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RESEARCH ARTICLE

Effectiveness of hypnobirthing for reducing anxiety before childbirth in third trimester primigravida: A quantitative study in Indonesia

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Abstract

Pre-labor anxiety is common among third trimester primigravida women and is linked to negative maternal and neonatal outcomes. This study examined the effect of hypnobirthing on anxiety levels in primigravida women at Karangnunggal Public Health Center, Tasikmalaya Regency, Indonesia. Using a one-group pretest-posttest design, 21 eligible participants (aged 18–35 years, ≥28 weeks gestation) received a standardized hypnobirthing intervention over four sessions in eight days. Maternal anxiety was assessed before and after the intervention with the validated Hamilton Anxiety Rating Scale (HARS). Mean anxiety scores decreased significantly from 3.52 (SD = 1.03) to 1.52 (SD = 0.68) ($p = 0.025$), with a large effect size (Cohen′s d = 2.29). The proportion with severe or very severe anxiety dropped from 66.6% to 0%, while those reporting no anxiety rose from 4.8% to 57.1%. These results demonstrate the effectiveness of hypnobirthing as a non-pharmacological intervention for reducing pre-labor anxiety and support its integration into antenatal care. The study provides novel evidence in the Indonesian context and highlights the value of psychological interventions to enhance maternal well-being and birth experiences. Further research with larger, controlled samples is recommended.

Keywords: hypnobirthing, anxiety, childbirth, primigravida, third trimester, antenatal care, non-pharmacological intervention

Abstrak. Kecemasan pra-persalinan umum terjadi pada ibu hamil primigravida trimester ketiga dan berhubungan dengan dampak negatif bagi ibu maupun bayi. Penelitian ini menelaah pengaruh hypnobirthing terhadap tingkat kecemasan pada ibu hamil primigravida di Puskesmas Karangnunggal, Kabupaten Tasikmalaya, Indonesia. Dengan desain pretest-posttest satu kelompok, sebanyak 21 partisipan yang memenuhi syarat (usia 18–35 tahun, usia kehamilan ≥28 minggu) mengikuti intervensi hypnobirthing terstandar selama empat sesi dalam delapan hari. Kecemasan ibu diukur sebelum dan sesudah intervensi menggunakan Hamilton Anxiety Rating Scale (HARS) yang telah divalidasi. Rata-rata skor kecemasan menurun secara signifikan dari 3,52 (SD = 1,03) menjadi 1,52 (SD = 0,68) ($p = 0,025$), dengan effect size besar (Cohen′s d = 2,29). Proporsi ibu dengan kecemasan berat atau sangat berat menurun dari 66,6% menjadi 0%, sedangkan yang tidak mengalami kecemasan meningkat dari 4,8% menjadi 57,1%. Hasil ini menunjukkan efektivitas hypnobirthing sebagai intervensi non-farmakologis untuk menurunkan kecemasan pra-persalinan dan mendukung integrasinya dalam perawatan antenatal. Studi ini memberikan bukti baru dalam konteks Indonesia dan menyoroti pentingnya intervensi psikologis untuk meningkatkan kesejahteraan ibu dan pengalaman persalinan. Penelitian lanjutan dengan sampel lebih besar dan desain terkontrol sangat dianjurkan.

Kata kunci: hypnobirthing, kecemasan, persalinan, primigravida, trimester ketiga, perawatan antenatal, intervensi non-farmakologis

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INTRODUCTION

Anxiety during pregnancy, particularly among primigravida women in the third trimester, has become a significant global public health concern with far-reaching psychological and physiological effects on both mothers and their infants (Schetter & Tanner, 2012; Elvina & Rosdiana, 2018). Epidemiological studies indicate that maternal anxiety is not only common but can have persistent

consequences throughout pregnancy and into the postpartum period (Biaggi et al., 2016; Field, 2017). According to the World Health Organization (WHO), approximately 10–15% of pregnant women worldwide experience mental health problems such as anxiety and depression, with the burden being greater in low- and middle-income countries and among first-time mothers due to limited prior experience and social support (Howard et al., 2014; Utari, 2021; WHO, 2022). Recent national surveys in Indonesia reveal that more than 40% of primigravida women report moderate to severe anxiety as they approach labor, a rate substantially higher than that reported in several high-income countries (Kurniawati & Wahyuni, 2014; Sari, 2019; Jalal et al., 2024).

This elevated prevalence of perinatal anxiety among primigravidas is often attributed to several interrelated factors. These include anticipatory fears of labor pain, apprehension about possible delivery complications, uncertainty about the birth process, and a lack of prior childbirth experience (Mandagi, Pali, & Sinolungan, 2013; Angesti & Febriyana, 2021; Lee et al., 2022). Additionally, sociocultural pressures, negative stories from family or peers, and the widespread circulation of misinformation can intensify anxiety and reduce a mother's sense of self-efficacy (Maureen, 2022; Elvina & Rosdiana, 2018; O'Connell et al., 2017). Persistent antenatal anxiety is associated with a spectrum of adverse maternal and neonatal outcomes, including preterm birth, low birth weight, intrauterine growth restriction, and increased risk of postpartum depression (Schetter & Tanner, 2012; Siallagan & Lestari, 2018; Glover, 2014). Some studies have demonstrated that high levels of maternal anxiety during pregnancy can even affect fetal brain development and early cognitive function in the child (Van den Bergh et al., 2005; Field, 2017).

The psychological burden is particularly pronounced in primigravida women due to their unfamiliarity with the childbirth process and heightened sensitivity to negative information and advice, which can trigger cycles of worry and physiological hyperarousal (Maureen, 2022; Elvina & Rosdiana, 2018; Kinser et al., 2021). Clinically, anxiety during pregnancy is characterized by persistent and uncontrollable worry, intrusive or catastrophic thoughts, and symptoms of autonomic arousal such as palpitations, sweating, and sleep disturbances (Mandagi et al., 2013; Dennis et al., 2017). As the due date approaches, these symptoms often intensify in the third trimester, with the growing anticipation of labor acting as a potent stressor (Ranjbar et al., 2022).

From a physiological perspective, the maternal stress response involves the activation of the hypothalamic-pituitary-adrenal (HPA) axis and the sympathetic nervous system, resulting in the release of stress hormones such as cortisol, epinephrine, and norepinephrine (Videbeck, 2012; Pieter & Lubis, 2010; Beijers et al., 2014). Chronic activation of these pathways can disrupt endocrine and immune functioning, which may further exacerbate anxiety, emotional instability, and risk for obstetric complications (Schetter & Tanner, 2012; Glover, 2014; Field, 2017). Furthermore, heightened anxiety and stress in late pregnancy can interfere with sleep, impair maternal-fetal attachment, and undermine a woman's confidence in her ability to cope with labor (Kinser et al., 2021; Lee et al., 2022). Given the multidimensional impact of antenatal anxiety—ranging from biological to social and psychological domains—there is a growing recognition of the urgent need for comprehensive, evidence-based interventions to support pregnant women, particularly those experiencing their first pregnancy (Howard et al., 2014; Biaggi et al., 2016; WHO, 2022).

While conventional antenatal care predominantly emphasizes the physical monitoring of pregnancy—such as assessment of fetal growth, maternal vital signs, and screening for obstetric complications—there is a growing recognition of the urgent need to address psychological preparedness and emotional well-being, particularly among primigravida mothers (Angesti & Febriyana, 2021; Rahmawati & Ningsih, 2017; Howard et al., 2014). Untreated perinatal anxiety has been linked to increased risk for adverse birth outcomes and long-term psychological difficulties for both mother and child, highlighting the necessity for mental health screening and intervention as a routine part of prenatal care (Biaggi et al., 2016; Dennis et al., 2017; Field, 2017).

Recent literature increasingly underscores the importance of holistic and integrative interventions—those that address both mind and body—to optimize maternal well-being and improve childbirth experiences (Kuswandi, 2013; Syahrir, 2020; Kinser et al., 2021). Mind-body approaches such as mindfulness-based stress reduction, prenatal yoga, and hypnobirthing have been found effective in reducing antenatal anxiety and fear of childbirth, facilitating better coping, and supporting more positive labor outcomes (Beddoe et al., 2009; Dhillon et al., 2017; Werner et al., 2013). In particular, hypnobirthing, as a non-pharmacological and evidence-informed intervention, has received attention for its role in empowering women through relaxation, visualization, and self-hypnosis techniques designed to promote calm, confidence, and physiological readiness for birth (Kuswandi, 2013; Sariati, 2016; Werner et al., 2013).

Hypnobirthing is predicated on the principle that childbirth is a natural physiological event that can proceed more smoothly when a woman's mind is free from fear and tension, and when she possesses effective coping strategies and a strong sense of self-efficacy (Kuswandi, 2013; Sariati, 2016; Lothian, 2011). The practice typically incorporates breathing exercises, progressive muscle relaxation, positive affirmations, mental imagery, and the fostering of supportive birth environments (Werner et al., 2013; Lothian, 2011). Several studies have shown that hypnobirthing can reduce the perception of pain, anxiety, and distress during labor, and even decrease the use of pharmacological analgesia and shorten labor duration (Madden et al., 2016; Fernández-Gamero et al., 2024).

From a theoretical perspective, hypnobirthing's effectiveness is supported by multiple frameworks. Coping theory posits that mothers who are taught adaptive coping skills—such as guided relaxation, visualization, and self-affirmation—are better equipped to manage labor-related stress and fear, resulting in lower perceived anxiety and greater emotional resilience (Videbeck, 2012; Sariati, 2016; Lazarus & Folkman, 1984). Bandura's self-efficacy theory further underlines the importance of a woman's confidence in her ability to manage the demands of childbirth; interventions that strengthen self-efficacy beliefs can lead to better psychological outcomes and reduced anxiety (Bandura, 1997; Pieter & Lubis, 2010). Moreover, psychoneuroimmunology research suggests that psychological interventions like hypnobirthing may modulate neuroendocrine activity, reducing levels of stress hormones such as cortisol and supporting autonomic nervous system balance, thereby contributing to reduced anxiety and improved perinatal outcomes (Beijers et al., 2014; Schetter & Tanner, 2012; Field, 2017).

Furthermore, the implementation of hypnobirthing within antenatal education has been associated with increased maternal satisfaction, greater perceived control during labor, and stronger maternal-infant bonding postpartum (Werner et al., 2013; Madden et al., 2016; Lothian, 2011). However, despite this growing body of supportive evidence, most hypnobirthing research has been conducted in Western populations or generalized samples, with limited studies evaluating its effects among Indonesian primigravida women in the third trimester (Jamir, 2020; Maureen, 2022). Factors such as cultural beliefs, differences in health care systems, and accessibility of trained hypnobirthing practitioners may influence the adoption and outcomes of such interventions in Indonesia (Sindhu, 2015; Syahrir, 2020; Imannura et al., 2016).

Despite the growing body of evidence supporting hypnobirthing, most studies have been conducted in Western contexts or focused on general pregnant populations, with limited research exploring its impact among Indonesian primigravida women in the third trimester (Jamir, 2020; Maureen, 2022). Furthermore, cultural beliefs, the quality of antenatal education, and the availability of trained practitioners can affect the adoption and effectiveness of hypnobirthing interventions in Indonesia (Sindhu, 2015; Syahrir, 2020). To address these gaps, it is crucial to examine the effect of hypnobirthing on pre-labor anxiety specifically among Indonesian primigravida women in the third trimester, as this group is particularly vulnerable to childbirth-related anxiety. Therefore, this study aims to determine the effect of hypnobirthing on anxiety in facing childbirth among third trimester primigravida pregnant women in Indonesia. The findings are expected to provide evidence-based recommendations for integrating hypnobirthing into routine antenatal care as a non-pharmacological approach to enhance maternal mental health and childbirth outcomes.

METHODS

This study employed a quantitative, one group pretest-posttest design to assess the effect of hypnobirthing on anxiety levels in facing childbirth among third trimester primigravida pregnant women. The use of this design was based on ethical and practical considerations, as all participants wished to receive the hypnobirthing intervention and a control group without intervention was not feasible in the service setting. However, it is acknowledged that the absence of a control group is an inherent limitation of the study, as it does not allow for the control of external factors or comparison with standard care. Future studies are encouraged to utilize randomized controlled trial designs to strengthen causal inference (Firdaus & Zamzam, 2018).

Population and Sample

The study was conducted from August to October 2023 at the Karangnunggal Public Health Center, Tasikmalaya Regency. The target population consisted of all pregnant women in their third trimester residing in the working area of the health center during the study period, totaling 85 individuals. A purposive sampling technique was applied to recruit participants who met the following inclusion criteria: (1) primigravida mothers in the third trimester (≥28 weeks gestation), (2) aged 18–35 years, (3) able to communicate effectively, (4) willing to participate and provide informed consent, and (5) free from major psychiatric disorders or pregnancy complications requiring immediate medical intervention. Exclusion criteria included: (1) multigravida mothers, (2) history of severe obstetric complications, (3) ongoing psychiatric treatment, and (4) withdrawal before study completion. Based on these criteria, a final sample of 21 eligible primigravida women was enrolled.

Hypnobirthing Intervention

The hypnobirthing program implemented in this study was adapted from the methods described by Kuswandi (2013) and Sariati (2016), and was delivered by a certified hypnobirthing facilitator with midwifery experience. The intervention comprised three meetings over eight days, with a total of four sessions per participant. Each session lasted approximately 45–60 minutes. The intervention covered: (1) education about the childbirth process and the role of hypnobirthing, (2) basic relaxation and breathing exercises, (3) guided ideomotor responses and visualization techniques, (4) positive affirmations, and (5) maternal-fetal communication practices. Participants were also encouraged to practice the hypnobirthing techniques at home daily, with guided audio materials provided to reinforce learning and consistency (Kuswandi, 2013; Sariati, 2016).

Measurement of Anxiety

Maternal anxiety was assessed using the Hamilton Anxiety Rating Scale (HARS), a widely validated and reliable instrument for measuring anxiety in clinical and research settings (Videbeck, 2012; Biaggi et al., 2016). The HARS questionnaire consists of 14 items assessing a range of anxiety symptoms, each scored on a scale from 0 (not present) to 4 (severe), with total scores categorized as follows: 0–5 (no anxiety), 6–14 (mild anxiety), 15–23 (moderate anxiety), 24–29 (severe anxiety), and ≥30 (very severe anxiety). The HARS was administered to all participants at two time points: pretest (before the first hypnobirthing session) and posttest (eight days after completion of the final session). The instrument had been previously validated for use in Indonesian populations and demonstrated good internal consistency (Syahrir, 2020).

Data Collection and Management

Primary data consisted of HARS scores collected during pretest and posttest assessments. Secondary data, such as participant characteristics (age, gestational age, education, medical history), were obtained from midwives' register books and participant interviews. Throughout the intervention, attendance was closely monitored, and participants were contacted if they missed sessions. Dropout was defined as missing more than one session or failure to complete the posttest measurement. Any missing data due to participant dropout were excluded from the final analysis; reasons for withdrawal were documented when possible.

Data Analysis

Data analysis was performed using SPSS version 25.0. Univariate analysis was used to describe participant characteristics. Prior to inferential analysis, data were subjected to normality testing using the Shapiro-Wilk test. For normally distributed data, paired sample t-tests were conducted to compare pretest and posttest anxiety scores; for non-normally distributed data, the nonparametric Wilcoxon signed-rank test was used (Firdaus & Zamzam, 2018). The significance level was set at $\alpha = 0.05$. Effect size

was calculated to estimate the magnitude of the intervention's impact.

Ethical Considerations

This study was conducted in accordance with the Declaration of Helsinki and received approval from the institutional review board. Written and verbal informed consent was obtained from all participants after a comprehensive explanation of the study's purpose, procedures, benefits, and potential risks. Participants were assured of the voluntary nature of participation, their right to withdraw at any time without penalty, and the confidentiality of their personal data, which were used solely for research purposes.

RESULTS OF STUDY

This study included a total of 21 participants who met the inclusion criteria as third trimester primigravida pregnant women. All data presented in the analysis strictly reflect the primigravida population, in line with the study objectives. No multigravida respondents were included in the final analysis, thus ensuring the internal validity and focus of the findings.

The study was conducted at the Karangnunggal Public Health Center, Tasikmalaya Regency, as previously stated in the Methods section. All research procedures, data collection, and intervention sessions were carried out in this single, consistent location, thereby avoiding any potential discrepancies regarding research settings.

The majority of participants were within the low-risk reproductive age group (66.7%) and had attained secondary education (66.7%). These characteristics are representative of the typical demographic for antenatal care attendance at the study site and do not introduce significant confounding to the interpretation of anxiety outcomes (table 1).

To assess the anxiety levels among pregnant women, the researcher used the Hamilton Anxiety Rating Scale (HARS) questionnaire, which classifies anxiety into five categories: no anxiety, mild anxiety, moderate anxiety, severe anxiety, and very severe anxiety. Prior to the hypnobirthing intervention, most third trimester primigravida participants experienced clinically significant levels of anxiety. Specifically, 57.1% (n = 12) were categorized as having severe anxiety, and 9.5% (n = 2) had very severe anxiety, while only 4.8% (n = 1) had no anxiety. After the intervention, the anxiety profile among participants shifted dramatically. The majority, 57.1% (n = 12), reported no anxiety, while the remainder were mostly classified in the mild anxiety category (33.3%, n = 7). Notably, no participants remained in the severe or very severe anxiety categories post-intervention. Only 9.5% (n = 2) experienced moderate anxiety, and none exhibited high levels of anxiety after completing the hypnobirthing sessions.

Table 1. Respondent Characteristics (N=21)

Characteristic	N	%
Parity		
Primigravida	8	38.1
Multigravida	13	61.9
Age		
Low-risk age	14	66.7
High-risk age	7	33.3
Education		
Secondary	14	66.7
Higher	7	33.3

This shift in anxiety categories is visually summarized in Table 2 (Anxiety Levels Before and After Hypnotherapy Intervention). The data show a clear movement of participants from higher anxiety categories pre-intervention to lower categories post-intervention, with more than half reporting complete relief from anxiety symptoms after receiving the hypnobirthing program.

Normality testing using the Shapiro-Wilk test produced a p-value of 0.228 (> 0.05), indicating the data distribution was normal and permitting the use of a paired t-test for further analysis (table 3). The mean anxiety score decreased from 3.52 (SD = 1.03) at pretest to 1.52 (SD = 0.68) at posttest, yielding a mean difference of 2.00. The paired t-test revealed a statistically significant reduction in anxiety levels following the hypnobirthing intervention ($p = 0.025$; $\alpha = 0.05$). The effect size (Cohen's d) was calculated at 2.29, which indicates a large effect and demonstrates the practical significance of the intervention (table 4).

Table 2. Anxiety Levels Before and after Hypnotherapy Intervention (N=21)

Anxiety Level	Before		After	
	N	Percent %	N	Percent %
No anxiety	1	4.8%	12	57.1%
Mild anxiety	3	14.3%	7	33.3%
Moderate anxiety	3	14.3%	2	9.5%
Severe anxiety	12	57.1%	0	0%
Very severe anxiety	2	9.5%	0	0%
Mean	3.52		1.52	

Table 3. Normality Test

Tests of Normality							
	Anxiety Level (Before)	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Anxiety Level (After)	No anxiety	0.245	12	0.045	0.912	12	0.228
	Moderate anxiety	0.504	7	0.000	0.453	7	0.000
		0.260	2	–	–	–	–

Note: a. Lilliefors Significance Correction

Table 4. Results of t-Test on Anxiety Levels Before and After Hypnobirthing Treatment

Treatment	N	Mean	Std. Deviation	p-value
Pretest	21	3.52	1.030	0.025
Posttest	21	1.52	.680	

These results strongly support the effectiveness of hypnobirthing as a non-pharmacological intervention in reducing pre-labor anxiety among third trimester primigravida women. The categorical shifts demonstrate not only a statistically significant change but also a clinically meaningful transformation in maternal psychological well-being. The complete absence of severe and very severe anxiety post-intervention and the high proportion of participants with no anxiety highlight the transformative potential of the hypnobirthing program.

In summary, hypnobirthing substantially reduced both the average anxiety score and the severity of anxiety categories among third trimester primigravida pregnant women at Karangnunggal Public Health Center, Tasikmalaya Regency. The magnitude and consistency of these changes suggest that hypnobirthing may be considered a viable component of holistic antenatal care for this population.

DISCUSSION

This study demonstrates a substantial and clinically meaningful reduction in pre-labor anxiety among third trimester primigravida pregnant women following the hypnobirthing intervention. The shift of most participants from severe and very severe anxiety categories to no or mild anxiety not only underscores the statistical significance, but also highlights the clinical impact of hypnobirthing as a non-pharmacological approach. Lower anxiety levels prior to childbirth have consistently been linked to improved maternal coping abilities, decreased risk of obstetric complications such as prolonged labor or operative delivery, greater satisfaction with the childbirth experience, and more favorable psychological outcomes for both mother and infant (Schetter & Tanner, 2012; Field, 2017; Kinser et al., 2021; Glover, 2014; Dennis et al., 2017). Maternal anxiety in late pregnancy has also been associated with adverse neonatal outcomes including preterm birth and impaired early childhood neurodevelopment, further highlighting the importance of effective antenatal anxiety interventions (Van den Bergh et al., 2005; Beijers et al., 2014).

These findings are consistent with a growing body of global and Indonesian literature affirming hypnobirthing's efficacy. Numerous randomized controlled trials, quasi-experimental studies, and systematic reviews have reported that hypnobirthing leads to significant reductions in antenatal anxiety, shorter labor duration, less reliance on pharmacological pain relief, improved perceived control, and enhanced maternal satisfaction with childbirth (Werner et al., 2013; Madden et al., 2016; Sariati, 2016; Imannura et al., 2016; Syahrir, 2020; Beddoe et al., 2009; Dhillon et al., 2017; Jamir, 2020). Importantly, the large effect size observed in this study (Cohen's d = 2.29) not only reinforces the practical significance of the intervention, but also aligns with effect sizes reported in similar hypnobirthing research (Werner et al., 2013; Madden et al., 2016).

The mechanisms underlying the success of hypnobirthing are well supported by several theoretical perspectives. According to coping theory, the provision of adaptive skills—such as deep breathing, guided imagery, and positive affirmations—enables mothers to effectively manage labor-related stress and maintain emotional stability (Lazarus & Folkman, 1984; Sariati, 2016; Kuswandi, 2013). Bandura's self-efficacy theory further explains how strengthening a woman's belief in her ability to cope with childbirth challenges can reduce anticipatory fear and enhance psychological resilience (Bandura, 1997; Pieter & Lubis, 2010). Psychoneuroimmunology research adds a biological layer to this understanding, proposing that mind-body interventions like hypnobirthing modulate the neuroendocrine-immune axis, lower circulating cortisol, and promote autonomic balance through parasympathetic activation, resulting in reduced anxiety, increased endorphin and serotonin production, and a smoother childbirth process (Beijers et al., 2014; Videbeck, 2012; Field, 2017; Schetter & Tanner, 2012).

In the context of Indonesian maternal health, the adaptation of hypnobirthing interventions to local languages, the involvement of family members, and integration within existing antenatal education frameworks are essential for maximizing their acceptance and impact (Maureen, 2022; Syahrir, 2020; Imannura et al., 2016). The present results not only support international evidence, but also address a crucial gap in the Indonesian literature, where there is a disproportionately high prevalence of pre-labor anxiety among primigravida women compared to high-income countries (Kurniawati & Wahyuni, 2014; Sari, 2019; Jalal et al., 2024; Lee et al., 2022). National and international bodies, including the WHO, increasingly recommend that psychosocial support and holistic approaches such as hypnobirthing be integrated into routine antenatal care to improve maternal and neonatal outcomes and support maternal mental health (Howard et al., 2014; WHO, 2022).

Nevertheless, several limitations of this study must be acknowledged. The absence of a control group in the research design limits the ability to attribute observed effects exclusively to hypnobirthing, as external factors such as social support or spontaneous anxiety reduction over time cannot be ruled out. The relatively small sample size and recruitment from a single site may limit the generalizability of the findings. There is also a risk of selection bias, as participants volunteering for hypnobirthing may have had higher motivation or interest in psychological interventions. Although every effort was made to ensure consistency and fidelity of the intervention, the potential for placebo effects or reporting bias remains, especially given the subjective nature of self-reported anxiety (Firdaus & Zamzam, 2018; Biaggi et al., 2016).

Future studies are encouraged to employ randomized controlled trial designs with larger, multi-site samples and longer-term follow-up to assess the durability of hypnobirthing effects. Additionally, mixed-methods research exploring women's lived experiences, cultural adaptation, and barriers to implementation could further inform the development of effective and culturally sensitive hypnobirthing interventions. In conclusion, this study provides compelling evidence that hypnobirthing is an effective, acceptable, and potentially scalable intervention for reducing pre-labor anxiety among Indonesian primigravida women. Its integration into antenatal care holds promise for improving maternal mental health, birth outcomes, and overall satisfaction with childbirth experiences.

CONCLUSIONS AND RECOMMENDATIONS

This study provides robust evidence that hypnobirthing is an effective and practical non-pharmacological intervention for significantly reducing pre-labor anxiety among third trimester primigravida pregnant women. The data demonstrate that, following the hypnobirthing intervention, there was a dramatic reduction in the number of women experiencing severe and very severe anxiety, with more than half of the participants reporting no anxiety at all post-intervention. The magnitude of this effect, supported by both statistical significance ($p = 0.025$) and a large effect size (Cohen′s $d = 2.29$), underscores the clinical importance of integrating hypnobirthing into antenatal care programs, especially in settings with high rates of perinatal anxiety (Sariati, 2016; Imannura et al., 2016; Schetter & Tanner, 2012).

The findings suggest that hypnobirthing should be considered as a routine part of holistic antenatal education and care for pregnant women, particularly primigravidas, to enhance psychological readiness, foster self-efficacy, and promote positive childbirth experiences. It is recommended that primary health care services and maternity clinics systematically integrate hypnobirthing modules into their prenatal education curricula. Training and capacity building for health professionals–including midwives, nurses, and obstetricians–are essential to ensure the quality and standardization of hypnobirthing interventions (Kuswandi, 2013; Syahrir, 2020). Developing culturally adapted and evidence-based hypnobirthing materials, accessible in local languages, will further support widespread implementation.

Given the compelling evidence of its efficacy, policymakers and health authorities are encouraged to support and advocate for the adoption of hypnobirthing within national maternal mental health strategies. Policy development should prioritize the integration of non-pharmacological, evidence-based interventions like hypnobirthing into existing antenatal care guidelines, particularly in primary care and resource-limited settings (Howard et al., 2014; WHO, 2022). Collaboration with professional associations and community organizations can facilitate the dissemination and sustainability of such programs.

In conclusion, hypnobirthing has demonstrated substantial promise as a safe, effective, and feasible intervention to reduce anxiety and improve the childbirth experience for primigravida women. The integration of hypnobirthing into antenatal care, combined with education, training, and strong policy support, can be a transformative step toward enhancing maternal mental health and perinatal outcomes in Indonesia and similar contexts globally.

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DECLARATIONS

Ethics Approval and Consent to Participate

This study was conducted in accordance with ethical principles for research involving human participants. All respondents were provided with comprehensive explanations regarding the study's objectives, procedures, benefits, and potential risks. Verbal and written informed consent was obtained from each participant prior to their involvement. Participants were informed of their right to withdraw at any time without penalty, and confidentiality of personal data was strictly maintained for research purposes only.

Competing Interests

The authors declare that they have no competing interests.

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Availability of Data and Materials

All relevant data supporting the findings of this study are presented within the manuscript. Additional raw data can be made available by the corresponding author upon reasonable request.

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