



THE DIFFERENCE IN THE SECOND STAGE OF LABOR DURATION IN PRIMIGRAVIDA MOMS WHO DO PREGNANCY EXERCISE DURING THIRD TRIMESTER OF PREGNANCY IN THE WORKING AREAS OF ANDALAS AND LUBUK BUAYA HEALTH CENTER PADANG CITY IN 2018

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ABSTRACT

The 2015 maternal mortality rate in Indonesia was 305/100,000 live births. The causes were bleeding, eclampsia and infection. American College of Obstetricians and Gynecologists recommend pregnancy exercise during pregnancy so that labor is smooth and reduces complications during labor. This type of observational study with a Comparative study design. The study was conducted in the working areas of andalas and lubuk buaya health center in October 2018 to January 2019. The number of samples was 44 people divided into 2 groups, namely the first 22 moms who did pregnancy exercise and 22 moms who did not do pregnancy exercise. Sampling method was with consecutive sampling. Data analysis was using a computerized system with independent T test. The results of the study showed that there were differences in the duration of second stage in maternity moms who did pregnancy exercise during the third trimester of pregnancy with a value ($p = 0.00$), with an average duration of second stage in moms who were 16.5 minutes pregnant, who did not pregnancy exercise 23.05 minutes. The conclusion of this study is that there is a difference in the duration of second stage of labor in moms who do pregnancy exercise during the third trimester of pregnancy.

Keywords: *Pregnancy exercise, duration of second stage*

INTRODUCTION

Maternal and perinatal mortality rates are one of the indicators of the success of health services, especially midwifery services. The Maternal Mortality Rate (AKI) and Infant Mortality Rate (AKB) in Indonesia are still quite high until now, for 2015, namely AKI 305 / 100.00 live births, while AKB 22/1,000 live births. The cause of the high rate of AKI and AKB is the presence of complication and problem during pregnancy and labor including bleeding, eclamiation and infection. Labor bleeding is the main cause of the death. One

of the main causes of bleeding is uterine atony caused by weak uterine contraction.^{1,2,3}

Physiologically, exercise can improve physical fitness and increase blood vascularity so that it can improve upon muscle contraction and control the respiratory core so that the rate and depth respiratory become normal. Physical movements during pregnancy exercise is committing regularly in accordance with the instructions will be beneficial for the health of moms, increase muscle tone,



increase strength and endurance, and increase muscle relaxation which is tense and controlling the mom's emotion.^{4,5}

American College of Obstetrics and Gynecologist (ACOG) recommends exercise during pregnancy as a preventative effort so that pregnancy and labor run naturally and reduce the risk of injury due to labor. Pregnancy exercise in Indonesia is part of the Antenatal Care (ANC) service that should be held by every single institution which is providing maternal health services, but for now, not all health care institutions that held pregnancy exercise.^{3,6}

Research conducted by the Cochrane 2006 updated in 2010 and 2015 found that pregnant moms who do exercise in pregnancy as much as 2-3 times a week will improve their fitness, and pregnant moms who do structured exercises will prevent drastically weight gain during pregnancy and reduce the risk of hypertensive disorders in pregnancy.⁷

According to research conducted by Rusmini and partners in 2017 regarding the participation of pregnancy exercise with the accuracy of the second stage of labor in Tegal Regency, it was found that pregnant moms who do pregnancy exercise frequently and regularly, the labor process runs spontaneously and the time is shorter.⁸

This study was to determine the difference in duration of second stage during labor in primigravida moms who did pregnancy exercise during pregnancy Trimester III in the working areas of andalas and lubuk buaya health center padang city in 2018.

MATERIAL AND METHODS

This study was observational using a Comparative study design. The populations in this study were third trimester pregnant moms in the working areas of Andalas and Lubuk Buaya health center Padang city. The amount

of samples in this study is 44 people divided into 2 groups, the first group of 22 moms who did pregnancy exercise regularly, and the second group 22 moms who did not do pregnancy exercise during the third trimester of pregnancy. Sampling was done by consecutive sampling method, which is subjects who met the inclusion criteria. The inclusion criteria of this study were primigravida, age 20-35 years old, and single pregnancy, head presentation and no suspicion of head-pelvic disproportion.

The research instrument used was an observation sheet for the regularity of moms who do pregnancy exercise every week, hours to monitor the second stage of labor duration that starts from the opening the cervix is completed, accompanied by a prominent perineum and encouragement of straining to the child and partograph as a labor documentation tool. Data analysis is committing the normality test of the data using the Shapiro Wilk test, was found to be normally distributed, then the data analysis was continued using the parametric Independent T test.

RESULTS

The results in the second stage duration of the normality test in primigravida moms who did pregnancy exercise and did not do pregnancy exercise during the third trimester of pregnancy were normally distributed with $p = 0.120$ ($p > 0.05$). Data analysis continued using the independent T test statistical test as follows:



Table 1
Duration of Second Stage in Primigravida Moms Who did and did not do Pregnancy Exercise during Pregnancy Trimester III

Group	Did Pregnancy Exercise	Did not do Pregnancy Exercise
Duration of second stage (minutes)	16,5	23,05

Based on the table above, it can be seen that the average duration of the second stage for moms who did pregnancy exercise is 16.5 minutes while the average duration of second stage in moms who did not do exercise is 23.05 minutes. Based on these results, there is a difference between the duration of second stage in moms who did and did not do pregnancy exercise for pregnant moms with a difference of 6.55 minutes.

Table 2
Differences in the Duration of the Second Stage in Primigravida Moms who did and did not do Pregnancy Exercise During Pregnancy Trimester III

Variabl e	Did Pregnancy Exercise Mean ± SD	Did not do Pregnancy Exercise Mean ± SD
Durati on of second stage (minut es)	16,50±5,4 6	3,05 ± 3,78

Based on independent tests of samples T test, the sig value = 0,000 (sig <0.05) can be concluded that there is a difference between the duration of second stage in moms who do pregnancy exercises and do not do pregnancy exercise during the third trimester of pregnancy.

DISCUSSION

The results of the study found that the average duration of second stage in moms who did pregnancy exercise was 16.5 minutes and the average duration of second stage in mothers who did not do pregnancy was 23.05 minutes. The Independent T Test statistical test obtained a value of $p = 0,000$ (p value <0.05), there was a difference between the duration of the second stage of labor in primigravida moms who did and did not do pregnancy exercise during the third trimester of pregnancy.

This research was supported by the research conducted by Ria Winda Setyasari (2011), the results of the study found that there was a relationship between the regularity exercise in pregnancy and second stage labor in Primigravida at PKU Muhammadiyah General Hospital Bantul in 2008-2010. The results of the Chi-Quadratic Asym-Sig (2-sided) statistical test are 0.00 with a significance level of 5% and $df = 1$.⁹

According to Simoni, L. Nascimento, et al (2012) said that exercise during pregnancy is recommended for moms with normal pregnancies. The benefit of stretching exercises that are usually done in this exercise is that it can increase pelvic muscle strength, strengthen overall body strength which can help in the process of birth and labor and reduce



discomfort during pregnancy.¹⁰

In the process of labor, especially in the second stage, the factors that play a major role in the labor process are the power, passage, and the moms' psychological. Moms who did pregnancy exercises regularly will be calmer in the process of labor because they have mastered the breathing technique when run pregnancy exercises, so that good and correct breathing techniques will affect the mother's labor and straining techniques are needed during labor, especially in the second stage so labor can be held quickly. Pregnancy exercise also makes the pelvic floor muscles that will be passed through when the baby's releasing process becomes stronger and elastic so that the baby's releasing becomes faster and smoother.^{11,12}

CONCLUSION

There was a difference in the second stage of labor duration in moms who did pregnancy exercise and those who did not do pregnancy exercise during the third trimester of pregnancy, where the average duration of second stage in moms who did pregnancy exercise was 16.5 minutes and 23.05 minutes who did not do it. It is expected that health workers can apply pregnancy exercise to each class of pregnant moms and encourage moms to routinely do pregnancy exercise at least once every week with 30-40 minutes to help smooth the delivery

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