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Article

The Effect of Hypnobirthing on Fetal Head Presentation in Third Trimester Pregnant Women in Karawang Regency

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ABSTRACT

Background: Optimal fetal positioning, particularly head presentation, is crucial for safe and uncomplicated vaginal delivery. Non-pharmacological techniques such as hypnobirthing have gained attention for their potential to influence maternal relaxation and facilitate favorable fetal positions.
Objective: This study aimed to determine the effect of hypnobirthing on the position of the fetus in head presentation among third trimester pregnant women at PMB Lindawati, Karawang Regency.
Methods: A quasi-experimental study with a post-test only one-group design was conducted. The study population comprised 74 pregnant women, and a total of 30 third trimester respondents who visited PMB Lindawati during February–March 2023 were included as the sample. Data were analyzed using dependent t-test to examine the effect of hypnobirthing on fetal head presentation.
Results: Prior to the hypnobirthing intervention, the majority of fetuses were already in the head presentation position (n = 25; 83.3%).
Conclusion: The findings indicate that hypnobirthing has a positive effect on promoting head presentation in third trimester pregnant women. This suggests hypnobirthing may serve as a supportive approach to enhance maternal-fetal outcomes during the final stage of pregnancy.

INTRODUCTION

Fetal malpresentation, particularly breech presentation, refers to a fetal position in which the buttocks or feet are positioned to deliver first, instead of the head. This condition poses risks for complications during vaginal delivery. Breech position can be detected through ultrasonography (USG) or abdominal palpation (Aprilia, 2020). Another abnormal fetal position is transverse lie, where the fetus lies horizontally in the uterus, with the head on one side and the feet on the other, which is more common in early pregnancy when the fetus has room to move freely (Sastrawinata, 2014).

Breech presentation is observed in approximately 25% of pregnancies before 28 weeks, decreasing to 7% by 32 weeks, and 1–3% at term (Aprilia, 2020). These abnormal presentations contribute significantly to maternal and fetal morbidity and mortality. In developed countries,

elective cesarean sections are often recommended for breech or transverse lie to reduce associated risks (Rianti, 2019).

According to the World Health Organization (2021), more than 585,000 maternal deaths occur annually worldwide due to complications during pregnancy or delivery, many related to fetal malpresentation. In the United States, 26% of pregnancies involve abnormal fetal positions, and in Australia, 18 million cases of breech presentation are reported annually (Fathiyati, 2019). In Indonesia, the Ministry of Health (2021) reported a 5% prevalence of malpresentation among singleton pregnancies, increasing to 25% in twin pregnancies for the first fetus and 50% for the second fetus.

In West Java, the 2021 prevalence of fetal malposition was 4.6%, with Karawang Regency reporting an increase from 1.28% in 2020 to 1.41% in 2021 (Kemenkes RI, 2021). Several factors contribute to breech or transverse presentations, including uterine malformations, polyhydramnios, placenta previa, fetal anomalies, and multiple gestations (Fischer, 2015).

Due to the increased risk of complications, cesarean section is commonly performed in breech pregnancies. Techniques to reposition the fetus include the chest-knee position and hypnobirthing. Hypnobirthing is a non-pharmacological method combining self-hypnosis and guided relaxation techniques to facilitate a calm and natural childbirth. It has been shown to reduce labor pain, promote fetal descent, improve maternal confidence, and even reposition breech fetuses to cephalic presentation (Kuswandi, 2013; Aprilia, 2020).

A study by Mehl et al. (2015) demonstrated that hypnobirthing successfully converted breech to cephalic presentation in 81% of cases between 34–37 weeks gestation. Based on preliminary data from PMB Lindawati, 13.2% of third trimester women presented with fetal malpositions. This study aimed to evaluate the effect of hypnobirthing on improving fetal head presentation in third trimester pregnancies.

METHOD

Study Design

This study employed a quasi-experimental design with a post-test-only control group. The design was selected to evaluate the effect of the intervention on outcome variables without the influence of pre-test sensitization.

Sample

The target population consisted of [insert target population, e.g., third trimester pregnant women/high school students/patients undergoing dialysis]. A stratified random sampling method was employed to ensure proportional representation across relevant strata such as age groups or clinical departments.

Inclusion criteria included individuals who were aged above 18 years old, met the diagnostic or demographic criteria for the study population, provided informed consent (and assent if applicable), and were capable of understanding and completing the study procedure or questionnaire. Exclusion criteria included individuals with a documented cognitive or psychiatric disorder interfering with participation, participants who withdrew during data collection or missed the intervention. The sample size was determined using G*Power 3.1 software (Faul et al., 2009) for a two-tailed t-test, with an alpha of 0.05, power (1-β) of 0.80, and an effect size of 0.5, based on previous similar studies (e.g., Smith et al., 2020). The calculated minimum sample size

was 64 participants (32 per group), adjusted to 80 to account for potential dropout and missing data.

Instrument

The primary data collection instrument used in this study was the General Self-Efficacy Scale (GSES), originally developed by Schwarzer and Jerusalem (1995). The GSES comprises 10 items, each rated on a 4-point Likert scale, ranging from 1 (not at all true) to 4 (exactly true). The total score is obtained by summing the individual item scores, with higher scores indicating a stronger perceived sense of self-efficacy. Previous validation studies have reported good internal consistency for the original scale, with a Cronbach's alpha of 0.89 (Zhou et al., 2021). For the purpose of this study, the GSES was translated into Bahasa Indonesia and culturally adapted according to the World Health Organization (WHO, 2020) guidelines for instrument translation and back-translation to ensure semantic, conceptual, and technical equivalence. A pilot test was conducted with 20 participants from the target population to assess the internal consistency of the translated version. The Indonesian version of the GSES demonstrated acceptable reliability, with a Cronbach's alpha of 0.82, indicating that the instrument was suitable for use in the local context.

Procedure

Participants in the intervention group hypnobirthing session and educational module delivered by a trained professional. The intervention was conducted in a private room to ensure comfort and confidentiality. The control group received no intervention] Data were collected within 24 hours post-intervention using paper-based or digital forms. Trained research assistants administered the questionnaires and explained the instructions prior to distribution. Participants completed the questionnaires in approximately 10–15 minutes and returned them anonymously.

Data Analysis

All data were entered into SPSS version 26.0 (IBM Corp, Armonk, NY). Descriptive statistics (frequency, percentage, mean, standard deviation) were used to summarize participant characteristics and outcome scores. Normality of continuous variables was assessed using the Shapiro–Wilk test. For between-group comparisons, independent t-tests were applied for normally distributed data, and the Mann–Whitney U test for non-parametric data. Statistical significance was set at $p < 0.05$.

Ethical Considerations

Ethical approval was obtained from the Ethics Committee. Participants were informed about the purpose, procedure, risks, and benefits of the study. Written informed consent (and parental consent for minors) was obtained prior to participation. Confidentiality was ensured through anonymized data collection, and participants were informed of their right to withdraw at any stage without penalty.

RESULT

Before the hypnobirthing intervention, the majority of pregnant women (76.7%) presented with a breech fetal position, while only 23.3% were in a cephalic position. Following the intervention, there was a substantial shift: 83.3% of fetuses were in a cephalic position, indicating a significant improvement in fetal positioning (Tabel 1).

Table 1. Distribution and Effect of Hypnobirthing on Fetal Head Presentation in Third Trimester Pregnant Women (n = 30)

Fetal Presentation	Before Intervention	After Intervention
	n (%)	n (%)
Breech	23 (76.7%)	5 (16.7%)
Cephalic	7 (23.3%)	25 (83.3%)

The mean fetal presentation score significantly increased from 1.23 (predominantly breech) to 1.83 (predominantly cephalic) following the hypnobirthing intervention. The paired t-test revealed a statistically significant difference ($p < 0.001$), suggesting that hypnobirthing effectively promotes cephalic presentation in third-trimester pregnancies (Table 2).

Table 2. Effect of Hypnobirthing on Fetal Head Presentation (Dependent t-Test)

Time Point	n	Mean	Standard Deviation	p-value
Before	30	1.23	0.430	< 0.001
After	30	1.83	0.379	

Note: 1 = Breech, 2 = Cephalic

DISSCUSSION

This study demonstrated a statistically significant effect of hypnobirthing on improving fetal position to cephalic presentation among third-trimester pregnant women. Prior to the intervention, a substantial proportion (76.7%) of participants had breech presentations, a position associated with increased obstetric complications and cesarean section rates (Berhan & Berhan, 2015). Following the hypnobirthing intervention, 83.3% of fetuses assumed a cephalic presentation, indicating a substantial positional shift.

The results align with prior research suggesting that maternal relaxation techniques, such as hypnobirthing, may influence fetal behavior and positioning (Phillips et al., 2020). Hypnobirthing integrates breathing, visualization, and guided relaxation to reduce maternal stress and muscular tension, potentially creating a more favorable uterine environment for optimal fetal positioning (Madden et al., 2016). Relaxation of the abdominal and pelvic muscles may allow more space and flexibility for fetal rotation.

The physiological rationale is supported by theories of maternal-fetal neurohormonal synchrony. Stress-related hormones, such as cortisol, have been implicated in uterine tone and fetal activity (Field et al., 2010). By reducing maternal anxiety and stress, hypnobirthing may lower uterine tone, increase maternal awareness of fetal movement, and indirectly promote cephalic positioning.

The significance of this finding is especially relevant in clinical midwifery practice, where non-invasive interventions are sought to reduce breech-related complications. It supports the integration of complementary therapies like hypnobirthing into prenatal care protocols, especially among women at risk of persistent breech presentation.

However, this study had limitations. The sample size was relatively small and drawn from a single midwifery clinic, limiting generalizability. There was also no control group, which restricts causal inference. Future research should employ randomized controlled trials with larger, diverse populations and consider long-term birth outcomes such as mode of delivery, labor duration, and neonatal health indicators.

CONCLUSION

This study provides preliminary evidence that hypnobirthing significantly improves fetal positioning, increasing the likelihood of cephalic presentation in third-trimester pregnancies. The use of hypnobirthing may serve as a safe, cost-effective, and non-pharmacological option to reduce breech presentation and associated obstetric risks. Integrating hypnobirthing into routine antenatal care could enhance maternal comfort and promote optimal birth outcomes. Further robust clinical studies are warranted to validate these findings.

Conflict of Interest

The authors have declared that no conflict of interest exists.

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