



Midwife's knowledge level and delivery ball techniques on labor pain

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ABSTRACT

Childbirth is a natural process and causes pain caused by contractions when the mother is giving birth. One of the non-pharmacological methods that can be used is the birth ball method, which is a method of using a rubber ball filled with air to reduce back pain during pregnancy and childbirth which is safe to use. The method used in this study is a literature review by examining 20 articles with the same topics and themes in the 2018-2023 range from Indonesia. The literature search used the keywords, namely, Childbirth Ball, Labor Pain, Knowledge. Each article is reviewed first, where the article raised is the most relevant. The results obtained from this literature study are that there is an effect of the application of the birth ball method to reduce the intensity of labor pain before and after being given the birth ball method. Based on the results of the discussion conducted by reviewing 20 articles related to the level of knowledge of midwives and labor ball techniques to reduce pain. It can be concluded that there is a significant reduction in pain after being given and implemented birth ball therapy for maternity mothers and the level of knowledge of midwives is high on the use of birth ball therapy.

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1. INTRODUCTION

Defining that maternal death is the death of a woman that occurs during pregnancy, childbirth or within 42 days after delivery with causes that are directly or indirectly related to after delivery. With this problem of maternal mortality, the community sues that the target of the 2030 Sustainable Development Goals (SDG's) is certainly necessary. to receive special attention from all parties, both the government and the private sector, namely to reduce the maternal mortality rate (MMR) below 70 per 100,000 deliveries that take place continuously.

Childbirth is a physiological process that accompanies the life of almost every woman. Although the process is physiological, it is generally frightening, because it is accompanied by severe pain, sometimes even causing life-threatening physical and mental conditions. Simiometrium contract occurs and the mechanism of physiological and biochemical changes caused by physical, psychological, emotional and motivational factors. This incident can cause longer labor (long labor) so that the fetus can experience emergency/fetal-distress (Noviyanti, 2019).

Relieving pain is important. It is not the amount of pain experienced by women that needs to be considered, but expectations about how to deal with this pain can be fulfilled (Ilyas, Sonda and Hidayati, 2020). Labor pain is a natural reaction. The pain that will be felt is the same as the process of giving birth. Some mothers worry that they will not be able to go through labor because the pain makes them frustrated and hopeless (Samata et.2021).

According to a study involving 2,700 mothers from 212 obstetric hospitals in 36 countries, labor only took place 15% without pain, 30% with moderate pain, 35% with severe pain, and 20% times with severe pain (Sari, 2020). Discomfort, fear and pain are problems for birthing mothers. This is the biggest obstacle in labor and if it is not overcome it will have an impact on hampering the progress of labor (Lee and Holroyd, 2009). Maternal mothers who have difficulty adapting to labor pain can cause uncoordinated uterine contractions which can result in prolongation of the first stage of labor and impaired fetal well-being. No progress of labor or slow labour, which is one of the worrisome complications of labour,

When a mother faces the birth process accompanied by fear and is very anxious and tense, unsure of herself, this tension can cause pressure on the cervix and uterus so that more pain will be caused. The perception of pain in labor is closely related to the intensity of pain felt by the mother (Anarado et al., 2015). Factors that influence the perception of pain include emotional, motivational, socio-cultural and self-confidence. Self-confidence during labor is defined as the mother's belief in her ability to deal with the pain she feels so that the mother can control and deal with pain naturally so that the delivery process goes smoothly (Sari, 2020).

Birth Ball means the birth ball where the method of the mother sits on the ball during the birth process which has the benefit of helping the mother in reducing pain during labor where the birth ball is very good at encouraging the mother's strong energy needed during childbirth, upright posture, will support the birth process well as well as helping the fetus to be in an optimal position so as to facilitate childbirth under normal conditions (Wati, Monarisa and Hamdanesti, 2022).

Previous experimental studies proved that 84% of mothers stated that the birth ball could relieve contraction pain, 79% reported that back pain subsided, and 95% stated that they were comfortable when using the birth ball (Lee and Holroyd, 2009). Other benefits of the birth ball during labor can reduce anxiety, and help the process of lowering the fetal head, reducing the duration of the first stage of labor, increasing satisfaction and well-being of the mother. (VAR Barao et al., 2022).

The advantages of using this birth ball are that it increases blood flow to the uterus, placenta and baby, relieves pressure and can increase the output of the pelvis by as much as 30%, provides comfort for the knees and ankles, provides counter-pressure on the perineum and upright thighs. This posture works with gravity to push the baby down so as to speed up the delivery process (Noviyanti, 2019).

One of the innovations in pregnancy exercise is the birth ball pregnancy exercise. Pregnancy birth ball exercise is a physical exercise therapy for pregnant women by using a birth ball as a tool to increase comfort and fitness during pregnancy. The results of the study stated that the birth ball pregnancy exercise was effective in reducing pain perception and increasing self-efficacy in copying (Sari, 2020). The purpose of this literature review study is to find out the knowledge of midwives and birth ball techniques on labor pain.

2. RESEARCH METHOD

The method used in this study is a literature review by examining 20 articles with the same topics and themes in the 2018-2022 range from Indonesia. Analysis of the data used in this study was after reviewing 20 articles that were considered relevant, then 11 articles were assigned that had inclusion related to the level of knowledge of midwives and labor ball techniques on labor pain. A literature search used keywords namely, Childbirth Ball, Labor Pain, Knowledge. Each particle is reviewed first, where the articles raised are the most relevant and have inclusions.

3. RESULTS AND DISCUSSIONS

Research results

The results of this literature review were carried out by examining 20 articles related to the level of knowledge of midwives and birth ball techniques on labor pain. After reviewing the 20 articles, 11 articles were found that were relevant, where the keywords used were labor balls, labor pain and knowledge. Where in almost every article that was published there was an effect of birth ball therapy on reducing labor pain and the level of knowledge. Midwives and midwives' motivation in implementing birth ball therapy is above average in the very good category. The results of the review can be seen in the attachment table at the end of this article.

Table I: Research Summary of Articles on the Relationship of Midwives' Knowledge and Delivery Ball Techniques to Labor Pain.

Name and year of research	Article name	Types of research	Examined variables	Study design	Research samples	Research statistics	Research conclusion
Ferinawati, Rita Zahara. October 2021	Journal of Healthcare Technology and Medicine Vol. 7 No. 2	<i>Analytics</i>	The use of birth ball therapy to reduce labor pain	<i>Case control</i>	Purposive sampling with 20 respondents	Univariate and bivariate analytics	There is an effect of using the Birthing Ball on reducing the level of pain in women giving birth. At BPM Yulia Fonna, A.Md. Keb, SKM
Nur Mala Sari, Zahratul Khairi, Ariani. 2021	Research articles on midwives and reproductive health	<i>quantitative</i>	the effect of giving birth ball therapy to women giving birth to reducing labor pain	<i>Quasi experiment</i>	Purposive sampling with 15 respondents	Univariate and bivariate analytics	After being given birth ball therapy to primigravida mothers, the average labor pain was 5.73 and all respondents experienced a decrease in labor pain (negative ranks were worth 15).
Ayu Irawati. Susianti. Iranita Haryono' 2019.	Smart midwife article, vol 3, no 1.	<i>experimental</i>	Effect of birthing ball on pain reduction	<i>Pretest - posttest control group</i>	<i>Purposive sampling</i>	Wilcoxon-test	There is a birth ball effect on reduction of pain in women giving birth at the Lompoe Health Center
Yeni Aryani, Fatiyani Alyensi 2016.(Valinda and Hadianti, 2022)	Lecturer in the Department of Midwifery, Poltekkes, Ministry of Health, Riau	<i>Quasi experiment</i>	Knowing the relationship between the knowledge of midwives and the technique of using a birthing ball on pain intensity	<i>One group pretest -post test</i>	<i>Accidental sampling</i>	Wilcoxon on-test	There is a birthingball effect on reduction of pain in women giving birth
Ika Murtiyarin Rosmaria, Yuli Suryanti. (2022).	<i>Journal of Telenursing (JOTING)</i> Volume 4, Number 2	<i>Quasi experiment</i>	The effect of birth ball therapy on reducing the intensity of labor pain during the first active	<i>One group pre test post test</i>	<i>Accidental sampling</i>	Test paired t test	There is an effect of birth ball therapy on reducing the intensity of labor pain during the first active phase.

Linda Wati, Monarisa, Rischa Hamdanesti	Batanghari Jambi University Scientific Article,22 (1)	Quasi experiment	phase. Pretest-post test To determine the effect of the birth ball method on intensity of labor pain during the first active phase.	One group pre test post test	Accidental sampling	Test paired t test	There is an influence of the birth ball method on Reducing the intensity of labor pain during the first stage of the active phase.
Riza Choirunnisa, Retno Wati (2021)	Journal of Community Engagemen in Health.	experimental.	The effect of using a birthing ball on reducing pain in Maternity mother	Pretest posttes control group design	Purposive sampling	Univariate and bivaria te analys is	There is an effect of using a birthing ball on reducing pain in Maternity mother

Discussion

According to Ferina Wati, after conducting research and being given socialization, midwives and mothers can do birth ball therapy to help reduce pain in labor. This study shows that there is an effect of using a birthing ball on reducing the level of pain in women giving birth because with the help of using a birthing ball it makes mothers more comfortable during labor, and helps the progress of labor. The majority of respondents experienced moderate levels of pain because the mother used a birthing ball in accordance with the guidance of midwives, researchers and was supported by the patient's family at the time of delivery (Ferinawati and Zahara, 2021).

Nur Mala Sari's research, after being given birth ball therapy to primigravida mothers, the average labor pain. According to Rita Zahara et al, there was a significant effect on the use of the Birthing Ball on reducing the level of pain in women giving birth. Birth ball (birth ball) can be done as physical therapy that can relieve pain or aches, help the process of progress of labor and can also be used in various positions. One of the movements is by sitting on a ball and swaying so that it makes you feel more comfortable and helps the progress of labor / accelerates fetal descent due to gravity, stimulates normal somatosensory input to projector neurons which can reduce pain, and can also affect psychology. / reduce anxiety so as to reduce pain in labor, in addition to that with the elasticity and soft ball arch makes the perineum and lower back without putting a lot of pressure which can increase pain (Gau et all 2011). This is in line with a study conducted by Mirzakhani et al (2015) at the Omolbanin Hospital in Iran which showed that there was a significant difference between the two active phase labor grubs with a P value of 0.018. Then the P value (Sari, 2020).

Based on Ayu Ratiet al. it was found that there was an effect of the birthing ball on reducing pain in mothers giving birth at the Lompoe Health Center. The level of pain in the birthing mother in the treatment group showed that the level of pain before using the birthing ball, some respondents experienced pain that really interfered with their activities, as many as 7 people (35%), and after using the birthing ball, the level of pain felt changed so that the mother no longer felt pain. very disturbing, where the respondent only feels pain that bothers not pain that is very disturbing (Irawati, Susanti and Haryono, 2019). According to Rizqi Nur Alifah (18) the description of knowledge shows that pregnant women are less knowledgeable, namely as many as 46 people (55.4%). According to Purbadewi (19),

According to Yeni Aryani, birth ball therapy for reducing the intensity of labor pain during the first active phase is very good as evidenced by the pre-test and post-test therapy given (Sari and Yusniarita, 2021). According to Ika Murtiarini, the birth ball method has an effect on decreasing the intensity of labor pain in the active phase of the first stage of labor which is proven by the paired test. This journal shows that after using the birth ball the level of pain felt has changed so that the birthing mother no longer feels very disturbing pain, where the respondent only feels disturbing pain not very disturbing pain. Due to the use of birth balls, some birth ball exercises or therapy are carried out by

mothers who are in labor by sitting relaxed and swaying on the ball. hugging a ball during contractions has the benefit of helping mothers reduce pain during labor. A mother will experience less cramps during labor and delivery if she can relax on time with the uterus contracting (Murtiyarini et al., 2022).

According to Suter, after an analysis was carried out, there was an effect of using birthing balls on reducing pain in mothers during active phase at the Helna Taman Sari Clinic. In addition, the birth ball is very good at pushing the mother's energy needed during childbirth, an upright posture will support the birth process and help the fetus be in an optimal position so that it makes it easier to give birth normally (Sutriningsih, Yuhelva Destri and Andiani Shaqinatunissa, 2019).

According to Maria Ulfa, there was a difference in the knowledge of the midwives in using the ball for the 1st stage of normal delivery before and after the training based on the Wilcoxon trial. The benefits obtained by using a birth ball during labor are reducing pain and anxiety, minimizing the use of pethidine, helping the process of lowering the head reducing the duration of the first stage of labor, increasing the satisfaction and well-being of mothers (Ilyas, Sonda and Hidayati, 2020).

According to Ingrid Dirgahayu, based on a literature review of several articles, a significant relationship was obtained between a reduction in labor pain and the birth ball technique. Birth ball exercises can reduce and control labor pain, especially during the first stage. Movement with knees and chest leaning forward, such as leaning and hugging a ball, then shaking your hips in a clockwise direction (Tarigan, 2018). According to Wenny Indah Purnama Eka Sari et al, after being given socialization and assistance to midwives regarding birth ball therapy with a decrease in the intensity of labor pain the midwife's level of knowledge and enthusiasm in implementing birth ball therapy was very good (Sari and Yusniarita, 2021).

4. CONCLUSION

Based on the results of the discussion that was carried out by examining 20 articles related to the level of knowledge of midwives and ball delivery techniques on reducing pain. It can be concluded that there is a significant reduction in pain after being given and implemented birth ball therapy for mothers in labor and the midwife's knowledge level is high about the use of birth ball therapy.

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