

COMPARISON OF COUNTERPRESSURE WITH BIRTHBALL TO FEAR OF FACING LABOR

Neng Rani Fitriyani*, Feva Tridiyawati

STIKES Abdi Nusantara, Jl. Swadaya No. 7, Jatibening, Pd. Gede, Bekasi, West Java 17412, Indonesia

*Nengraniii27@gmail.com

ABSTRACT

Fear of childbirth' (FOC) is defined as "intense anxiety that has interfered with the process, function and well-being during childbirth. This fear is caused by pain inflicted during labor, so finding ways to reduce pain will automatically decrease fear in labor. Nonpharmacological methods that can be used to reduce labor pain are birth ball therapy and counter pressure. The purpose of this study was to conduct a scientific analysis of the effectiveness of birth ball and *counterpressure* against reducing fear in the face of childbirth. This research is designed experimental quasy. This location is at the Bunda Aya Kragilan clinic, Serang-Banten in May-June 2023. In this study were 30 maternity mothers. The analysis used is an independent t test. The results of the independent t test obtained a Sig.2-tailed value of 0.002 for the birth ball and the results of the independent t test obtained a Sig.2-tailed value of 0.024. Birt balls and counterpressure are effective in reducing the fear of childbirth.

Keywords: birthball; comparison of counterpressure; facing labor

INTRODUCTION

The term 'fear of childbirth' (FOC) is defined as "intense anxiety that has interfered with the process, functioning and well-being during childbirth". In addition, more severe fear can be described as anxiety. Then, during the 1990s, studies from Finland defined FOC as health problems of pregnant women in the face of childbirth associated with anxiety disorders or phobias that can give rise to physical complications, nightmares and concentration problems. That phobia in childbirth is called "tokophobia" which is characterized as "irrational fear in the face of childbirth" including the desire to avoid childbirth (Nilsson, 2018).

The pain or pain that arises is actually a signal that indicates that the labor process has begun. Labor pain arises as a result of the mother's physical reflexes and psychic responses. Tension to fear can aggravate the perception of pain experienced by mothers when facing labor and can end in panic. This can cause a physiological response that reduces the ability of the uterus to contract properly so that it will prolong the time of delivery. Maternity mothers who are difficult to adapt to labor pain can cause uncodination of uterine contractions which can result in prolongation of labor and fetal welfare is disrupted. Research also mentions that fear can interfere with aspects (Sutriningsih, 2019)*psycho-neuro-endocrinoimmune (PNEI)*, which can cause misalignment of soul and mind which can ultimately result in disruption of nervous balance, hormones, and finally decreased endurance. (Prananingrum, 2015)

Labor pain can cause hormone release *Catecholamines* and *Steroids* which is excessive and can cause tension of smooth muscles and vasocontric blood vessels resulting in a decrease in uterine contractions, a decrease in uteroplacental circulation, a decrease in blood flow and oxygen to the uterus . Pharmacological pain management tends to be expensive and has the potential to have adverse effects and not all health facilities provide these services (Choirunissa, 2021) (Apriani, 2020).. So that many nonpharmacological therapies have emerged to reduce pain in labor where

every level of society can do and health services can facilitate, are cheap, simple, effective and without adverse effects. One nonpharmacological method that can be used to reduce labor pain is birth ball therapy and counter pressure.

In addition to using birth balls, one of the other non-pharmacological therapies is: *counterpressure* or Massage counter pressure is a massage performed by applying continuous pressure on the patient's sacrum bone with the base or fist of one palm. Counter pressure massage can be given in straight motions or small circles. This technique effectively eliminates back pain in childbirth. (Juniartati, 2018). Previous research reported that based on statistical tests obtained the result p value = 0.000. This means there is an effective massage *counterpressure* to decrease pain intensity during the active phase at Dr. M.M Dunda Limboto Hospital, Gorontalo Regency 2018. (Yulianingsih, 2019)

A preliminary study on the effects of birthball and *counterpressure* fear has been conducted on 10 maternity expectant mothers experiencing moderate anxiety based on the W-DEQ questionnaire. Each intervention was given to 5 maternity mothers, the results showed a decrease in fear in both groups (the birth ball group fell by an average of 6 points and the *counterpressure* group fell by an average of 7 points), but these results have not been scientifically analyzed. Based on these results, researchers are interested in conducting a scientific analysis of the comparative effectiveness of birth ball and *counterpressure* against reducing fear in the face of childbirth at the Aya Serang mother clinic in 2023.

METHOD

This research is a type of intervention research with an experimental quasy *design*. The location used for this research is at the Bunda Aya Kragilan clinic, Serang-Banten in May-June 2023. The samples used in this study were 30 maternity mothers divided into 2 groups, namely 15 counterpressure respondents and 15 birth ball respondents using purposive sampling. Inclusion criteria include: Inpartu mothers who feel pain. The long opening is more than 2 hours at each opening. Birth ball is a physical therapy ball that helps mothers inpartu when 1 position that helps the progress of labor. A physical therapy ball that helps labor progress and can be used in a variety of positions. One of the movements is to sit on the ball and sway back and forth to make a sense of comfort and help the progress of labor. Counterpressure is pressing the sacrum area firmly with the base or fist of one palm, release and press again, and so on for 20 minutes. The outcome in this study is fear as measured by the W-DEQ (The Wijma Delivery Expectancy/Experience Questionnaire) questionnaire caused (Ortega-Cejas, 2021). Analysis of the difference test using the Independent t test.

RESULT AND DISCUSSION

Based on the results of univariate analysis, half of the respondents fell into the productive category of 15 respondents (50%), were the first or primiparous pregnancies for 21 respondents (70%) and worked as housewives as many as 19 respondents (63.3%).

Table 1.
Characteristics of respondents

Characteristic	f	%
Age of Respondents		
< 20 Years	13	43.3 %
20 – 35 Years	15	50 %
> 35 Years	2	6.7%
Parity		
Primipara	21	70%
Multiparous	9	30%
Work		
Housewives	19	63.3%
Trader/ self-employed	9	30%
Civil servants	2	6.7%

Table 2.
Normality test

Result		Kolmogrov-Smirnova			Shapiro - Wilk		
		Statistics	Df	Sig	Statistics	Df	Sig
Intervention Birth ball	Pretest	,173	15	,200	,924	15	,247
	Posttest	,221	15	,086	,908	15	,108
Intervention Counterpressure	Pretest	,268	15	,007	,879	15	,056
	Posttest	,099	15	,200	,982	15	,976

All post-test Sig values produced > 0.05 , so it can be concluded that the data is distributed, so the next step is *an independent T test*. The average result of the fear score before the intervention was 66.79 and the average fear score after the intervention was 59.69 The results of the independent t test obtained a Sig.2-tailed value of $0.002 < 0.05$, it can be concluded that the administration of birth ball intervention has an effect in reducing fear before labor and is statistically significant.

Table 3.
Independent T Test for Birth ball

Result	Independent T test					df	Sig (2-tailed)
				95 Confidence Interval			
	Mean before	Mean after	Std error	Lower	Upper		
Pretest – Posttest Intervention	66.79	59.69	2.09	2.81	11.38	30	.002

The average result of the fear score before the intervention was 55.64 and the average fear score after the intervention was 53.13 The results of the independent t test obtained a Sig.2-tailed value of $0.024 < 0.05$, it can be concluded that the provision of Counterpressure intervention also has an effect in reducing fear before labor and is statistically significant.

Table 4.
Independent T Test for Counterpressure

Result	Independent T test					Df	Sig (2-tailed)
	Mean before	Mean after	Std error	95 Confidence Interval Lower	95 Confidence Interval Upper		
Pretest – Intervention	Posttest 55.64	53.13	2.03	0.72	9.17	30	.024

Birth ball is physical therapy or simple exercises using a ball. The word birth ball can be interpreted when exercise using a ball is applied to pregnant women, childbirth women and postpartum mothers (Reffita, 2021). The birthingball technique is one way that can be applied by pregnant women to get calm when facing pregnancy and childbirth. Birth ball is a physical therapy ball that helps mothers inpartu when 1 position that helps the progress of labor. A physical therapy ball that helps labor progress and can be used in a variety of positions. Sitting on the ball and rocking makes you feel comfortable and helps labor progress by using gravity while increasing endorphin release because the elasticity and curvature of the ball stimulate receptors in the pelvis responsible for secreting *endorphins*. (Kurniawati, 2016)

Between primigravida and multigravida there are differences in emotional, physical, and psychosocial atmosphere (Sari, 2019). Generally, the psychological and emotional reactions of primigravida are indicated by the presence of anxiety or fear, anger, fear, and panic about pregnancy. During the pregnancy period, most pregnant women feel fear or anxiety about childbirth, especially in primigravida mothers (first pregnancy) in contrast to multigravida mothers (Na'im, 2021). The Counter Pressure technique is one method that can reduce sharp pain and provide pleasant sensations and fight discomfort during contractions or between contractions. The counter pressure technique is done by emphasizing the source of low back pain area that is felt so that it can release muscle tension, reduce low back pain, facilitate blood circulation and will cause relaxation. Conterpressor technique will help overcome muscle cramps felt by sufferers, relieve pain, anxiety accelerate the process of thigh muscle firmness followed by pelvic bone expansion due to relaxation in the muscles around the pelvis, effective in forming a reduced sense of waist pain and relatively safe because there are no side effects caused (Merry, 2021) (Choirunissa, 2021)

Counterpressure, Gate control theory is one of the application techniques, using massage techniques can relieve pain by inhibiting pain signals, increasing blood flow and oxygenation throughout the tissues. Massage given to maternity mothers for twenty minutes each contraction will be more pain-free. The massage will stimulate the body to release endorphins that function as pain relievers and create a feeling of comfort. Gentle massage helps the mother feel more refreshed, relaxed, and comfortable in labor. (Supliyani, 2017) (Juniartati, 2018). By giving massage counter pressure can close the nerve message gate that will be delivered to the spinal cord and brain. In addition, with strong pressure on the technique, it will activate endhorophin compounds that are at the synapses of spinal cord cells and the brain. So that the transmission of pain messages can be inhibited and cause a decrease in pain sensation (Siallagan, 2018) (Yulianingsih, 2019).

CONCLUSION

Based on the results of univariate analysis, half of the respondents fell into the productive category of 15 respondents (50%), primiparous pregnancies for 21 respondents (70%) and worked as housewives as many as 19 respondents. Birth balls and counterpressure are effective in reducing the fear of childbirth

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