

EFFECTIVE METHODS FOR REDUCING PREGNANCY-RELATED ANXIETY IN THE THIRD TRIMESTER: A SYSTEMATIC REVIEW

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Abstract

During pregnancy, mothers often feel fear, worry, and anxiety. This anxiety can have adverse effects on both the mother and the baby, such as increased maternal mortality, preterm birth, and cognitive issues. To address this, a study was conducted to identify ways to reduce anxiety in third-trimester pregnant women. This study used a systematic review method to find the most effective health interventions, as obtained from several articles. Through a systematic review of various health interventions following PRISMA 2020 guidelines, 11 articles were analyzed. The findings suggest that methods like prenatal yoga, virtual reality, and music can effectively alleviate anxiety during childbirth. Overall, the study concludes that there are several effective ways to help pregnant women in their third trimester manage anxiety related to labor. The findings suggest that methods like prenatal yoga, virtual reality, and music can effectively alleviate anxiety during childbirth. Overall, the study concludes that there are several effective ways to help pregnant women in their third trimester manage anxiety related to labor.

Keywords: Anxiety, Pregnant women, Childbirth anxiety

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1. Introduction

Childbirth, a physiological process involving the expulsion of the fetus and placenta from the uterus through the vagina, is a pivotal event in a woman's life, often marked by a range of emotions, including fear, worry, and anxiety. The labor process typically unfolds in three phases, each presenting unique challenges and uncertainties for expectant mothers [1]. A previous study found that out of 377 participants, 346 reported feeling fearful about the prospect of childbirth, with 31 mothers experiencing particularly severe anxiety in the face of impending labor [2]. Lack of knowledge and fear of the uncertainty of the birth process makes

mothers feel afraid, anxious, and restless. Anxiety increases when approaching delivery due to fear of the labor process and labor pain. Fear and anxiety are often exacerbated by a lack of comprehensive knowledge about the birthing process and the uncertainties surrounding it, leading to heightened feelings of distress and restlessness as the due date approaches [3].

The psychological distress experienced during pregnancy, especially anxiety, has been associated with adverse maternal and neonatal outcomes. Studies suggested that maternal anxiety during pregnancy is associated with increased incidence of maternal mortality, preterm

birth compromised cognitive development in offspring, low birth weight, impaired mother-infant bonding, and overall poor child health and development [4]—prenatal education and mental support benefit pregnant women during pregnancy and childbirth. The anxiety level was 14.47 (4.69) in the intervention group and 16 (4.86) in the control group. Pain intensity was 85.68 (1.85) in the intervention group and 90.99 (14.72) in the control group [5].

Maternal healthcare outcomes in Indonesia, as evidenced by the maternal mortality rate (MMR) of 189 per 100,000 live births in 2020, indicate the persistent challenges and risks faced by expectant mothers in the region p [6]. Furthermore, in 2021, there were 7,389 cases of maternal mortality, with COVID-19 emerging as a leading cause, accounting for 2,982 fatalities, followed by complications such as bleeding (1,330 cases) and pregnancy-induced hypertension (1,077 cases) [7]. Common complications include fetal distress, reported at a rate of 35.5 per 1000 births, and slow progress of labor, occurring in 28.3 out of 1000 deliveries) [8].

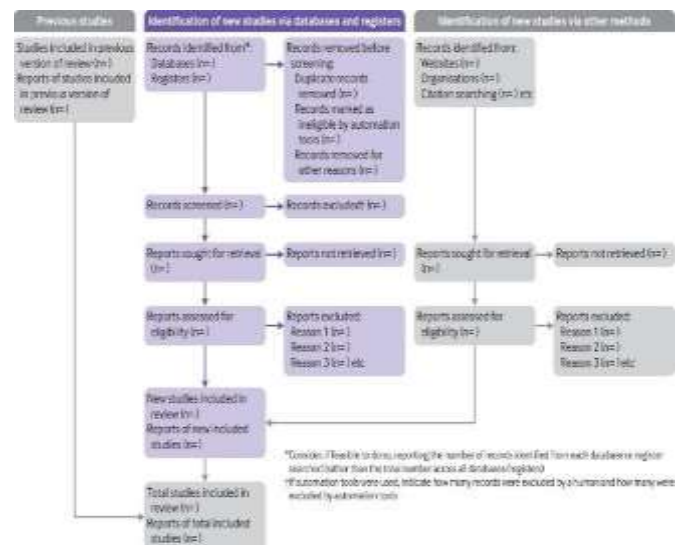
In light of these challenges, this research endeavors to investigate and establish effective interventions for reducing anxiety among pregnant women in the third trimester as they navigate the intricacies of the birthing process.

2. Method

This research entails a systematic review, employing meticulous methods to gather and synthesize research findings addressing predetermined questions. Selecting articles not included in PRISMA 2020 involves identifying journal databases, compiling keywords, searching for relevant journals, choosing articles based on title and abstract, assessing content suitability, and evaluating selected articles. The research is conducted using JOANNA Briggs Appraisal Tools.

This systematic review utilized four databases from 2018-2023, compiled in accordance with The Preferred

Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 Statement.



Gambar 1. Alur Penelitian

The process of selecting articles for a systematic review will follow the flow of Figure 1. The gray box in Figure 1 is optional; it can be excluded from the chart if not needed. The sources referred to in this process comprise journal articles, manuscripts, conference abstracts, clinical study reports, theses, government reports, and other pertinent documents [9].

3. Results and Discussion

Within the context of the systematic review, 11 articles were included in the final analysis, focusing on interventions geared towards alleviating anxiety in pregnant women anticipating childbirth. Researchers categorized these interventions into five modalities: Prenatal Yoga and Pilates Interventions, Virtual Reality, Music and Audio Visual, Hypnotherapy, Breathing Exercises, and Antenatal and Childbirth Education.

Prenatal Yoga and Pilates

Prenatal Yoga sessions, typically conducted weekly over four weeks, catered to pregnant women in the third stage of pregnancy [10]. Noteworthy is that Prenatal Yoga was administered to pregnant individuals between 30-37

weeks gestation, irrespective of their anxiety levels [11]. Similarly, Pilates interventions were administered to third-trimester pregnant women, with participants divided into control and intervention groups for comparative evaluation [12]. Before receiving prenatal yoga intervention, 58.3% of mothers had severe anxiety, 37.5% had moderate anxiety, 2.1% had mild anxiety, and 2.1% did not have anxiety. After the intervention, the percentage of mothers with severe and moderate anxiety decreased to 14.6%, the percentage of mothers with moderate anxiety increased to 54.1%, and 16.7% of mothers did not experience anxiety. Wilcoxon statistical tests indicated a significant impact [11].

These findings align with research from Kim and Hyun (2022), which showed that there was a significant reduction in anxiety scores in the Pilates training intervention group with a p-value of 0.011 [13].

Prenatal yoga soothes the mother; each pose can ease muscle tension, calm the mind, enhance joint flexibility, and promote relaxation. Emphasizing maternal safety and comfort, prenatal yoga is beneficial [14]. Pilates exercises aim to boost the mother's relaxation and fitness, enhancing her readiness for childbirth, promoting alertness, and regulating breathing patterns. Pilates integrates relaxation, breathing, flexibility, and strength training techniques. These exercises can alleviate depression, enhance muscle flexibility, boost blood flow, and alleviate stress and anxiety [15].

Virtual Reality, Music and Audio Visual

A study utilized Virtual Reality (VR) to alleviate anxiety in third-trimester pregnant women preparing for childbirth. Respondents in this study were pregnant women entering 37-42 weeks of gestation. VR sessions involving video content lasted 15-20 minutes [16]. Results showed that 95.5% of mothers in the VR group were willing to listen to music during cesarean sections. [17]. The study

involved 76 pregnant women, evenly divided into intervention and control groups. The analysis revealed a significant disparity in anxiety levels between the two groups, with a p-value of 0.003. Additionally, pain intensity was notably lower in the intervention group, with a p-value of 0.004 [18].

Murtiyarini et al. (2023) research demonstrated a reduction in fear of childbirth in third-trimester pregnant women, from 23.07% to 10.60%, after being exposed to Mozart music intervention [19].

VR offers a captivating three-dimensional experience through video display using a headset. Immersing the user can provide audio-visual distractions from their immediate surroundings [20]. Natural setting VR environments have been shown to decrease stress and enhance happiness while diminishing anxiety levels [21]. VR can simulate childbirth experiences for first-time mothers by incorporating visual, audio, tactile, and olfactory stimuli, allowing a realistic encounter. This technology has been widely employed in assisting cancer patients with stress management, pain relief, wound care, and other applications [22].

Hypnotherapy

Two studies have been identified that focus on using hypnotherapy as an intervention for expectant mothers preparing to give birth. Following the intervention, anxiety levels decreased in the intervention group, while they increased in the control group. The Chi-Square test showed a significant result with $p = 0.001$ and RR of 4.6, indicating the effectiveness of hypnotherapy in reducing pre-birth anxiety among pregnant women [23].

Hypnosis involves a redirection of attention that can diminish awareness of the immediate surroundings. Patients typically become receptive to directions and suggestions given during hypnosis. Hypnotherapy aims to help mothers bolster their confidence and foster a positive mindset to facilitate smooth and

calm labor, aligning with their plans and expectations. As a result, pregnant women can experience natural relaxation, leading to a reduction in both anxiety and muscle tension [24].

Breathing Exercises

Deep breathing exercises, also known as diaphragm breathing, are valuable for relieving anxiety. In a study involving third-trimester pregnant women at the Pajala Public Health Center, deep breathing relaxation methods were provided to those experiencing anxiety [25]. Other similar research in Bengkulu showed a significant reduction in anxiety levels among pregnant women preparing for labor following the intervention ($p < 0.005$) [26].

Deep breathing, also known as diaphragmatic breathing, is a mindfulness technique rooted in the integration of an individual's mental and physical aspects, thus inducing a state of relaxation. This relaxation method has been demonstrated as a valuable tool in mitigating maternal anxiety and influencing the duration of labor [27]. Through the practice of deep breathing, the parasympathetic nervous system is engaged, counterbalancing the activity of the sympathetic nervous system that predominates during periods of stress and anxiety. By facilitating relaxation, deep breathing can lower an individual's physiological arousal and guide them toward a more composed mental and physical state [26]. Importantly, these relaxation techniques are accessible for self-administration, allowing individuals to engage in this practice independently. Central to the effectiveness of deep breathing relaxation is the regulation of breathing patterns, with an emphasis on extended inhalation and deliberate, slow exhalation [28].

Antenatal and Childbirth Education

Two studies delineated interventions involving educational programs tailored for pregnant women and their partners. The antenatal education initiative spanned two weeks with biweekly meetings, covering normal

childbirth, active labor, hypnobirthing philosophy, and chemoprophylaxis.

In a previous study, participants who received antenatal education exhibited lower levels of depression, anxiety, and stress compared to the control group ($p=0.008$, $p=0.002$, $p=0.006$). Additionally, the fear of childbirth was significantly reduced in the Antenatal Education group when compared with the control group ($p < 0.001$) [29].

Sebanyak 32 ibu hamil diberikan intervensi. In another study involving thirty-two pregnant women, a four-week prenatal yoga intervention demonstrated notable outcomes. Prior to the intervention, seventeen mothers reported severe anxiety levels, which decreased to eight mothers post-intervention. The mean anxiety score among pregnant women decreased from 26.91 to 17.59 following the intervention. The impact of prenatal yoga on reducing anxiety levels in expectant mothers was statistically significant ($p < 0.001$) [10].

Moreover, knowledge enhancement can be achieved through health education sessions or counseling provided by healthcare professionals. Expectant mothers with access to comprehensive health information, particularly concerning pregnancy and childbirth, display increased receptivity and diminished negative perceptions [10].

4. Conclusion

Anxiety experienced by pregnant women in the third trimester regarding childbirth can be addressed through various methods, including Prenatal Yoga and Pilates, Virtual Reality, Music and Audio - Visual stimuli, Hypnotherapy, Breathing exercises, as well as Antenatal and Childbirth Education.

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