



Analysing Literature On Birth Ball Use And Labour Advancement- A Review Article

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Abstract

One of the numerous variables that contribute to India's high rates of maternal and infant mortality is the prevalence of labours that last for an extended period of time. This is the cause of the high incidence of measles, mumps, and rubella (MMR) on a national scale. The use of birth balls is one approach that has shown potential in avoiding this from occurring. It may find it easier to maintain consciousness and active participation throughout the full labour and delivery process if you use a birth ball.. During the forthcoming early stages of labour, the purpose of this article is to provide a concise review of the impact that birth ball exercises have on the process.. A literature review was the method that was used in this investigation. The selection of articles that addressed relevant themes was accomplished via the use of a technique of purposeful selection. The study discovered that the use of birth ball exercises as a kind of treatment had an effect on the beginning of labour in pregnant women throughout the whole of their pregnancies, from the time of identification to the time of screening to the time of inclusion. The use of a birth ball during exercise may have a number of possible benefits, including the alleviation of back discomfort, the promotion of cervical dilatation, the reduction of tension in the pelvic ligaments, and the facilitation of the descent of the baby's head into the pelvic floor.

INDEX TERMS: *Birthing balls, First stage of Labor and Labor Advancement*

Introduction

According to the statistics provided by the World Health Organisation, the majority of maternal mortality is caused by complications that arise during and after being pregnant. Complications include haemorrhage, infections, hypertension, labour pains, or failed abortions are responsible for over 75% of maternal fatalities. The danger of maternal death rises when the delivery process takes longer than expected. Based on the 2022 ASEAN SDG Snapshot Report, East Asia and the Pacific had the highest number of maternal deaths in ASEAN, at 218. Power changes work. Work will still be done even if the power goes out. India has many problems, one of which is prolonged labour, which makes it more likely for mothers and babies to die.

For a woman, the years leading up to and including her birth are among the most formative. In preparation for carrying and giving birth, a pregnant woman's body undergoes a number of physiological changes. Labour pain is a normal part of giving birth, yet it may still be a real challenge for some women. During

labour, every woman deserves respectful, empathetic care that addresses pain management and empowers her to create an unforgettable birth experience.

Labour as a whole consists of four distinct phases. The cervical stage of labour, which begins when actual labour pains begin, is the first stage of the labour process. This stage of labour may last up to twelve hours in first-time mothers. The frequency and severity of contractions grow during labour, and for some women, the agony is intolerable.¹

Giving birth while using a birthing ball is a crucial technique for reducing labour pains. A birthing ball, which is an elastic ball filled with air, allows the woman to sit upright and has a wide base to support her.²

When it comes to helping labouring women feel less pain, there is a focus on non-pharmacological components. A birthing ball is an effective non-pharmacological pain reliever that may also help with labour progress and results, making for a more pleasant delivery experience overall. In addition to increasing cervical dilatation and widening the pelvic exit, the birthing ball provides counterforce on the perineum.³

During the early stage of labour, many women find relaxation with mild massage and counter pressure.⁴ The foetal longitudinal axis becomes aligned with the birth axis during birthing ball exercises, which in turn reduces the time it takes for the first stage of labour to end and increases the likelihood of a vaginal delivery.⁵

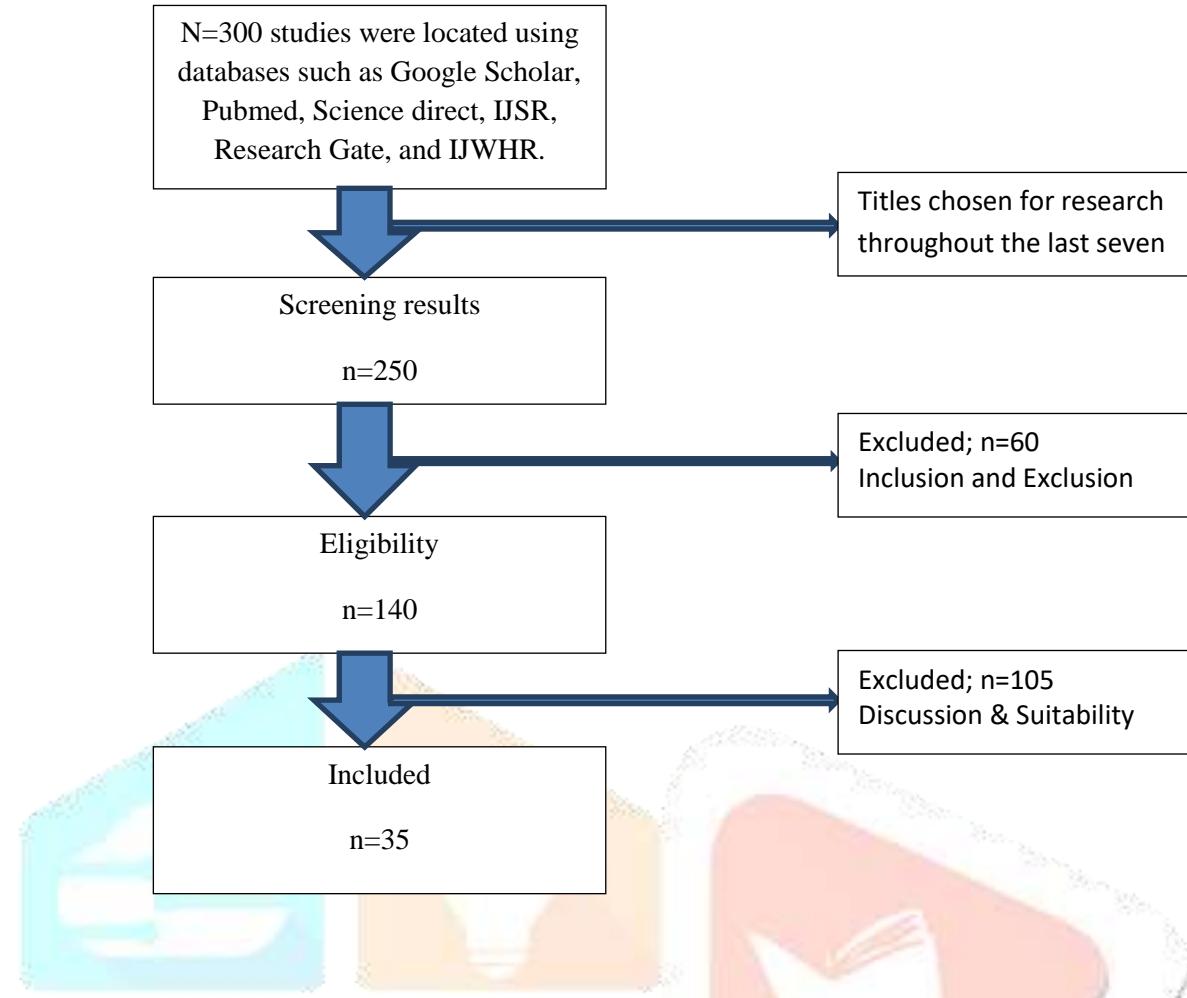
The birthing ball helps the mother to remain upright as she gives birth, which increases her pelvic dimensions and encourages the foetus to descend with the help of gravity⁶. The physiological benefit of birthing ball exercises is a lessened severity of labour pains; the psychological benefit is an increased sense of agency and control over one's own healthcare⁷. Consequently, the purpose of this research is to determine whether birthing ball exercises may reduce labour pain and improve delivery outcomes for first-time moms.

Prolonged labour and delivery times are associated with an increased risk of maternal death. But compared to haemorrhage and high blood pressure, the figure is substantially lower. Problems and emergencies will arise for the mother and the baby if nothing is done soon or prevented.. The mother may have haemorrhage, shock, or even death during a long parturitions, while the foetus may experience discomfort, hypoxia, or caput⁸. When the COVID-19 epidemic was in full swing, the Puncu Regency Community Health Centre in Kediri made an observation on how the dissemination of health information via social media influenced the understanding of postpartum moms about nursing strategies. Numerous variables, including as maternal features, body mass index (BMI), age, parity, oxytocin dosage, epidural analgesia, and others, have the potential to influence the duration of labour.⁹

The condition of the pelvis is another element that impacts the duration of labour. The process of giving birth might be impeded by pelvic abnormalities. An essential aspect of giving birth is determining the exact placement and presentation of the foetus among the many postures that the Birth Ball, a physical therapy ball, may be used in to ease and hasten the labour process, one of which is sitting on the ball while wriggling the pelvis¹⁰. When it comes to strengthening their core muscles and postural reflexes, pregnant women who wish to enhance their core strength could try out the Birth Ball exercise. Pelvic rocking may also be accomplished by shifting the pelvis laterally, which is an alternate way. If the woman does pelvic rocking exercises, which strengthen the sacroiliac and abdominal muscles, the head of the baby may be able to enter the delivery canal with more ease.

Methods

This review aims to go more into the topic of birth balls and their impact on labouring pregnant women. This study was conducted with the intention of filling a knowledge gap about the impact that birth balls have on pregnant women when they are in the process of giving birth. Electronic databases such as Google Scholar, Pubmed, Sciedirect, IJSR, Research Gate, and IJWHR were used extensively during the course of this literature evaluation. Some of the things that were looked for were things like labour, birth balls, and pregnancy. Between the years 2017 and 2023, journal papers were used as sources. Every item of research was subjected to the inclusion and exclusion criteria that were established.



Result and Discussion

After complete the stage of literature review, the researcher discovered 35 articles that explored the effects of birth ball exercises therapy on the duration of labour in Stage I mothers. These publications were located in the literature. They conducted an in-depth analysis over these articles. The first stage of labour is defined by the discharge of mucus mixed with blood, which is referred to as bloody show. This occurs when the cervix starts to dilate and efface, which is the first stage of labour. The active phase and the dormant period are two different segments that make up the initial phase of the process. Those cervical apertures that are latent have a diameter that ranges from one to three cm. The active phase is distinguished by the foetus continuing to descend towards the pelvis and the cervical dilatation reaching its maximum extent. Primiparous women are expected to dilate at a pace of 1 cm per hour, whereas multiparous mothers are expected to dilate at a rate of 1.5 cm per hour.

Using a gym ball during the initial stage of labour may extend the labour process and decrease pain levels by 1.46 and 1.95 points on the Visual Analogic Scale, respectively, according to a research. There was an increase in both self-efficacy and discomfort in the intervention group. Birth balls enhance the entire experience of giving birth and the mother's feeling of self-efficacy, according to the study's results, making them a better way for controlling labour pain.

The study explores the pelvic rocking technique, which accelerates labour by rotating the pelvis during contractions. The approach, which involves swaying and jiggling the pelvis, reduces the amount of anxiety that the woman has and makes it simpler to get access to the delivery canal. A difference of 2.9 hours was found between the treatment group and the control group, with the treatment group requiring 7.25 hours more time than the control group.

The study also highlighted the differences in labour length and age among mothers. Most respondents were 20-35 years old, but the treatment group had a longer first stage labour. The study also highlighted the importance of passage and position in labour. By assisting the mother in tensing her abdominal and waist muscles, relieving tension on her bladder and abdomen, and promoting relaxation, a birthing ball may do all of these things, which can result in a reduction in the severity of labour pains. The foetus obtains ideal oxygen flow and blood circulation as a result of the mother's erect sitting position. Pelvic rocking is a physical action that accelerates pelvic departure by 30% and allows for perineal extension with little pressure.

Summary

A literature review of 35 articles found that birth ball exercises can improve labour duration in Stage I mothers. The first stage of labor involves the discharge of mucus mixed with blood, which occurs when the cervix starts to dilate and efface. A gym ball may help in the first stage of labour by extending it and reducing discomfort by 1.46 and 1.95 points on the Visual Analogic Scale, respectively, according to a research. Labour pain relief and self-confidence are two additional benefits of using a birth ball. As contractions progress, the pelvic rocking method rotates the pelvis, which speeds up labour, eases pain, and facilitates access to the birth canal. The study also highlighted differences in labor length and age among mothers. The study also highlighted the importance of passage and position in labor, promoting relaxation and reducing labor pain

Conclusion

Researchers discovered those moms who utilised birth ball movements as a kind of treatment in the early stages of the process reported greater levels of empowerment, shorter labours, and less pain than those who did not use the motions. The use of a gym ball during labour and delivery has been shown to improve self-efficacy and help with the management of pain, according to study. In addition, studies have shown that the pelvic rocking method might decrease the amount of pain experienced during labour and delivery, hence facilitating the opening of the birth canal. When it comes to labour management, the study also brought to light the significance of maternal age, the duration of labour, and posture. When used in conjunction with one another, birth balls and pelvic rocking methods have the ability to ease some of the pain and discomfort that women experience during labour, so making the process more tolerable.

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