



EFFECT OF THE IMPLEMENTATION ACTIVE BIRTH TECHNIQUE USING BIRTH BALL AND HYPNOBIRTHING ACCELERATED THE PROGRESS OF THE FIRST STAGE OF LABOR AMONG INTRAPARTUM MOTHER

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ABSTRACT

In Indonesia there are still many problems during childbirth, including old labor, which is one of the causes of death for mothers and newborns. To deal with prolonged labor, the UK has introduced active birth techniques. Birth ball and hypnobirthing are among the active birth methods that can be used during the first stage of labor. This study aims to study the effect of the application of the active birth technique using birth balls and hypnobirthing on the progress of the first stage of labor in the mother. This type of research is analytical with experimental design with pre-experimental using Post-Only Design. This research was conducted from 15 May to 28 July 2020, in 4 Independent Practice Midwives (BPM) Padang City in 2020. Data were collected through observation sheets using non-probability sampling techniques, namely purposive sampling with a total sample size of 24 samples. Data were collected using observation sheets. Data were analyzed using univariate and bivariate analysis using the Kruskal Wallis test. The results showed that the average ranking of delivery progress was faster in the combination treatment of Birth Ball and Hypnobirthing, namely 7.44 than the respondents who were given Birth Ball treatment, namely 12.69. The average ranking of progress in labor was faster than Hypnobirthing treatment, namely 17.38. Based on the statistical test p value 0.016 ($p < 0.05$), there is an effect of the application of active birth techniques using a birth ball and hypnobirthing on the progress of the first stage of labor in the mother.

Keyword: *Activ Birth, progress of the first stage of labor , Mother in labor*

INTRODUCTION

Childbirth is a natural process. Physiologically, the mother will experience contractions that cause cervical thinning and opening. This will cause the mother to feel pain and often this pain is perceived as the most intense pain experience a mother has ever felt during her life¹.

In the labor process, it passes four stages, at the first stage it is divided into two phases, namely the latent phase and the active phase. The latent phase is the period from the onset of labor to the point when the opening starts progressively. The active phase is the

initial time period from the active progression of the opening to the completion of the opening². During labor, expulsion of the conception begins with a progressive cervical opening, dilatation or both, due to regular uterine contractions that occur at least every 5 minutes and last 30 to 60 seconds. occurs at 37-42 weeks of gestation³.

According to data reports from WHO (2015), it was noted that every day in 2015 there were 830 mothers who died due to complications of pregnancy and childbirth. WHO also recorded MMR in Indonesia (2015) of 126 /



100,000 live births⁴. The Indonesian Health Demographic Survey (IDHS) in 2012 noted that MMR in Indonesia was still high at 359 / 100,000 live births. This figure is still quite high when compared to neighboring countries in the ASEAN region. The latest data from the Ministry of Health (2016) states that up to semester I in 2017 there were 1,712 cases of maternal deaths during childbirth⁵. The high MMR illustrates that the level of welfare of the people in Indonesia is still low⁶. Data released by the Directorate of Maternal Health in 2012 shows that maternal mortality in Indonesia is caused by several factors. These factors include bleeding (30.1%), hypertension (26.9%), infection (5.6%), prolonged labor (1.8%), abortion (1.6%) and other causes. (34.5%). Based on these data, prolonged labor is one of the factors contributing to the contribution of maternal mortality in Indonesia, even though the percentage is quite small. In Indonesia, there are still many problems during childbirth, including prolonged labor, which is one of the causes of death for mothers and newborns⁵.

Prolonged labor(long labor) is labor that lasts more than 24 hours for primiparous, and more than 18 hours for multiparous, the problem that occurs in long labor is a latent phase of more than 8 hours, labor has lasted more than 12 hours but the baby has not been born , dilated cervix on the right line alerts us to active phase of labor⁷.

Factors that influence labor to take longer are abnormal presentation, inadequate contractions, birth canal abnormalities, multiple pregnancies and anemia. To deal with prolonged labor, the UK has introduced active birth techniques. The success of the implementation of the active birth method in the UK is 46% born naturally with a kneeling position 29%, a combination of 4 positions 28%, 23%

left tilt, standing 9% and squatting 4%. More than 200 midwives in the UK have implemented this method⁸.

The active birth method in Indonesia has actually been implemented as one of the care services in the delivery process, namely in terms of mobilization which encourages the mother to choose a position that is considered the most comfortable with the aim of minimizing pain and can affect the length of the first stage and second stage of labor, this is in accordance with the standards of midwives according to WHO in 2010 in terms of midwives as assistants for childbirth. In general, there are still many mothers who experience prolonged period I and more mothers give birth through stage I by lying in bed because they cannot stand the pain of contractions and some patients for other reasons⁹.

Methods that can be used in the active birth technique are walks, tilt left, mobilization, husband assistance, yoga, warm cold compresses, birth balls and hypnobirthing that have been carried out by midwifery care during childbirth. to help with prolonged labor¹⁰. The advantages of active birth include the progress of labor, reduced pain due to uterine contractions moving toward the front of the uterus naturally and not against gravity, increased energy during stage II, less risk of perineal tear in stage II and maternal condition and babies are more optimal because they reduce medical therapy which can cause side effects to both¹¹. Birth ball and hypnobirthing are among the active birth methods that can be used during the first stage of labor. Birth ball (delivery ball) is a physical therapy ball that helps the mother in stage I to position that can help the progress of labor. A physical therapy ball can be used in a variety of positions. By sitting on the ball and shaking it makes you feel comfortable



and makes labor progress using gravity, while increasing the release of endorphins due to the elasticity and curvature of the ball, stimulating the receptors in the shoulders to secrete endorphins¹². Research conducted by Rohmah (2016) in Gombang on the application of active birth techniques using birth ball on the progress of labor, namely the progress of labor becomes faster 2-3 hours¹³.

The research objective was to study effect of the application of the active birth technique using birth balls and hypnobirthing on the progress of the first stage of labor in the mother.

MATERIAL AND METHODS

This research type is quantitative with experimental design with pre-experimental design using Postes Only Design¹⁴. The research was conducted in 4 Independent Practice Midwives (BPM) Padang City, namely BPM Nurhaida, A.Md Keb, BPM Sari Gutti, BPM Ika Putri, M. Biomed, BPM Halimatun Sakdiah, A.Md Keb. Held on 15 May-28 July 2020. The population in this study were all mothers giving birth

at the Padang City Independent Practice Midwives with full-term gestation \geq 37-42 weeks with no pregnancy complications. The sampling technique used non probability sampling, namely purposive sampling. Data obtained by using observation sheets. The sample in this study were 24 women giving birth, in which 8 samples of the treatment group performed the birth ball technique, 8 samples of the treatment group performed the hypnobirthing technique and 8 samples of the treatment group combined the birth ball technique and hypnobirthing technique. The inclusion criteria were pregnant women with gestational age \geq 37-42 weeks, Stage I Active Phase (Opening $>$ 4cm), head presentation, no complications of pregnancy / mothers with complications (former secio caesarea, Mc Donald $>$ 40 cm, maternal TB $<$ 145 cm, maternal blood pressure $>$ 140/90 mm / Hg, anemia mother), normal FHR. Data were collected using observation sheets. Data were analyzed descriptively using univariate and bivariate analysis using the Kruskal Wallis test.

RESULTS

Table 1
Distribution of the frequency of parity in the application of the active birth technique using birth balls and hypnobirthing towards the progress of the first stage of labor among intrapartum mother

Parity	f	%
Primipara	6	25
Multipara	18	75
Total	24	100

Based on table 1, it is found that more than half of the 75% of respondents with multiparity parity.



Table 2
Average of the application of the active birth technique using birth balls and hypnobirthing accelerated the progress of the first stage of labor among intrapartum mother

Treatment	Mean	N
Hypnobirthing	17.38	
Birth ball	12.69	24
Combination	7.44	

Table 2 above proves that the average ranking of labor progress is faster in the combination treatment of Birth Ball and Hypnobirthing, namely 7.44 than the respondents who were given Birth Ball

treatment, namely 12.69. The average ranking of progress in labor was faster than Hypnobirthing treatment, namely 17.38.

Table 3
The Effect of the application of the active birth technique using birth balls and hypnobirthing accelerated the progress of the first stage of labor among intrapartum mother

Treatment	Mean	P	N
Hypnobirthing	17.38		
Birth ball	12.69	0,016	24
Combination	7.44		

Table 3 above shows that the results of the statistical test with a p-value of 0.016 ($p < 0.05$) means that there is an effect of the Application of Active Birth

Techniques Using Birth Balls and Hypnobirthing on the Progress of First Stage Labor in Maternity.

DISCUSSION

Based on the results of the study showed that the results of statistical tests obtained p-value 0.016 ($p < 0.05$) means that there is an effect of the Application of Active Birth Techniques Using Birth Ball and Hypnobirthing on the Progress of First Stage Labor in Maternity.

This study is in line with Sheishaa Ramadhan et al (2019) with the results of the analysis that there is an effect of active birth using the Birth Ball on the progress of the first stage of labor¹⁵. By using the statistical test, it was obtained $P = 0.007$, which means that H_0 is rejected and H_a is accepted. In addition, it is also in line with the results of

research by Buulolo Ramadhani (2016) showing that there is an effect of hypnobirthing with the duration of the active phase I labor process in primiparous and multiparous labor mothers with a p value < 0.005 ¹⁶.

In this study, carried out by giving treatment to 24 samples of maternal mothers, 8 samples were given hypnobirthing treatment, 8 samples of Birth Ball treatment and 8 samples of the combination of Hypnobirthing and Birth Ball.

The factor that affects the duration of labor is labor pain. Labor pain is a physiological condition, labor pain begins to appear in the first stage of labor in the latent phase and the active



phase. The latent phase opens up to 3 cm, lasting as long as 8 hours. Pain comes from uterine contractions and cervical dilation, with increasing volume and frequency of uterine contractions, the pain you feel will get stronger, the peak of pain occurs in the active phase, where the opening occurs from 3 cm to 10 cm and lasts for 6 hours. Pain that occurs can affect the mother's condition in the form of fatigue, fear, worry and cause stress. Stress can cause the weakening of uterine contractions and result in prolonged labor and even death¹⁷.

The use of Birth Ball and Hypnobirthing is a non-pharmacological pain reliever method of delivery. Its use is physically beneficial during pregnancy and childbirth¹⁸. Birth Ball is rocking the pelvis using a birth Ball. As labor enters stage I, sit on the ball and slowly swing and sway your hips back and forth, the right, left and circular sides of the pelvis will become more relaxed¹⁹. Hypnobirthing method is a combination of natural birth processes with hypnosis to build positive perceptions and self-confidence and reduce fear, anxiety and tension, and panic before, during and after childbirth²⁰.

The suggested benefits of using a birth ball and Hypnobirthing during labor include reduced pain, decreased anxiety levels, less use of analgesics, easier fetal head transmission and rotation, shorter duration than one stage of labor and increased maternal satisfaction and well-being. Psychologically, sport with the ball improves posture, balance, coordination, and body awareness because of its dynamic nature that helps mothers maintain body control and build self-confidence^{21,22}.

CONCLUSION

There is an effect of the Application of Active Birth Techniques Using Birth Balls and Hypnobirthing on the Progress of Stage I Labor in Maternity at BPM Padang City.

REFERENCES

- Aprilia, Y & Ritchmond, B. *Gentle Birth: Comfortable Childbirth Without Pain*, Jakarta: PT Gramedia Widiasarana Indonesia; 2011
- Beigi NMA, Broumandfar K & Abedi HA. Women's Experience of Pain During Childbirth in Iranian Journal of Nursing and Midwifery Research, [Online], 2010: 15, no. 2, pp.77-82.
- Bobak. *Textbook of Maternity Nursing*, Book Medical Publishers EGC, Jakarta; 2010.
- Buulolo, Dewi Ramadani. *The Effect of Hypnobirthing Techniques on the Duration of the Process Stage I Labor in the Active Phase and Pain Levels in Labor at Eka SriWahyuni Clinic, Medan Denai District*, 2016. USU Institutional Repository. 2016.
- Gallo, RBS, Santana, LS, Marcolin, AC, Duarte, G., & Quintana, SM. The sequential application of non-pharmacological interventions reduces the severity of labor pain, delays use of pharmacological analgesia, and improves some obstetric outcomes: a randomized trial. *Journal of physiotherapy*, 2018: 64 (1), 33-40.
- Icesmi and Margareth. *Pregnancy, childbirth, and postpartum* Yogyakarta. NuhaMedika Bandung; 2013
- Kuswandi, L. *The Miracle of Hypno-Birthing*. Jakarta: Pustaka Bunda; 2011.



- Makvandi, S., Latifnejad Roudsari, R., Sadeghi, R., & Karimi, L. Effect of birth ball on labor pain relief: A systematic review and meta - analysis. *Journal of Obstetrics and Gynecology Research* 2015; 41 (11), 1679-1686.
- Ministry of Health RI. Health Profile 2015. Jakarta: Indonesian Ministry of Health. 2016.
- Ministry of Health RI. InfoDATIN. Jakarta: Indonesian Ministry of Health. 2016. Jakarta: Indonesian Ministry of Health. 2014
- Notoatmodjo, S, Dr. R. Health Research Methodology, Rieneka Cipta, Jakarta. 2010.
- Prawiroharjo, Sarwono. Maternity and Neonatal Health Services. Jakarta, PT Bina Pustaka; 2011.
- Reeder, S.J., Martin, L.L., & Koniak-Griffin, D. (2017). Maternity nursing: family, newborn, and women's health care. 18th ed. Philadelphia: Lippincott; 2017
- Rizema, P .. Easy Way to give birth with Hypnobirthing. Banguntapan Yogyakarta: Laksana .; 2016.
- Rohmah. The application of the Active Birth Technique using the Birth Ball to the progress of Labor during the Active Phase of Maternity at BPM Wiwik Gunandari, S.SiT. 2017 *Health Research Journal*; 4 (2)
- Saifuddin, Abdul Bari. Practical Guide Book for Maternal Neonatal Health Services .. PT Bina Pustaka Sarwono Prawihardjo. Jakarta ; 2011
- Sariati, Yuseva, Era Nurisa Windari, Nur Aini Retno Hastuti. The Influence of Hypnobirthing on the Anxiety Level of Maternal Labor and the Duration of Delivery in the Independent Practice Midwives in Malang Regency. *Midwife Scientific Journal*. 2016; I (3)
- Sheishaa, Doaa Mustafa Ramadan, Hanan A, M El-Mashad2 & Nahed F, H Khedr. Effect of Birthing Ball Exercises during Pregnancy on the First Stage Progress of Labor. *International Journal of Nursing (Online)*, 2019: 6 (2): 47-67.
- Simkin, P. & Bolding, A. Update on nonpharmacology approach to relieve labor pain and prevent suffering. *Journal of Midwifery & Women's Health*; 2017
- Souza, J.P., Miquelutti, M.A., Jose, G.C., & Makuch, M.Y.. Maternal position during the first stage of labor: a systemic review. *Reproductive Health* 2016; 3 (10): 1-9.
- Susanti et al. The Effect of Active Birth on the Labor Process when the Active Phase, *Midwifery Scientific Journal* 2013: 4: 199-210
- World Health Organization, 2015. Global Health Observatory (GHO) data: Maternal Mortality. http://www.who.int/gho/maternal_health/mortality/maternal_mortality. Accessed 3 August 2020.