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The Effect of Pregnancy Exercises on Normal Childbirth at the BPM Suci Rahmadani Clinic in 2023

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ABSTRACT

Pregnancy is a natural process that occurs in that the changes that occur in women during normal pregnancy are physiological in nature. The aim is to determine the effect of pregnancy exercise on the smooth delivery process of primiparous mothers at the BPM Suci Rahmadani Clinic. This research is a cross sectional study using an observational approach. The results of the study showed that of the 50% who participated in pregnancy exercise, 35.4% had normal deliveries, 14.6% had abnormal births. Of the 50% of mothers who did not participate in pregnancy exercise, 11.5% had normal deliveries and 38.5% had abnormal births. Based on the Odds Ratio (OR) value of 8.169, this means that mothers who do not exercise during pregnancy have a risk of abnormal labor of 8.169 times compared to mothers who exercise during pregnancy. It is recommended for mothers to take part in pregnancy exercise at least once a week so that the benefits of pregnancy exercise can be felt to the maximum. It is hoped that the Suci Rahmadani BPM Clinic will make pregnancy exercise one of the pregnancy care program policies, so that pregnant women can feel the benefits of the exercise well.

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INTRODUCTION

Human pregnancy occurs for 40 weeks between the time of the last menstrual period and birth (38 weeks from conception). The medical term for pregnant women is gravida, while the human in it is called embryo (early weeks) and then fetus (until birth). A woman who becomes pregnant for the first time is called primigravida. A woman who has never been pregnant is known as a gravida. Pregnancy is a condition in which a woman has a fetus that is growing in her body. Generally, the fetus grows in the womb. The gestation time in humans is about 40 weeks or 9 months. This period is calculated at the beginning of the last menstrual period until childbirth. Pregnancy is a reproductive process that requires special care to go well. With the occurrence of pregnancy, women undergo fundamental changes so that they can support the development and growth of the fetus in the womb (Manuaba, 2018).

Physical changes during pregnancy do not hinder pregnant women from exercising. Especially with pregnancy exercises, the health of pregnant women both physically and mentally can be maintained and moreover, pregnancy exercises help pregnant women to prepare for a smooth delivery. A pregnant woman can adapt to the changes that occur both physically and mentally, it is necessary to carry out antenatal care that aims to prepare for physiological childbirth with the aim of the mother and child she will give birth to in a healthy state (Ministry of Health of the Republic of Indonesia, 1994). Surveillance during pregnancy (antenatal) has proven to have a very important position in efforts to improve the mental and physical health of pregnancy to face childbirth. The purpose of pregnancy surveillance for mothers is to reduce and enforce early pregnancy complications, enforce and treat early maternal complications that can affect pregnancy, maintain and improve the mental and physical health of pregnant women, pregnancy surveillance can also reduce AKI (Maternal Mortality Rate) (Manuaba, 2008).

This can cause mental and physical tension that will result in abnormal stiffness of muscles and joints Among the predictors of health conditions in Indonesia, the maternal mortality rate can be said to be the most concerning. Maternal Mortality Rate (AKI) 307 deaths per 100,000 live births in SDKI 2002-2003 (Muslimin & Rahim, 2022). The maternal mortality rate has not decreased in the last 5 years. The target of the Millenniu Development Goals (MDG's) in 2016 is 100 deaths per 100,000 live births (Indrayani & Choirunnisa, 2020)

According to the Ministry of Health (in 2018), the maternal mortality rate (AKI) in West Java is still high. According to Ganggu (2018) Practicing pregnancy exercises regularly will reduce fatigue. The number of pregnant women in Indonesia is 5,324,562 while according to the Ministry of Health in 2018 in West Java it was 971,458 pregnant women. As for the survey conducted on March 16, 2019, there were 629 pregnant women consisting of 249 pregnant women in the first trimester, 248 pregnant women in the second trimester, and 132 pregnant women in the third trimester.

A health problem that is still a concern in every country is the large maternal mortality rate. The Ministry of Health of the Republic of Indonesia (2019) stated that the maternal mortality rate in 2018/2019 was at 305 per 1000 live births. The direct cause of maternal death is 28% due to bleeding, eclampsia 24%, puerperium complications 8%, abortion 5%, partus eclampsia 24%, obstetric trauma 3%, others 11%. The Maternal Mortality Rate in Medan is 2019, AKI is 179 out of 302,555 live births or 59.16 per 100,000 live births. (Ministry of Health of the Republic of Indonesia, 2019; Profile of SUMUTProv, 2019).

According to World Health Organization (WHO) data, it is estimated that about 15% of all pregnant women will develop complications related to their pregnancy as well as life-threatening. In a study of 876 pregnant patients in New York who exercised, labor was easier for those who exercised regularly compared to those who exercised little or no at all, and also had a reduced risk of prolonged labor.

According to Riskesdas in 2018, the data of pregnant women in South Sulawesi is around 187,141 people. The results of the incidence of not participating in pregnancy exercises were (95.1%) and in cases of participating in pregnancy exercises were (1.9%). Based on Riskesdas data in 2018, the still high AKI is due to several factors. The largest cause of maternal mortality is bleeding which is 30.3% and the old partus is the lowest cause which is 1.8% but needs better treatment so that it does not occur during childbirth (Ministry of Health of the Republic of Indonesia, 2018). According to Astuti, the percentage of discomfort that appears in pregnant women is swelling in the legs 20%, leg cramps 10%, shortness of breath 60%, headaches 20%, and back pain 70%.

According to Miqueluitti et al, pregnant women who took a labor preparation class at 30 weeks of pregnancy had a lower risk of urinary incontinence (treatment group 42.7%, control group 62.2%, RR 0.69; 95% CI 0.51-0.93). Gestational age of 36 weeks urinary incontinence (treatment group 41.2%, control group 68.4%, RR 0.6, 95% CI 0.45-0.81).

In a previous study conducted by Nurlaelah S (2020) at the Masitah Muara Jawa Clinic, East Kalimantan, it was shown that as many as 46 people (63%) pregnant women participated in pregnancy gymnastics activities, and as many as 48 people (65.8%) experienced a smooth delivery process. The results of the Chi-Square test obtained a p-value of 0.000 (<0.05), so it can be concluded that there is a significant relationship between the implementation of pregnancy exercises and the smooth delivery process at the Masitah Muara Jawa Clinic in 2019.

Data from the South Sulawesi Provincial Health Office in 2018 obtained the number of pregnant women around 187,141 people. Those who did not participate in pregnancy gymnastics were (95.1%) and in the case of participating in pregnancy gymnastics was (1.9%) (Data from the Provincial Health Office. South Sulawesi, 2018). Data from the Bone Regency Health Office in 2018 obtained the number

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of maternity mothers was 13,438 people (92.62%), then in 2019 it decreased to 13,123 people (92.97%), and in 2020 it increased by 13,476 people (95.47%) (Data from the Regency Health Office. Bone, 2020).

Data from the Ajangale Health Center in 2018 obtained the number of maternity mothers was 429 people (100.94%) and those who experienced old partus as many as 6 people (1.40%), then in 2019 the number of maternity mothers decreased by 365 people (93.11%) and those who experienced old partus as many as 12 people (3.28%), in 2020 the number of maternity mothers decreased again which was 358 people (91.33%) and those who experienced old partus as many as 12 people (3.28%) (UPT Puskesmas data Ajangale, 2020).

Psychological problems experienced by mothers in dealing with childbirth are anxiety (52%) and doubts about their ability to cope with pain (43%). Anxiety and fear experienced by maternity mothers, especially primipara can prolong the duration of labor and increase the incidence of labor with actions, namely labor by sectional area (OR 26.9 CI 95%) and vacuum extraction (OR 4.5 CI 95%). Mothers who have given birth and experience anxiety during childbirth are unpleasant times in their lives (Hayati, 2018).

METHOD

This type of research is observational analytical with a cross sectional research design where the case group is compared to the control group, namely to determine the effect of pregnancy exercises on normal childbirth at the HOLY RAHMADANI BPM CLINIC IN 2023.

The population in this study is all maternity mothers who check their pregnancy at the CLINIC BPM SUCI RAHMADANI based on previous data of 60 people per month. So, the sample in this study was 96 people who were divided into two parts, namely 48 mothers who participated in gymnastics which were referred to as cases and 48 mothers who did not participate in pregnancy gymnastics which were used as controls. Before the researcher conducted sampling, the researcher determined the sampling technique by accidental sampling, namely the mother who went to the BPM SUCI RAHMADANI CLINIC to check the pregnancy at the time of the study.

Data collection in this study is carried out in two ways, namely:

a. Primary data is data obtained from respondents using questionnaires and lists of questions that have been provided by the researcher and distributed directly to respondents
b. Secondary data is data obtained from the medical record of KLINIK BPM SUCI RAHMADANI

The data analyzed using a univariate test is to see the frequency distribution of respondent characteristics. Bivariate analysis of this study uses a statistical test of chi-square risk (Odds Ratio) exposure to cases with a significance of 5% (0.05).

RESULTS AND DISCUSSION

The types of services at the BPM Suci Rahmadani Clinic consist of 6 maternity room services, a luxurious private maternity room complete with facilities, an operating room consisting of 5 units, a NICU room dedicated to the treatment of newborns with complications or premature births, an obstetrics and gynecology polyclinic, a pediatric polyclinic consisting of 10 specialist doctors' practices, skin and venereal polyclinic, ENT polyclinic, oncology surgical polyclinic.

Midwifery activities in 2013 with 537 types of normal childbirth activities, sectio caesarean section as many as 2,082. Perinatology activities in 2013 for newborns with a weight of ≥ 2500 grams as many as 2973, < 2500 grams as many as 130 babies.

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Univariate Analysis

Table. 1. Frequency Distribution of Respondent Characteristics at the BPM Suci Rahmadani Clinic 2023

Age	Frequency (f)	Percentage (%)
<25	25	26
25-35	48	50
>35	23	24
Work	**Frequency (f)**	**Percentage (%)**
Self employed	23	24
Housewife	57	59,4
Private employees	12	12,5
Civil Servants	4	4,2
Parity	**Frequency (f)**	**Percentage (%)**
Primipara	62	64,6
Multipara	34	35,4
Total	**96**	**100**

Based on table 1 above, it can be seen that the age of the majority of respondents is 25-35 years old as much as 50%, the majority of IRT mothers' employment is 59.4%, and the parity of the majority of primipara is 64.6%.

Table 2. Frequency Distribution Based on Pregnancy Exercises at BPM Suci Rahmadani Clinic 2023

Pregnancy Gymnastics	Frequency (f)	Percentage (%)
Follow	48	50
Not Participating	48	50
Total	**96**	**100**

Based on table 2 above, it can be seen that the number of pregnant women who participate in pregnancy exercises is the same as the number of mothers who do not participate in pregnancy exercises, because this study is a case control study, the case is mothers who participate in pregnancy exercises and the control is mothers who do not participate in pregnancy exercises

Table 3. Distribution of Normal Delivery Frequency at BPM Suci Rahmadani Clinic 2023

Normal Childbirth	Frequency (f)	Percentage (%)
Normal Childbirth	45	45,9
Abnormal Childbirth	51	54,1
Total	**96**	**100**

Based on table 3 above, it can be seen that of the 96 pregnant women who gave birth through normal childbirth, 45.9% and those who gave birth through abnormal childbirth as much as 54.1%.

Bivariate Analysis

Based on the Cross-Tabulation of the Effect of Pregnancy Gymnastics on Normal Childbirth, it can be seen that of the 50% participating in pregnancy exercises, normal childbirth is 35.4%, which is abnormal 14.6%. Of the 50% of mothers who did not participate in pregnancy exercises, 11.5% had normal childbirth, and 38.5% were abnormal. Based on the Odds Ratio (OR) value of 8.169, it means

that mothers who do not exercise pregnant have a risk of abnormal partus by 8.169 times compared to mothers who exercise pregnant.

The results of the statistical test with ujichi-square showed that the value of p=0.000 (p=<0.05) showed that there was an effect of pregnancy exercises on normal childbirth.

Discussion

The Effect of Pregnancy Gymnastics on Normal Childbirth at the BPM Suci Rahmadani Clinic 2023

The results showed that of the 50% participating in pregnancy exercises, 35.4% had normal childbirth, which was 14.6% abnormal. Of the 50% of mothers who did not participate in pregnancy exercises, 11.5% gave birth normally and 38.5% were abnormal. Based on the Odds Ratio (OR) value of 8.169, it means that mothers who do not exercise pregnant have a risk of abnormal partus by 8.169 times compared to mothers who exercise pregnant.

The results of this study are in accordance with the opinion of Maryunani (2014) pregnancy gymnastics is an important method to maintain or improve the physical balance of pregnant women and is an exercise therapy given to pregnant women with the aim of achieving fast, easy and safe childbirth. The results of Aulia's research, Hendarmin (2010) found that mothers who did pregnancy exercises with a normal delivery process were 56.06% while mothers who did not exercise became pregnant with a normal delivery process of 43.94%.

According to Nirwana (2011) pregnancy gymnastics is a movement exercise therapy to prepare pregnant women physically and mentally, in fast, safe and spontaneous childbirth. If pregnant women have complaints about their pregnancy, you should consult the doctor who handles it before participating in a pregnancy gymnastics session. Pregnant women who take part in pregnancy exercises are expected to be able to undergo a smooth delivery, be able to make the best use of their energy and abilities so that childbirth runs normally and quickly.

Exercises carried out during pregnancy will help mothers deal with stress and anxiety. The essence of pregnancy gymnastics itself is to train breathing before childbirth. So that at the moment of the baby's birth, the mother can relax and control the situation. Pregnancy exercises usually begin when pregnancy enters the third trimester, which is around the age of 28-30 weeks of pregnancy (Ministry of Health of the Republic of Indonesia, 2009).

According to Jannah (2012), pregnancy gymnastics exercises given in hospitals and RBs in regular leisure time, if there are no very pathological circumstances, will be able to lead pregnant women towards physiological childbirth. Fear can cause physical tensions, which can cause muscles and joints to become stiff and walk unnaturally.

Pregnant women who participate in pregnancy exercises have a greater chance of normal childbirth than abnormal partus, this is influenced by mothers who participate in pregnancy exercises more often and understand pregnancy exercises, this can be seen from the mother's answers through questionnaires with the number of participating in pregnancy exercises in a week the majority of participating in pregnancy exercises the majority of mothers participating in pregnancy exercises during a week 4-6 times as much as 22.9%. This is in accordance with the opinion of Jannah, (2012) stating that the implementation of pregnancy exercises at least once a week a maximum of 3 times a week in about 30-60 said that there is a greater chance of giving birth normally.

And based on the respondents' answers through a questionnaire, the majority of pregnant women who understand pregnancy exercises are 34.4%. According to Notoadmojdo, (2012) before people behave in a new way, in the person there is a sequential process that starts from the awareness of the stimulus and then there is a sense of interest. After that, there is a consideration in the mind

about how the negative and positive impact of the stimulus is. The result of positive thinking will bring the subject to start trying and finally a new behavior has been formed in him. The adoption of behaviors based on knowledge, awareness and a positive attitude towards stimulus will form new behaviors that can last for a long time.

According to Ayati, (2011) the lack of knowledge gained and also the lack of interest or desire from the pregnant woman made her also afraid to participate in pregnancy gymnastics. In addition, even though a pregnant woman is highly educated, there is also a mother who does not participate in pregnancy exercises. This is influenced by the mother's work. The busyness of work makes pregnant women with higher education unable to follow the pregnancy process. Pregnant women who work will certainly have a little trouble dividing their time between working and participating in pregnancy exercises. So it is clear that there is a relationship between the level of education of pregnant women and the participation of pregnant women.

The results of the statistical test with the chi-square test showed that the value of p=0.000 (p=<0.05) which showed that there was an effect of pregnancy exercises on normal childbirth at RSIA Stella Maris in 2015. The results of this study are in line with the research of Aulia, Hendarmin (2010) the relationship between pregnancy exercises and the delivery process was obtained that mothers who did pregnancy exercises with normal childbirth were 56.06% while abnormal ones were 34.85%. The results of the statistical test obtained a p value of 0.014, so it can be concluded that there is a significant relationship between pregnancy gymnastics and the second stage of childbirth, the OR value = 0.419 with a Confident Interval (CI) of 95% between 0.208-0.846, so it can be concluded that pregnancy gymnastics is a protective factor for abnormal childbirth. In other words, mothers who do pregnancy exercises have a risk of abnormal partus only 0.419 times compared to mothers who do not exercise pregnant.

CONCLUSION

Respondents who took part in pregnancy exercises at the BPM Suci Rahmadani Clinic were able to make mothers give birth normally and abnormally. And mothers who do not participate in pregnancy exercises can also make mothers give birth normally and abnormally. The majority of the delivery process at the BPM Suci Rahmadani Clinic experienced abnormal delivery. There is an effect of pregnancy exercises on normal childbirth at the 2023 BPM Suci Rahmadani Clinic.

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