

# The Effect of Birth Ball Therapy on Labor Pain in Providing Excellent Service at Setia Clinic Padang Pariaman

Aprima Yona Amir\*<sup>1</sup>, Hartati Deri Manila<sup>2</sup>, Fafelia Rozyka Meysetri<sup>3</sup>, Ramah Hayu<sup>4</sup>

<sup>1,2,3,4</sup>STIKES Syedza Saintika Padang

\*Corresponding author. Email: [aprimayona@gmail.com](mailto:aprimayona@gmail.com)

## ABSTRACT

Physiologically, labour pain or pain arises due to the physical response and psychological response experienced by the mother. Anxiety to fear can make the perception of pain during labour more severe. This event can trigger a physiological response that reduces the uterus is not able to contract optimally which will result in prolonging the time of labour itself. The process of pain felt during the first stage is severe pain with a longer time to process. The study aimed to reduce pain in labour, both pharmacologically and non-pharmacologically. During labour, there will be pain due to uterine contractions. This review utilizes a trial research plan with a pretest-posttest control bunch plan. The sample was taken by purposive sampling so that a sample of 40 mothers who gave birth were divided into two groups, namely 20 respondents who gave birth with treatment and 20 mothers who gave birth in the control group. This research method is an experimental design with a pretest-posttest control group design, the examining method in this review is purposive testing with an example of 20 ladies in the treatment gathering and 20 ladies in the benchmark group. Information examination utilized the Wilcoxon-test measurable test. The aftereffects of the review on treatment respondents encountered a lessening in torment level scores. While the aftereffects of the examination utilizing the Wilcoxon Signed Ranks Test can likewise be seen that the Asymp esteem. Mark. (2-followed) control bunch 0.083 and Acid worth. Mark. (2-followed) respondents who got treatment were <0.001. The end is that there is an impact of the utilization of birthing balls on decreasing torment in the principal phase of work dormant stage moms at the Setia Padang Pariaman Clinic.

**Keywords:** *birth ball therapy, labour pain*

## 1. INTRODUCTION

Pregnancy is the dream of every married woman when a woman will experience the birth process. In the process of labour and the birth process later this is a process of physiological events experienced by a woman where the normal process is the process of expulsion of the fetus or the product of conception at a term pregnancy (37-42 weeks).

The process of childbirth will feel comfortable and pleasant because the fetus that is in the womb for nine months will be born into the world. On the other hand, the birthing process is a stressful and scary thing for mothers, especially for new mothers who are about to give birth, where it has been embedded in her mind that the birthing process is scary because it is imagined that the birth process takes a lot of energy and is very tiring and painful

because in the process. there is a very extraordinary pain.[1]

Labour and pain are two things that are interrelated and cannot be separated. Several studies are explaining that the picture in ancient/ancient society is that the delivery process takes a very long time with very severe pain, while in advanced people 8-15% give birth with minimal pain and most (90%) are accompanied by pain. great one. All efforts have been made to reduce pain during labour, both pharmacologically and non-pharmacologically. Various attempts have been made to reduce pain in labour, both pharmacologically and non-pharmacologically. At the point when the work cycle is running, the agony will show up because of uterine withdrawals. Although it is natural, many expectant mothers are

afraid of the process of labour pain so they consider using pain relief technology medically.[1][2]

Physiologically Pain or labour pain arises due to the physical response and psychological response experienced by the mother. Anxiety to fear can make the perception of pain during labour more severe. When facing labour, the pain experienced by the mother can stimulate fear so that it eventually results in anxiety and panic during the labour process. This event can trigger a physiological response that reduces the uterus is not able to contract optimally which will result in prolonging the time of labour itself. The process of pain felt during the first stage is severe pain with a longer time to process. Therefore, it is necessary to pay attention to the treatment to overcome the pain during the first stage. Pain can require the tension and fear experienced by the mother in the first stage that extends during the labour process.[3]

Problems that often arise for maternity are fear, pain and discomfort. This will have an impact on delaying the progress of labour if these major obstacles in labour are not overcome. Prolongation of the first stage of labour and disruption of fetal well-being often occur, this is the result of uncoordinated uterine contractions as a result of the mother's difficulty in adapting to labour pain during labour. One of the worrisome, complicated and unexpected complications of labour is the absence of progress of labour or slow progress of labour.[4]

Pharmacological pain management is more effective than non-pharmacological methods, but pharmacological methods are more expensive and have the potential to cause adverse effects and not all health facilities to provide these services. So that many non-pharmacological therapies appear to reduce pain in labour where every level of society can do it and health services can facilitate, are cheap, simple, effective and without adverse effects. One of the non-pharmacological methods that can be used to reduce labour pain is birth ball therapy.[1]

Birth Ball has the meaning of a birth ball where the mother's method of occupying the ball during the delivery process has the benefit of helping the mother in reducing pain during childbirth where the birth ball is very good at encouraging the strong strength of the mother needed during childbirth, an upright posture position, will support the process well. birth and helps the fetus position in an optimal

position to facilitate childbirth under normal conditions.[1]

Based on research that has been carried out with birth ball techniques, the average research subject has a pain scale of 6 (moderate pain) as many as 7 respondents or 46.7%, pain on a scale of 7 (moderate pain) as many as 2 people (13.3%) and pain on a scale of 5 (pain). moderate) as many as 6 people or 40.0%. Respondents in BPM mostly experienced moderate pain between 6-7 (moderate pain).[5]

## 2. METHODS

This review utilizing a trial research plan with a pretest-posttest control bunch plan. The testing strategy in this review was conducted non-randomly with the purposive sampling technique. The inclusion criteria used were normal delivery mothers, with gestational age 37 weeks, live singleton fetus, cephalic presentation, no induction of labour, active phase I birthing mothers (4-6 cm dilation), adequate hystera (uterine contractions >3 times in a week). 10 minutes with contractions >40 seconds), the delivery is accompanied by a husband or next of kin, does not use pharmacological and non-pharmacological methods to reduce labour pain, and the mother is cooperative. The exclusion criteria used in this study were mothers with complications and mothers with problems who were not willing to be respondents. The sample in this study were 20 women giving birth in the treatment gathering and 20 ladies conceiving an offspring in the benchmark group. In analyzing the data in a bivariate manner, the data presentation was carried out utilizing the Wilcoxon-test measurable test to decide the impact of the treatment given.

## 3. RESULTS

Univariate analysis was conducted to determine the frequency distribution and the presentation of the observed variables, namely by calculating the percentage to get an overview of the distribution of respondents. The study was conducted for one month, namely in June 2021 at the Setia Clinic, Padang Pariaman Regency. Samples were taken by purposive sampling so that a sample of 40 women gave birth which was divided into 2 groups, namely 20 respondents who gave birth to the treatment group who were given Birthing Ball therapy, and for the control group, 20 respondents gave birth without treatment but were taught deep breathing relaxation. The following are the results of the research as a whole:

**Table 1.** Frequency Distribution of Respondents Based on Characteristics

Characteristics	Treatment		Control		Total	
	n=20	%	n=20	%	n=40	%
<b>Age (Years)</b>						
20-30	18	90	15	75	33	82,5
31-35	2	10	5	25	7	17,5
<b>Level of education</b>						
Elementary School and Middle School	3	15	4	20	7	17,5
Senior High School	14	70	12	60	26	65
Bachelor	3	15	4	20	7	17,5
<b>Work</b>						
Work	16	80	14	70	30	25
Not Working	11	55	5	25	16	75
<b>Parity</b>						
Primigravida	11	55	5	25	16	40
Multigravida	9	45	15	75	24	60

Based on Table 1, the characteristics of the respondents in the treatment group are the most aged 20-30 years, namely 18 people (90%), as well as the respondents in the control group, the most respondents aged 20-30 are 15 people (75%). Meanwhile, at the education level for the treatment group and control group, the highest number of respondents was in secondary education with 14 people (70%) in the treatment group and 12 people (60%) in the control group, for the characteristics of respondents based on occupation, most of them were in the treatment

bunch and the benchmark group. Yes, mothers who do not work are 16 people (80%) in the treatment group and 14 people (70%) in the control group. Meanwhile, the parity of the treatment respondents in this study was more dominant with mothers with primiparous parity, namely 11 people (55%), while for the control group more parity with multiparous mothers, namely 15 people (75%).

**Table 2.** Distribution of Pre and Post Results of Maternal Pain Levels in the Treatment Group

Score	Pain Level	Pre		Post		Total	
		n=20	%	n=20	%	n=40	%
0	Painless	0	0	0	0	0	0
2	A little pain	0	0	0	0	0	0
4	Somewhat Annoying	9	45	6	30	15	37,5
6	Disturbing Activity	11	55	11	55	22	55
8	Very annoying	0	0	0	50	0	0
10	Unbearable	0	0	3	15	3	7,5

Description: Pre= Before; Post= After Based on Table 2. It shows that at the beginning of the assessment (pre-test) before using the birthing ball, most of the respondents experienced a level of pain that interfered with their activities and was very disturbing, namely 9 people (45%) and 7 people (35%), this pain level experienced change or decrease in the number after the assessment (post-

test) after the use of the birthing ball that is to 8 people (40%). And the respondents who experienced very disturbing pain levels also experienced a change from 7 people (35%) after the birthing ball there was a decrease in pain levels so that no more respondents experienced very disturbing pain levels.

**Table 3.** Distribution of Pre and Post Results of Pain Levels in Control Respondents

Score	Pain Level (FPRS)	Pre		Post		Total	
		n=20	%	n=20	%	n=40	%
0	Painless	0	0	0	0	0	0

2	A little pain	0	0	0	0	0	0
4	Somewhat Annoying	9	45	6	30	15	37,5
6	Disturbing Activity	11	55	11	55	22	55
8	Very annoying	0	0	0	50	0	0
10	Unbearable	0	0	3	15	3	7,5

Based on table 3 shows that at the beginning of the assessment of the level of pain (pre-test) on control respondents or respondents who did not get treatment, most of the respondents felt the pain bothering as many as 11 people (55%), and disturbing activities as many as 9 people (45%). In this table, it can be seen that the level of pain has increased were at the end of the assessment (post-test) respondents who experienced unbearable pain increased by 3 people (7.5%). And respondents who experience pain levels

that interfere with activities are still 11 people (55%).

Bivariate analysis was used to determine the effect of the birth ball technique on reducing labour pain at the Setia Padang Pariaman Clinic. In analyzing the data in a bivariate manner, the data presentation was carried out utilizing the Wilcoxon-test measurable test to decide the impact of the treatment given.

**Table 4.** Results of the Normality Test for Pain Levels in Maternity

Pain Level		Spahiro-Wilk		
Statistic		DF	Sig.	
Pre test	Treatment	0,809	20	<0,001
	Control	0,637	20	<0,001
Post test	Treatment	0,626	20	<0,001
	Control	0,745	20	<0,001

Table 4 shows that the significant value at the beginning of the research assessment (pre-test) obtained a p-value of less than 0.05, namely 0.001 for the group given the treatment and a p-value of <0.001 for the control group. Likewise at the end of the research assessment (post-test) obtained a significant value of less than 0.05 for

the treatment group and the control group, namely <0.001. This means that the treatment and control groups at the beginning and end of the research assessment had abnormal data distribution. This shows that the analysis used is non-parametric because the data distribution is not normally distributed.

**Table 5.** Comparison of Average Pre and Post Pain Levels in Maternal Maternity

Pain Score Group	$\Delta$	Sig Pre-test ( $\pm$ SD)	$\Delta$	Post-test ( $\pm$ SD)
Control	5,10 $\pm$ 1,021	6,00 $\pm$ 1,947	0,9	0,083
Treatment	6,30 $\pm$ 1,490	4,80 $\pm$ 1,005	1,5	<0,001

Information:

Sig = Wilcoxon Signed Ranks Test

SD = Standard Deviation

$\Delta$  = Difference in pain level after treatment (post-test) and before treatment (pre-test)

Table 5 in this study shows the mean (mean) pain scores of the pre-test and post-test in the treatment bunch and the benchmark group. In the results of the mean value, there is a change from the pre-test and post-test, namely the difference in the average value of pain levels in the treatment group respondents is 1.5 and the control group respondents are 0.9. Judging from the difference in changes, based on the average control respondents experienced an increase in pain scores. Meanwhile,

respondents in the treatment group experienced a decrease in the difference in pain level scores. Thus, it can be interpreted based on the mean value that the treatment respondents experienced a decrease in pain level scores. Meanwhile, from the consequences of the examination utilizing the Wilcoxon Signed Ranks Test, it can likewise be seen that the Asymp value. Sig. (2-tailed) control group was 0.083 and the Asymp value. Sig. (2-tailed) respondents who received treatment were <0.001. So that the Sig value of the treatment group respondents <0.001 < the value of = 0.05 which means  $H_a$  is accepted. It can be concluded that there is an impact of utilizing a birthing ball on the decrease of torment in the active phase I maternity mothers at the Setia Padang Pariaman Clinic. Based

on the results of the bivariate analysis showed that the value of Asymp. Sig. (2-tailed) is  $<0.001$ . So the value of Sig  $< 0.001 <$  the value of  $= 0.05$  which means  $H_0$  is accepted. It can be concluded that there is an effect of the use of birthing balls on reducing pain levels in the active phase I maternity mothers at the Setia Padang Pariaman Clinic.

#### 4. DISCUSSION

Based on the table of maternal pain levels in the treatment group, it shows that the level of pain before using the birthing ball, some respondents experienced pain that was very disturbing to their activities, namely 7 people (35%), and after using the birthing ball the level of pain felt changed so that the mother gave birth no longer. felt a very disturbing pain, where the respondent only felt a disturbing pain not a very disturbing pain.[6] Due to the use of a birthing ball in part, the birth ball exercise or therapy carried out by mothers in labour by sitting relaxed and swaying on the ball, hugging the ball during contractions has the benefit of helping the mother in reducing pain during labour. A mother who can relax in rhythm with uterine contractions will feel comfortable during the delivery process. In addition, the birth ball is very good at pushing strongly the mother's energy needed during childbirth, the upright posture will support the birth process and help the fetus to be in an optimal position making it easier to give birth normally. During labour therapy, the mother sits as comfortably as possible and the ball shape that can adjust to the mother's body shape makes it easier for the mother to relax, besides that, the ligaments and muscles, especially those in the pelvic area, become loose and reduce pressure on the sacroiliac joints, blood vessels around the uterus and pressure on the uterus. bladder, back, waist, tailbone and can reduce pressure on the perineum.[7]

#### 5. CONCLUSIONS

It very well may be presumed that there is an impact of utilizing a birthing ball on the decrease of torment in the dynamic stage I maternity moms at the Setia Padang Pariaman Clinic. This is because, during birthing therapy, the mother sits as comfortably as possible and the ball shape that can adjust to the mother's

body shape makes it easier for the mother to relax, besides that, the ligaments and muscles, especially those in the pelvic area, become loose and reduce pressure on the sacroiliac joints, blood vessels. around the uterus and pressure on the bladder, back, waist, tailbone and can reduce pressure on the perineum.

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