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THE EFFECT OF PRENATAL EXERCISE TOWARD CLINICAL OUTCOME ON DELIVERY PROCESS AT PERMATA BUNDA CLINIC, SERANG IN 2018

Nazwita Dewi Putri[1], Shinta Novelia[2*], Uswatun Khasanah[3], Tommy J Wowor[4]

[1] Master of Biomedical Study Program, Faculty of Medicine, Andalas University, Indonesia

[2,3,4] Midwifery Department, Faculty of Health Sciences, Universitas Nasional, Indonesia

**Corresponding Author: shinta.novelia@civitas.unas.ac.id*

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Abstract

Prenatal exercise is one of activities in services during pregnancy. Prenatal exercise result in a better pregnancy product and better delivery outcome, compared to the mothers that do not follow prenatal exercise. Delivery is a physiological process. If the mother gets no clear information and do not examine her pregnancy regularly, it becomes pathological. The research aims to determine the effect of prenatal exercise toward clinical outcome in the delivery process at Permata Bunda clinic Serang 2018. The method used in the research was quasi Experimentt control group design. The samples were 20 pregnant mothers who follow prenatal exercise at Permata Bunda Clinic Serang. The result shows that prenatal exercise affect clinical outcome during the delivery process phase I,II,III,IV which is significant among experiment group (p = 0,000). Prenatal exercise could decrease pain and accelerate labor process. Permata Bunda Clinic needs to socialize the prenatal exercise program regularly.

Keywords: *Clinical Outcome, Delivery Process, Prenatal Exercise,*

Introduction

According to data from the World Health Organization (WHO), MMR in the world in 2015 reached 303,000 people per year who died during pregnancy or childbirth. MMR in Southeast Asian countries such as Brunei is 23 per 100,000 live births, Thailand is 20 per 100,000 live births, and Malaysia is 40 per 100,000 per live birth. Meanwhile in Indonesia, the MMR reached 126 per 100,000 live births [25]. Based on data obtained from the Banten Province Health Office in 2016, it reached 252 per 100,000 live births (Banten Province Health Office, 2016).

Factors that influence the causes of complications during childbirth include bleeding, infection, one of which is caused by difficult or long labor and eclampsia. The factors that cause prolonged labor are weak strength such as: contractions of the abdominal wall muscles, contractions of the pelvic diaphragm or pushing strength, tension and contraction of the round ligament, passanger (abnormal position of the fetus, low-lying placenta), passage (narrow birth canal).) (Guyton, 2007).

According to (Titin Sutriyani, et al 2017) in his research entitled the influence of therapeutic communication and pregnancy exercise on the process of labor in stages I, II, III, IV, this research states that pregnancy exercise is a process in preparation for childbirth, while the benefits of pregnancy exercise include improving blood circulation, reduces swelling, especially legs, improves muscle balance, reduces leg spasms/cramps, strengthens abdominal muscles, improves fetal position [6]. One of the effective health interventions to prevent maternal morbidity and death is prenatal care The main function of prenatal services includes health promotion during pregnancy through health education facilities, which are provided individually and in groups. Therefore, researchers chose pregnancy exercise because they wanted to see the effect of pregnancy exercise on clinical outcomes during the birth process.

In general, the birth process is physiological, if during pregnancy you do not receive clear information and do not carry out regular pregnancy checks, then the physiological process becomes pathological. Pregnancy exercise will produce better birth outcomes, compared to pregnant women who do not do pregnancy exercise. The benefits of pregnancy exercise have been reported to reduce the occurrence of low birth weight babies, decrease heart rate abnormalities, umbilical cord and meconium, decrease energy use, reduce pain, reduce the occurrence of premature births, reduce the incidence

of caesarean sections, and improve the Apgar and psychomotor scores of the fetus. Pregnancy exercise can also reduce the risk of stress and pain during childbirth. Apart from that, the essence of pregnancy exercise itself is to train your breathing before giving birth, so that when the baby is born, the mother can relax and control the situation (JNPKKR, 2007). The aim of this research is to determine the effect of pregnancy exercise on clinical outcomes in the birthing process.

Based on the description above, researchers are interested in conducting research with the title "The Effect of Pregnancy Exercise on Clinical Outcomes in the Childbirth Process at the Permata Bunda Clinic, Serang City in 2018".

Method

This research is a quasi-experimental research with a control group design. This type of research is used to look for cause and effect by providing treatment with a treatment technique at a certain time compared to the standard technique that has been used for a long time, then studying the effect of the treatment. The population used in this study were all pregnant women who underwent ANC examinations at the Permata Bunda Clinic, Serang City in May with a total of 30 pregnant women. Sampling in this study used accidental sampling technique, samples were obtained from a population of 20 pregnant women, who were divided into 2 groups. Group 1 was given the pregnancy exercise intervention with a total of 10 pregnant women (experimental group) and group 2 was not given the intervention with a total of 10 pregnant women (control group). To reduce bias in this study, inclusion and exclusion criteria were determined. Inclusion criteria are criteria or standards that are established before research or research is carried out. Meanwhile, exclusion criteria are criteria where research subjects cannot represent the sample because they do not meet the requirements as a sample. The instruments used in this research were observation tools and questionnaires. The data collection used was to differentiate the provision of intervention in the experimental group and non-intervention in the control group, observation and questionnaires were filled out by researchers to determine the clinical outcome in the delivery process for pregnant women who took part in pregnancy exercise in the experimental group and the control group.

Results

Univariate Analysis Results

Frequency Distribution of Respondents Based on First Stage of Labor

Table 1 Frequency Distribution of Respondents Based on First Stage of Labor at Permata Bunda Clinic Serang City in 2018

Variable		Stage I					
		Experiment		Control		Total	Percent %
		F	%	F	%		
Systole	100	-	-	1	10%	1	5,0%
Pressure	110	3	30%	9	90%	12	60,0%
	120	7	70%	-	-	7	35,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
TD	70	-	-	6	60%	6	30,0%
dyastole	80	10	100%	4	40%	14	70,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Pulse	78	-	-	5	50%	5	25,0%
	80	5	50%	5	50%	10	50,0%
	81	2	20%	-	-	2	10,0%
	82	2	20%	-	-	2	10,0%
	84	1	10%	-	-	1	5,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
tempera	36,2	-	-	2	20%	2	10,0%
tue	36,3	-	-	2	20%	2	10,0%
	36,4	-	-	2	20%	2	10,0%
	36,5	4	40%	3	30%	7	35,0%
	36,6	2	20%	1	10%	3	15,0%
	36,7	2	20%	-	-	2	10,0%
	36,8	2	20%	-	-	2	10,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
breathing	18	-	-	2	20%	2	10,0%
	19	-	-	4	40%	4	20,0%
	20	6	60%	3	30%	9	45,0%
	21	2	20%	1	10%	3	15,0%
	22	2	20%	-	-	2	10,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
fetal	136	-	-	2	20%	2	10,0%
heart rate	137	-	-	1	10%	1	5,0%
	138	1	10%	3	30%	4	20,0%
	139	-	-	1	10%	1	5,0%
	140	3	30%	2	20%	5	25,0%
	142	1	10%	1	10%	2	10,0%
	143	2	20%	-	-	2	10,0%
	144	1	10%	-	-	1	5,0%
	145	1	10%	-	-	1	5,0%
	148	1	10%	-	-	1	5,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Length	360	3	30%	-	-	3	15,0%
of first	540	-	-	1	10%	1	5,0%
stage of	600	7	70%	4	40%	11	55,0%
labor	770	-	-	1	10%	1	5,0%
	780	-	-	2	20%	2	10,0%
	800	-	-	1	10%	1	5,0%
	840	-	-	1	10%	1	5,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**

Based on table 1, it can be seen that the blood pressure of the respondents did not experience much change, namely 110 mmHg in 12 respondents (60%), normal systolic blood pressure was 100-120 mmH. Diastolic pressure did not change much, namely 80 mmHg in 14 respondents (70%), normal 70-80 mmHg. It can be seen that the pulse of the respondents is not much different, namely 80 x/minute in 10 respondents (50%), normal pulse is 60-100 x/minute. It can be seen that the body temperature of the respondents did not experience much change, namely 36.50C in 7 respondents (35%), normal body temperature was 36.50C - 370C. It can be seen that the respondents' breathing is not much different, namely 20 x/minute in 9 respondents (45%), normal breathing is 16-24 x/minute. It can be seen that DJJ in respondents did not experience much change, namely 140 x/minute in 5 respondents (25%), normal DJJ was 120-160 x/minute. In the first stage of labor, the length of labor changed, namely 600 minutes in primigravida, 11 people (55%) experienced faster labor, normal first stage of labor was 10-12 hours. In multigravida, namely 360 minutes, 3 respondents (15%) experienced a faster labor process of 6-8 hours, which is normal.

Frequency Distribution of Respondents Based on Second Stage of Labor

Table 2 Frequency Distribution of Respondents Based on Second Stage of Labor at Permata Bunda Clinic Serang City in 2018

Variable		Stage II					
		Experiment		Control		Total	Percent %
		F	%	F	%		
Pressure	100	-	-	5	50%	5	25,0%
systole	110	7	70%	5	50%	12	60,0%
	120	3	30%	-	-	5	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Pressure	70	1	10%	8	80%	9	45,0%
dyastole	80	9	90%	2	20%	11	55,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Pulse	78	-	-	4	40%	4	20,0%
	79	-	-	1	10%	1	5,0%
	80	4	40%	5	50%	9	45,0%
	81	1	10%	-	-	1	5,0%
	82	4	40%	-	-	4	20,0%
	84	1	10%	-	-	1	5,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Tempera	36,4	-	-	2	20%	2	10,0%
ture	36,4	-	-	3	30%	3	15,0%
	36,5	2	20%	3	30%	5	25,0%
	36,6	3	30%	1	10%	4	20,0%
	36,7	1	10%	1	10%	2	10,0%
	36,8	1	10%	-	-	1	5,0%
	36,9	1	10%	-	-	1	5,0%
	37,0	2	20%	-	-	2	10,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Breathin	18	-	-	4	40%	4	20,0%

g	19	-	-	2	20%	2	10,0%
	20	4	40%	2	20%	6	30,0%
	21	3	30%	2	20%	5	25,0%
	22	3	30%	-	-	3	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Length	80	1	-	-	-	1	5,0%
of second	85	1	-	-	-	1	5,0%
stage of	90	3	30%	1	10%	4	20,0%
labor	95	3	30%	7	70%	10	55,0%
	100	2	20%	1	10%	3	15,0%
	110	-	-	1	10%	1	5,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**

Based on table 2, it can be seen that the blood pressure of the respondents did not experience much change, namely 110 mmHg in 12 respondents (60%), normal systolic blood pressure was 100-120 mmHg. Diastolic pressure did not change much, namely 80 mmHg in 11 respondents (55%), normal diastole was 70-80 mmHg. It can be seen that the pulse of the respondents is not much different, namely 80 x/minute in 9 respondents (45%), the normal pulse is 60-100 x/minute. It can be seen that the body temperature of the respondents did not experience much change, namely 36.50C in 6 respondents (30%), normal body temperature was 36.50C - 370C. It can be seen that the respondents' breathing is not much different, namely 20 x/minute in 7 respondents (35%), normal breathing is 16-24 x/m. In the second stage of labor, the length of labor changed, namely 50 minutes in primigravida, 5 people (25%) experienced faster labor, normal second stage labor was 1-1.5 hours. In multigravida, namely 30 minutes, 3 respondents (15%) experienced a faster labor process, normal second stage labor is 0.5-1 hour.

Frequency Distribution of Respondents Based on Third Stage of Labor

Table 3 Frequency Distribution of Respondents Based on Third Stage of Labor at Permata Bunda Clinic Serang City in 2018

Variable		Stage III					
		Experiment		Control		Total	Percent %
		F	%	F	%		
Pressure	100	-	-	7	70%	7	35,0%
systole	110	7	70%	3	30%	10	50,0%
	120	3	30%	-	-	3	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Pressure	70	1	10%	9	90%	10	50,0%
dyastole	80	9	90%	1	10%	10	50,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Pulse	78	-	-	6	60%	6	30,0%
	80	5	50%	4	90%	9	45,0%
	81	2	20%	-	20%	2	10,0%
	82	3	30%	-	30%	3	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**

Tempera ture	36,4	-	-	3	30%	3	15,0%
	36,5	3	30%	5	50%	8	40,0%
	36,6	-	-	1	10%	1	5,0%
	36,7	2	20%	1	10%	3	15,0%
	36,8	2	20%	-	-	2	10,0%
	36,9	3	30%	-	-	3	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Breathin g	19	-	-	4	40%	4	20,0%
	20	3	30%	5	50%	8	40,0%
	21	4	40%	1	10%	5	25,0%
	22	3	30%	-	-	3	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Length of third stage of labor	5	5	50%	-	-	5	25,0%
	7	1	10%	-	-	1	5,0%
	8	1	10%	-	-	1	5,0%
	10	3	30%	8	80%	11	55,0%
	15	-	-	2	20%	2	10,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Blood loss in the fourth stage of labor	100	2	20%	-	-	2	10,0%
	110	1	10%	-	-	1	5,0%
	120	1	10%	-	-	1	5,0%
	124	1	10%	-	-	1	5,0%
	130	2	20%	-	-	2	10,0%
	140	2	20%	2	20%	4	20,0%
	150	1	10%	1	10%	2	10,0%
	160	-	-	1	10%	1	5,0%
	180	-	-	1	10%	1	5,0%
	185	-	-	3	30%	3	15,0%
	190	-	-	2	20%	2	10,0%
Total		**10**	**100%**	**20**	**100%**	**20**	**100%**

Based on table 3, it can be seen that the blood pressure of the respondents did not experience much change, namely 110 mmHg in 10 respondents (50%), normal systolic blood pressure was 100-120 mmHg. Diastolic pressure did not change much, namely 80 mmHg in 10 respondents (50%), normal diastole was 70-80 mmHg. It can be seen that the pulse of the respondents is not much different, namely 80 x/minute in 9 respondents (45%), the normal pulse is 60-100 x/minute. It can be seen that the body temperature of the respondents did not experience much change, namely 36.50C in 8 respondents (40%), normal body temperature was 36.50C - 370C. It can be seen that the respondents' breathing is not much different, namely 20 x/minute in 8 respondents (40%), normal breathing is 16-24 x/m. In the third stage of labor, there was not much change, namely 10 minutes, namely 11 respondents (55%). Third stage blood output was 140 cc, namely 4 respondents (20%), normal ≤ 500 cc during labor.

Frequency Distribution of Respondents Based on Fourth Stage of Labor

Table 4 Frequency Distribution of Respondents Based on Fourth Stage of Delivery at Permata Bunda Clinic Serang City in 2018

Variable		Stage IV					
		Experiment		Control		Total	Percent %
		F	%	F	%		
Pressure	100	1	10%	8	80%	9	45,0%
systole	110	7	70%	2	20%	9	45,0%
	120	2	20%	-	-	2	10,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Pressure	60	-	-	2	20%	2	10,0%
dyastole	70	3	30%	7	70%	10	50,0%
	80	7	70%	1	10%	8	40,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Pulse	78	-	-	6	60%	6	30,0%
	80	5	50%	4	40%	9	45,0%
	81	1	10%	-	-	1	5,0%
	82	4	40%	-	-	4	20,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Tempera	36,3	-	-	4	40%	4	20,0%
ture	36,5	3	30%	3	30%	6	30,0%
	36,6	-	-	3	30%	3	15,0%
	36,7	3	30%	-	-	3	15,0%
	36,8	1	10%	-	-	1	5,0%
	36,9	3	30%	-	-	3	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Breathin	19	-	-	3	30%	3	15,0%
g	20	2	20%	5	50%	7	35,0%
	21	2	20%	2	20%	4	20,0%
	22	6	60%	-	-	6	30,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Length	30	3	30%	-	-	3	15,0%
of second	45	-	-	1	10%	1	5,0%
stage of	50	4	40%	1	10%	5	25,0%
labor	55	2	20%	-	-	2	10,0%
	60	1	10%	1	10%	2	10,0%
	70	-	-	2	20%	2	10,0%
	90	-	-	1	10%	1	5,0%
	110	-	-	1	10%	1	10,0%
	130			3	30%	3	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**

Based on table 4, it can be seen that the blood pressure of the respondents did not experience much change, namely 110 mmHg in 9 respondents (45%), normal systolic blood pressure was 100-120 mmHg. Diastolic pressure did not change much, namely 70 mmHg in 10 respondents (50%), normal diastole was 70-80 mmHg. It can be seen that the pulse of the respondents is not much different, namely 80 x/minute in 9 respondents (45%), the normal pulse is 60-100 x/minute. It can be seen that the body temperature of

the respondents did not experience much change, namely 36.50C in 5 respondents (25%), normal body temperature was 36.50C - 370C. It can be seen that the respondents' breathing is not much different, namely 20 x/minute in 6 respondents (30%), normal breathing is 16-24 x/m. IV blood output was 95 cc, namely 10 respondents (50%), normally no more than 500 cc during labor.

Bivariate Analysis

Differences in the First Stage of Labor between the Experimental and Control Groups

Table 5 Differences in the First Stage of Labor between the Experimental Group and the Control Group at the Permata Bunda Clinic, Serang City in 2018

No	Research group	N	Mean	Deviation Standard	T-Count	P-Value
1	Pressure systole					
	Experiment	10	117,00	4,830	4,382	0,000
	Control	10	109,00	3,162		
2	Pressure dyastole					
	Experiment	10	80,00	0,00	3,764	0,002
	Control	10	74,00	5,164		
3	Pulse					
	Experiment	10	81,00	1,333	3,721	0,002
	Control	10	79,00	1,054		
4	Temperature					
	Experiment	10	366,20	1,229	3,951	0,001
	Control	10	363,90	1,370		
5	Breathing					
	Experiment	10	20,60	843	3,239	0,005
	Control	10	19,30	949		
6	Heart Fetal					
	Rate	10	142,30	2,946	3,520	0,002
	Experiment	10	138,40	1,897		
	Control					
7	Length of first stage of labor					
	Experiment	10	528,00	115,931		
	Control	10	691,00	111,599	-3,203	0,005

Based on table 5 above, it shows that the average blood pressure of respondents was stable and did not experience much change, with the lowest systolic pressure occurring in the control group, namely 109 mmHg and the highest occurring in the experimental group, namely 117 mmHg (p = 0.000 t = 4.382). The lowest diastolic pressure in the control group was 74 mmHg and the highest in the experimental group was 80 mmHg (p = 0.002 t = 3.764). The lowest pulse in the control group was 79 x/minute and the highest in the experimental group was 81. The lowest temperature in the control group was 36.30C and the highest in the experimental group was 36.60C (p = 0.001 t = 3.951).

The lowest respiration occurred in the control group 19 times/minute and the highest in the experimental group 20 times/minute (p = 0.005 t = 3.239). The lowest FHR occurred in the control group 138 x/minute and the highest in the experimental group 142 x/minute (p = 0.002 t = 3.520). The lowest duration of first stage labor occurred in the experimental group 528 minutes (p = 0.005 t = -3.203) and the highest in the control group 691 where the experimental group experienced a quicker labor process than the control group.

Differences in the Second Stage of Labor between the Experimental and Control Groups

Table 6 Differences in the Second Stage of Labor between the Experimental Group and the Control Group at the Permata Bunda Clinic, Serang City in 2018

No	Research Group	N	Mean	Deviation Standart	T-Count	P-Value
1	Systole Pressure					
	Experiment	10	113,00	4,830	3,539	0,002
	Control	10	105,00	5,270		
2	Dyastole Pressure					
	Experiment	10	79,00	3,162	4.200	0,001
	Control	10	72,00	4,216		
3	Pulse					
	Experiment	10	81,30	1,337	4,174	0,001
	Control	10	79,10	994		
4	Temperature					
	Experiment	10	367,10	1,663	3,701	0,002
	Control	10	364,90	876		
5	Breathing					
	Experiment	10	21,40	843	4,233	0,000
	Control	10	19,90	738		
6	Length of second stage of labor					
	Experiment	10	46,00	11,499	-3816	0,001
	Control	10	89,00	33,731		

Based on table 6 above, it shows that the average blood pressure of respondents was stable and did not experience much change, with the lowest systolic pressure occurring in the control group, namely 105 mmHg and the highest occurring in the experimental group, namely 113 mmHg (p = 0.002 t = 3.539). The lowest diastolic pressure in the control group was 72 mmHg and the highest in the experimental group was 79 mmHg (p = 0.001 t = 4.200). The lowest pulse in the control group was 79 x/minute and the highest in the experimental group was 81 x/minute (p = 0.001 t = 4.174). The lowest

temperature in the control group was 36.40C and the highest in the experimental group was 36.70C (p = 0.002 t = 3.701). The lowest respiration occurred in the control group 19 times/minute and the highest in the experimental group 21 times/minute (p = 0.000 t = 4.233). x/minute (p = 0.002 t = 3.520). The lowest duration of second stage labor occurred in the experimental group, 46 minutes (p = 0.001 t = -3.816) and the highest in the control group, 691 minutes, where the experimental group experienced a faster labor process than the control group.

Differences in the Third Stage of Labor between the Experimental and Control Groups

Table 7 Differences in the Third Stage of Labor between the Experimental Group and the Control Group at the Permata Bunda Clinic, Serang City in 2018

No	Research Group	N	Mean	Deviation Standart	T-Count	P-Value
1	Systole					
	Pressure	10	113,00	4,830	4,629	0,000
	Experiment	10	103,00	4,830		
	Control					
2	Dyastole					
	Pressuree	10	79,00	3,162	5,657	0,000
	Experiment	10	71,00	3,162		
	Control					
3	Pulse					
	Experiment	10	80,80	919	4,575	0,000
	Control	10	78,80	1,033		
4	Temperature					
	Experiment	10	367,50	2,068	3,478	0,003
	Control	10	365,00	943		
5	Breathing					
	Experiment	10	21,00	816	3,881	0,001
	Control	10	19,70	675		
6	Length of third stage of labor					
	Experiment	10	7,00	2,309	-4,045	0,001
	Control	10	11,00	2,108		
7	Third stage blood loss					
	Experiment	10	127,40	20,998	-4,618	0,000
	Control	10	170,50	2,108		

Based on table 7 above, it shows that the average blood pressure of respondents was stable and did not experience much change, with the lowest systolic pressure occurring in the control group, namely 103 mmHg and the highest occurring in the experimental group, namely 113 mmHg (p = 0.000 t = 4.629). The lowest diastolic pressure in the control group was 71 mmHg and the highest in the experimental group was 79 mmHg

(p = 0.000 t = 5.657). The lowest pulse in the control group was 78 x/minute and the highest in the experimental group was 80 x/minute (p = 0.000 t = 4.575). The lowest temperature in the control group was 36.50C and the highest in the experimental group was 36.70C (p = 0.003 t = 3.478). The lowest respiration occurred in the control group 19 times/minute and the highest in the experimental group 21 times/minute (p = 0.001 t = 3.881). The lowest length of labor in the third stage occurred in the experimental group, 7 minutes (p = 0.001 t = -4.045) and the highest in the control group, 11 minutes, where the experimental group experienced a faster ureter expulsion process than the control group. The lowest third stage blood output in the experimental group was 127 cc and the highest in the control group was 170 cc (p = 0.000 t = 4.618).

Differences in the Fourth Stage of Labor between the Experimental and Control Groups

Table 8 Differences in the fourth stage of labor between the experimental group and the control group at the Permata Bunda Clinic, Serang City in 2018

No	Research Group	N	Mean	Deviation Standart	T-Count	P-Value
1	Systole					
	Pressure	10	111,00	5,676	4,025	0,001
	Experiment	10	102,00	4,216		
	Control					
2	Dyastole					
	Pressuree	10	77,00	4,830	3,394	0,003
	Experiment	10	69,00	5,676		
	Control					
3	Pulse					
	Experiment	10	80,90	994	4,632	0,000
	Control	10	78,80	1,033		
4	Temperature					
	Experiment	10	367,20	1,932	3,560	0,002
	Control	10	363,60	1,265		
5	Breathing					
	Experiment	10	20,90	876	3,562	0,002
	Control	10	19,20	1,229		
6	Length of fourth stage of labor					
	Experiment	10	92,00	6,325	-3,264	0,004
	Control	10	101,00	6,687		

Based on table 8 above, it shows that the average blood pressure of respondents was stable and did not experience much change, with the lowest systolic pressure occurring in the control group, namely 102 mmHg and the highest occurring in the experimental

group, namely 111 mmHg (p = 0.001 t = 4.025). The lowest diastolic pressure in the control group was 69 mmHg and the highest in the experimental group was 77 mmHg (p = 0.003 t = 3.394). The lowest pulse in the control group was 78 x/minute and the highest in the experimental group was 80 x/minute (p = 0.003 t = 3.394). The lowest temperature in the control group was 36.30C and the highest in the experimental group was 36.70C (p = 0.002 t = 3.560). The lowest respiration occurred in the control group 19 times/minute and the highest in the experimental group 20 times/minute (p = 0.002 t = 3.562). The lowest IV blood output in the experimental group was 92 cc and the highest in the control group was 101 cc (p = 0.004 t = -3.264).

Discussion

Univariate Analysis

Frequency distribution of respondents based on systolic, diastolic, pulse, temperature, respiration, fetal heart rate, duration of labor and blood loss in stages I, II, III, IV between the experimental group and the control group.

Based on the research results, it can be concluded that out of the total number of pregnant women, namely 20 respondents in the experimental group, they got good outcomes. Pregnancy exercise is movement training therapy to prepare pregnant women physically and mentally to face childbirth quickly, safely and spontaneously [13]. Pregnancy exercise is basically training for healthy pregnant women to prepare their physical condition, maintain the condition of their muscles and joints which play a role in the process and mechanisms of childbirth. In this case, the abdominal wall muscles, ligaments, pelvic floor muscles and so on are related to the birthing process. One of the requirements for participating in pregnancy exercise is a normal pregnancy with the recommendation of a doctor and midwife where the vital signs of the mother and fetus are within normal limits [21].

This is in line with research Rusmini et al, 2017 based on the results of research that pregnant women who do pregnancy exercises more often or regularly, the labor process is relatively spontaneous and the birth time takes place at the right time. Increased stamina is needed during the birthing process, the muscles will be formed and strong [19].

The results of this study are different from research conducted by Irfana et al, 2017 in that their research found that problems arising from negative stories about childbirth

were something that pregnant women were very worried about in the third trimester so that it would affect the mother's psychology, which was characterized by difficulty concentrating [11].

According to researchers, the difference in research results is thought to be due to many factors, most of whom do not take part in pregnancy exercise due to their busy lives, such as: trading, taking care of the household, etc., even though participating in pregnancy exercise has the benefit of gaining knowledge and skills for preparation. facing childbirth so that the mother is better prepared to face the birth process calmly, safely and smoothly.

Based on observations made by researchers at the Permata Bunda Clinic, Serang City, it is known that there are still pregnant women who have not participated in pregnancy exercises, lack knowledge about pregnancy exercises, so that the majority of respondents experience difficulties during the birthing process. This is the same as observations made by other health workers saying that mothers in labor experience difficulties during the birthing process.

Bivariate Analysis

Differences in Systolic Blood Pressure, Diastole, Pulse, Temperature, Respiration, FHR, Length of Labor and Blood Expenditure in Stage III, IV between the experimental group and the control group. Based on the research results, it is known that the average outcome in the experimental group is different from the control group. Pregnancy exercise is one of the activities in services during pregnancy. Pregnancy exercise will provide a better pregnancy product and birth outcome, compared to mothers who do not do pregnancy exercise [21].

These results are in line with research Titin et al, 2017which states that there are significant differences in results, meaning there is an influence on changes in systolic, diastolic, pulse, temperature, respiratory pressure, duration of labor and bleeding in stages I, II, III and IV [23]. The results of this study are different from research conducted by (Hendarmin Aulia et al, 2017) in that their research found that from the results of the independent sample test, it was found that there was a difference in the length of the second stage of labor between pregnant women with normal and abnormal labor .

In the researcher's opinion, the difference in research results is thought to be due to

other factors that were not examined in this study, for example the mother's compliance in carrying out pregnancy exercises, the mother's knowledge about pregnancy exercises. Maybe if the mother's level of knowledge about pregnancy exercise is high, it can prevent and reduce pain during the birth process.

From the results of the test on the effect of providing the pregnancy exercise intervention, it turns out that pregnancy exercise is very influential in helping the birthing process. This is because pregnancy exercise makes it easier for mothers to carry out labor tasks with their own strength and confidence under the guidance of a helper during a normal (physiological) birth. So that pregnant women who are given pregnancy exercise treatment are only able to prepare for childbirth physically, namely strength when giving birth (Manuaba and Chandranita, 2009). The benefits of pregnancy exercise are improving blood circulation, reducing swelling, especially the legs, improving muscle balance, reducing leg spasms/cramps, strengthening abdominal muscles, speeding up healing after delivery, improving fetal position [6].

Based on observations made by researchers at the Permata Bunda Clinic, Serang City, it is known that there are still pregnant women who have not participated in pregnancy exercises, lack knowledge about pregnancy exercises, so that the majority of respondents experience difficulties during the birthing process. This is the same as observations made by other health workers saying that mothers in labor experience difficulties during the birthing process.

Therefore, health workers can encourage pregnant women to do pregnancy exercises more often at home by watching videos of pregnancy exercises after being given pregnancy exercises at a health service, making it easier for mothers to do pregnancy exercises and reducing pain during the birth process.

Limitation

This research was conducted over a short period of time, namely 30 days with a small number of respondents.

Conclusion

It can be seen that the frequency distribution of clinical outcomes from 20 pregnant women at the Permata Bunda Clinic, Serang City, Banten Province in 2018, in the

intervention group, there were better outcomes, namely systolic blood pressure obtained normal results, diastole obtained normal results, pulse obtained normal results, temperature get normal results, get normal breathing results, and shorten the first, second, third stages of labor, with less blood loss in the third and fourth stages. Apart from that, it can also be seen that the differences in clinical outcomes in the intervention group have an influence on systolic blood pressure, pulse, temperature, respiration, length of labor and bleeding in stages I, II, III and IV with (p = 0.000) which means there is a significant difference on clinical outcomes in the experimental group and control group.

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