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JURNAL KEPERAWATAN KOMPREHENSIF	VOL. 8	NO. 2	Page 126-293	Bandung April 2022	ISSN 2354-8428 e-ISSN 2598-8727
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## Research Article

# The Relationship of Brith Ball Therapy on Primigravida Mothers With A Fair Delivery Process

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Received : February 1, 2022

Revised : April 22, 2022

Accepted : April 25, 2022

Online : April 30, 2022

Published : April 30, 2022

### Abstract

**Aims:** Pain in childbirth has the highest degree of pain, caused many women are not ready to have children because day imagine the pain that will be presented at the time of labor later.

**Objectives:** The general objective of this study was to determine whether there was an effect of brith ball therapy on pain intensity in labour. **Methods:** Pain was measured using numeric pain scale from 0 to 10 (0 indicating no pain and 10 indicating severe pain). Univariate and bivariate analysis using Wilcoxon test analysis.

**Results:** Of the 50 respondent mothers who carried out the variable therapy pre-test british ball who were very painful and 29 respondents had pain (58%) and a minority had little pain, 21 people (42%). And on the post-test respondent the least pain was increased by 32 respondents (64%), While the minority of pain was quite severe as many as 18 respondents (36%). A  $0.00 < 0.05$ . The result are expected to have an effect on british therapy on labor pain. The results of the Wilcoxon test analysis with a dgree of significance( $\alpha$ )=0.05 and a P value of 0.00 were obtained ( $\alpha < 0.05$ ) which can be seen from the value which means that  $H_0$  is rejected and  $H_a$  is accepted. **Conclusion:** there is an effect british ball therapy on labor pain. Future studies should be conducted using bigger sample size to explore the true effect using experimental study.

### Keywords

british ball therapy, primigravida

## INTRODUCTION

World Health Organization (WHO) data shows that 99% of deaths are caused by problems in labor or delivery. Lack of knowledge of mothers about the etiology and treatment and complications of pregnancy. Childbirth and postpartum generally cause high mortality rates. The majority of maternal deaths occur in developing countries due to limited reach access to health services, lack of facilities, delays in delivery assistance accompanied by socio-economic conditions and

community education which is still relatively low (1)

International scientific research Conference on Indonesian family planning and Reproductive Health (ICIFPRH) until 2019 Maternal mortality in Indonesia is still high, namely 302/per 100,000 live births. Meanwhile, Indonesia's MMR target in 2015 is 102 per 100,000 live births (2) The Brith ball is a physical therapy ball that helps mothers in the first stage of labor progress in labor that can be used in various positions. One of the movements is sitting on the ball and

rocking to make you feel comfortable and help progress in labor using gravity while increasing the release of the ball's curvature, stimulating the receptors in the pelvis. responsible for secreting endocrine Birth balls are physically beneficial so they can be used during pregnancy and childbirth in this case, birth balls position the mother's body optimally and reduce pain in uterine contractions causing unusual movements. The reason behind this is that birth ball exercises can work effectively in labor (3,4)

Using ball therapy affects on reducing the pain score of active phase postpartum mothers at the time of opening. It shows that of the 17 samples of research , mothers gave birth without a control group, before the birthing ball treatment, the respondents' pain scores showed a very large number of pain results, which amounted to 11 people (64%), while after using the birthing ball the respondents experienced not much pain, namely there were 9 people (53%) (5).

Labor and delivery are normal physiological events. The role of health workers is to monitor labor which is considered normal if the process occurs at term (after 37 weeks) without any complications. In the process of labor through four stages, the first stage is divided into two phases, namely the latent phase and the active phase. In the latent phase and the active phase. The latent phase is the period from the onset of labor to the point when dilation begins to progress progressively. The active phase is the initial period from the active progress of opening until the opening is complete (6).

Long labor is labor that lasts longer than 24 hours and is classified as

prolonged labor, however, if the progress of labor does not occur adequately during that period, the situation must be assessed immediately. The problem must be identified and resolved before the 24-hour time limit is reached. shows any elongation that causes the cervix to fail to fully open within a reasonable period of time. (7) Prolonged labor is the cause of maternal and newborn mortality, parturition if not handled quickly and appropriately will result in the mother experiencing infection, exhaustion before the baby at birth, dehydration, sometimes postpartum hemorrhage that can cause maternal death, infection, injury, and asphyxia will occur in the fetus which can increase infant mortality (8).

Several physiological efforts can be done to prevent prolonged labor such as pregnancy exercise and deep breathing techniques. Other efforts to prevent prolonged labor are with a birthing ball that supports labor so that labor can run physiologically. This is also one method that is very helpful in responding to pain. actively and reduce labor pain during the active phase of 1st stage. A birthing ball is a way to increase the size of the pelvic cavity by rocking the pelvis over the ball and slowly swinging the hips forward and backward, right, left, and circular. The exercise is applied to mothers pregnant women, mothers giving birth and postpartum mothers. Indications for the use of birth balls are to relieve pain in pregnant women, for prolonged opening and to lower the baby's head (9).

Pain arises due to physical reflexes and the mother's psychological response. Emotional tension due to anxiety to fear can aggravate the reception of pain during labor. Pain

experienced by the mother when facing childbirth can stimulate fear so that anxiety arises which ends in panic. This can lead to a physiological response that can affect the ability of the uterus to contract by increasing the time of labor pain. Pain in the 1st stage of labor is severe pain with a longer time, therefore it is necessary to pay attention to handling to overcome pain in the 1st stage of labor (3).

In primigravida, the length of labor in the 1st stage has a longer duration compared to multigravida, where the duration of the first stage of labor in primigravida is about 20 hours, while multigravida is about 14 hours. But not all natural deliveries will end according to the normal time. In addition to that, some factors can influence labor to be prolonged, namely presentation abnormalities, inadequate contractions, birth canal abnormalities, twin pregnancies, and anemia. (7)

Based on a preliminary study conducted by researchers in the maternity ward of the Bekasi District Hospital from September to October 2021, 10 primigravidas in part respondents did not use the Brit ball technique to assist the delivery process. Of the 9 primigravida normal delivery mothers who did not carry out the birth delivery technique. ball at the time of stage 1, 2 people came to complete opening and 8 of them experienced stage 1 lengthening.

Long labor is one of the contributors to maternal mortality in the world, based on the World Health Organization (WHO) in 2018 there were cases of prolonged labor in women in the world, namely 289 per 100,000 live births. Meanwhile, in Indonesia, the incidence of prolonged labor was the

highest in ASEAN, namely per 100,000. WHO, 2018). based on the riskesdas in 2018 it was 4.1% with the highest province experiencing prolonged labor, namely in Yogyakarta at 7.9% while those experiencing prolonged labor were slightly in Papua province at 2.7% with a total birth of 78,736 births worldwide. province (10)

The high rate of maternity mothers who did not perform the brith ball technique at 70%, the researchers formulated a problem formulation in the study, namely the effect of brith ball therapy to reduce the intensity of labor pain in primigravida on the duration of the first stage of labor in the delivery room at the Bekasi District Hospital in 2021. This study was conducted to determine birth ball therapy to reduce pain intensity in primigravida during the first stage of labor in the delivery room at the Bekasi.

## METHODS

### Study design

This research will be conducted using a cross-sectional research design. The research was conducted in the maternity ward of the Bekasi District Hospital in 2021.

### Sample

The population observed by the researcher was every patient who was treated in the maternity ward of the Bekasi District Hospital. From the calculation above, the number of samples obtained is at least 30 respondents.

### Instrumentation

Pain was measured using numeric pain scale was 0 to 10 (0 indicating no pain and 10 indicating severe pain)

### Data analysis

Univariate analysis is presented in the form of tables and graphs. The statistical test used is the chi-square test. The test will obtain a p value (p

value). The p-value can be interpreted as the magnitude of the chance that the research results occur due to chance (11).

## RESULTS

**Table 1.**  
**Frequency Distribution Mother's knowledge about British ball therapy in the delivery room of the Bekasi West Java Hospital in 2021**

No	Knowledge	Frequency	Percentage
1	Good	21	70%
2	Not good	9	30%
<b>Amount</b>		<b>30</b>	<b>100%</b>

Based on the results of the research from table 5.3.1 above, it can be seen that the mother's knowledge of Brith Ball therapy in the delivery room of the Bekasi District Hospital, there were 21 good responses (70%), and 9 respondents (30%) poor knowledge of Brith Ball therapy.

**Table 2.**  
**Frequency Distribution of Parturition Time for Pregnant Women in the First Stage in the delivery room at Bekasi Hospital in 2021**

No	Parturition Time	Frequency	Percentage
1	18 hours	19	63.3%
2	> 18 Hours	11	36.7%
<b>Amount</b>		<b>30</b>	<b>100.0%</b>

Based on the results of the research from table 5.3.2 above, it can be seen that the distribution of parturition time in the hospital room in Bekasi, West Java, which is 18 hours, has 19 respondents (63.3%), and parturition time that is > 18 hours, there are 11 respondents (36.7). %)

**Table 3.**  
**Relationship of knowledge of Brith Ball therapy with parturition time First Stage Pregnant Women at Bekasi Hospital, West Java in 2021**

No	Brith Ball Therapy Knowledge	Parturition Time				Total		P value	OR
		18 hours		> 18 Hours		n	%		
1	Good	17	81.0%	4	19.0%	21	100%	0.004	14.875 (2.2 - 100.7)
2	Not good	2	22.2%	7	72.8	9	100%		
		19	63.3%	11	36.7%	30	100%		

Based on the results of the analysis in table 5.4.1 above, it can be seen that the results of the bivariate test between knowledge of Brith Ball therapy and the first stage of labor, obtained good knowledge of Brith Ball therapy, all of which were 30 respondents, with parturition time of 18 hours there were 19 respondents (81%), while the knowledge of Brith Ball therapy is not good in all there are 9 respondents, with parturition time > 18 hours there are 11 respondents.

From the results of the bivariate analysis, it was obtained that p-value = 0.004 (< 0.050), where the Chi-Square used the Fisher Exact because the sample size was 30 respondents, thus it can be said that there is a significant relationship *between* knowledge of Brith Ball therapy and the incidence of parturition during pregnancy. I in the delivery room at the Bekasi District Hospital, West Java. The Odd Ratio (OR) value is  $14.875 = 15$  (2.2 – 100.7) with a lower limit of 2.2 and an upper limit of 100.7.

## DISCUSSION

The relationship between brith ball therapy for primigravida mothers and the smooth delivery process in the delivery room at the Bekasi District Hospita. According to researchers, Brith Ball therapy that is carried out by mothers in labor by sitting and swaying on the ball embracing the ball during contractions can provide benefits to help mothers reduce pain during labor (12). Mothers who can relax in rhythm with uterine contractions will feel more comfortable during labor. In addition, the brith ball is very helpful in reducing pain when opening in the 1st stage, the birth ball has other benefits, including

being able to reduce the length of the 1st stage, stimulate uterine contractions, accelerate cervical opening, widen the diameter of the pelvis and help lower the fetal head. , so that the use of a birthing ball is highly recommended, especially for pregnant women, maternity and postpartum (13).

According to Alehagen, there is a relationship between fear of childbirth during pregnancy and the experience of pain during the active phase of labor, that emotions can increase maternal stress or fear which can physiologically increase uterine contractions, thereby increasing the pain felt when women are in labor (14). When the patient is stressed, the body will automatically carry out a defensive reaction so that automatically from this stress stimulates the body to release stressor hormones, namely catecholamine hormones and adrenaline hormones, these catecholamines will be released in high concentration during labor if the mother-to-be cannot get rid of her fear before giving birth, various body responses that arise include the uterus becoming increasingly tense so that the flow of blood and oxygen into the muscles continues to decrease because the arteries become smaller and narrower as a result, pain is inevitable (15).

There is a significant relationship between knowledge of brith ball therapy and the incidence of pregnant women in the 1st stage of labor in the delivery room at the Bekasi District Hospital. According to researchers, Brith Ball therapy that is carried out by mothers in labor by sitting and swaying on the ball embracing the ball during contractions can provide benefits to

help mothers reduce pain during labor (12). Mothers who can relax in rhythm with uterine contractions will feel more comfortable during labor. In addition, the birth ball is very helpful in reducing pain when opening in the 1st stage, the birth ball has other benefits, including being able to reduce the length of the 1st stage, stimulate uterine contractions, accelerate cervical opening, widen the diameter of the pelvis and help lower the fetal head. , so that the use of a birthing ball is highly recommended, especially for pregnant women, maternity and postpartum (13)

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## CONCLUSION

From the results of research that has been carried out with birth ball therapy in primigravida mothers with a

smooth delivery process in the delivery room of the Bekasi District Hospital in 2021. Future studies should be conducted to explore the true effect using experimental study.

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