm, increase the emotional closeness of husband and wife because the husband witnessed the mother's struggle to bear their baby, husband always when needed, the mother feels comfortable and there is more energy when the husband accompanies. Mothers feel not alone when giving birth because there are those who accompany, provide support and give enthusiasm (Astuti *et al.*, 2012). Pregnant gymnastics is an exercise program for healthy pregnant women to prepare the physical condition of the mother by maintaining the condition of the muscles and joints that play a role in the labor process, as well as preparing the psychological condition of the mother, especially to foster confidence in facing labor.

Pregnant exercise benefits the trained biomotor muscle components, and can also increase cardiorespiratory endurance by increasing oxygen consumption (Saifuddin, 2016). Hamilton (2015) explains that pregnancy exercise will provide a product of pregnancy or a better labor outcome, compared to pregnant women who do not do pregnancy exercises during pregnancy. Pregnant gymnastics can reduce stress in the midst of birth, reduce pain during labor, babies born have a normal body weight, and can reduce the risk of preeclampsia. Varney (2016) explains some of the benefits of pregnancy gymnastics for pregnancy with a decrease in heart rate, umbilical cord and meconium abnormalities, decreased energy use, reduced pain, and improved fetal Apgar and psychomotor scores. Effective pregnancy exercise is carried out starting at 22 weeks' gestation 1 time a week until before delivery. Pregnancy exercise that is given regularly is a help that cannot be ignored as well as pregnancy hygiene.

## Conclusion

There was a relationship between maternal companion and smooth delivery ( $p = 0.015$ ) with an Odds ratio of 2.867, which meant that mothers who received good maternity care had a 2.8 chance of having a smooth delivery compared to getting good labor assistance. There was a relationship between pregnancy exercise and smooth delivery ( $p = 0.002$ ) with an Odds ratio of 3.403, which means that mothers who actively participate in pregnancy exercise have a chance of 3.4 times having a smooth delivery compared to women who actively participating in pregnancy exercises.

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