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# The Effectiveness of Prenatal Yoga Exercises on The Anxiety of Primigravida Pregnant Women in The Third Trimester in Facing Labor: A Literature Review

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## Abstract

The current study aimed to determine the effect of prenatal yoga activities on the anxiety level of primigravida pregnant women in preparation for childbirth. The research approach used in this research is a literature review combined with Quasi-Experiment and Randomized Controlled Trial (RCT). Source: A literature search was conducted using five databases, Science Direct, Google Scholar, and Pubmed, covering publications from 2018 to 2023. Papers were selected based on specific criteria using a prism, which included evaluation of title, abstract, and full text. The feasibility of each study was reviewed, and the findings were compiled and analyzed. Ten journals that met the inclusion criteria were identified in the search results. Based on an analysis of 10 studies using Quasi Experiments and Randomized Controlled Trials (RCT), it is proven that the majority of first-trimester pregnant women in the third-trimester experience anxiety when they are about to give birth. This research shows that doing prenatal yoga exercises can effectively reduce anxiety levels in pregnant women. Conclusion: Prenatal yoga is the right solution for pregnant women who experience anxiety.

**Keywords:** Prenatal Yoga; Anxiety; Primigravida; Third Trimester

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## 1. Introduction

The process of pregnancy is associated with several physiological and psychological changes that might result in discomfort for the woman who is pregnant. Several changes might occur, including dyspnea, sleeplessness, gingivitis, and edema. Common symptoms include frequent urination, pressure, and discomfort in the perineal area, back pain, constipation, varicose veins, fatigue, Braxton Hicks contractions, leg cramps, swelling in the ankles, mood changes, and heightened levels of anxiety and worry [1]. Around 10% of pregnant women and 13% of new mothers have postpartum depression, according to data from the World Health Organization (WHO). Approximately twenty-six percent of pregnant women in China experience some form of anxiety. When it comes to anxiety symptoms, this percentage rises to 41% in Central America, specifically in Nicaragua, and it rises to 57% for depressive conditions. The astonishing percentage of pregnant women in Pakistan who

suffer from anxiety and depression is seventy percent. 23.4 % of pregnant women in Malaysia suffer from some form of anxiety. Last but not least, a staggering 71.90% of pregnant women in Indonesia report feelings of anxiety [2]. As indicated by the statistics from the 2020 SDG, the rate of maternal mortality in 2020 was 1712. The occurrence of complications during labor or after delivery is one of the factors that contribute to the mortality of mothers. The presence of an uncontrolled feeling of anxiety or stress during pregnancy is one of the variables that can contribute to complications during the delivery process [3]. Some studies have shown that mothers whose anxiety levels are very high during pregnancy are less able to bond with their infants and are less able to carry out their maternal responsibilities [4]. Evidence suggests that a mother's prenatal stress is linked to an increased probability of abortion, early labor, fetal impairment, fetal development limitation, and asymmetrical growth of the infant. In addition, increased stress during pregnancy leads to an elevation in stress hormones, which can

cause a rise in blood pressure and a decrease in birth weight [5]. Anxiety and stress in mothers activate the Hypothalamo-Pituitary-Adrenal (HPA) axis, producing stress hormones such as adrenocorticotropic Tropic Hormone (ACTH), cortisol, and catecholamines [6]. The secretion of these stress hormones leads to the widespread narrowing of blood vessels, including the vasa utero placenta, which hinders blood flow in the uterus. Consequently, the delivery of oxygen to the myometrium is interrupted, resulting in weakened contractions of the uterine muscles. These occurrences result in an extended labor process (prolonged labor) in order for the fetus to undergo fetal distress [7]. In the third trimester of pregnancy, anxiety levels are significantly higher than in the previous trimester [8]. Anxiety will be experienced differently throughout the pregnancy. In particular, a mother who is experiencing pregnancy for the first time, known as a primigravida, tends to have anxiety when confronted with the labor process. This is because the labor process is something that she will be experiencing for the first time [9]. Through physical activity, it has been demonstrated that anxiety during pregnancy can be minimized or removed entirely. Pregnancy exercises that support the process of pregnancy, birth, and parenting can be practiced in antenatal classes. These exercises are physical exercises that can be considered a self-help option through the practice of physical exercise. One of the pregnancy exercises is yoga [9]. Prenatal gentle yoga is a practice that involves strengthening the mind and cultivating the entire personality, encompassing physical, psychological, and spiritual aspects [2]. Yoga movement therapy, incorporates breath control, relaxation, meditation, and dietary adjustments, alleviates muscle and emotional tension, enhances focus, boosts blood oxygenation, and facilitates the body's recuperation [10]. As well as helping pregnant women become more flexible and strengthen their muscles, yoga also teaches them to pay attention to their bodies, which helps them feel less stressed and more at ease [11]. Yoga enhances physical fitness and overall well-being, boosts confidence in work, improves social connections, regulates the autonomic nervous system, promotes relaxation, alleviates labor pain, and reduces labor time, strengthens back muscles, lower abdominal and pelvic muscles [12]. Inhibiting the secretion of CRH, which in turn regulates the anterior lobe pituitary gland by reducing the release of the hormone ACTH, is one of the ways in which yoga exerts its influence on the hypothalamus. Consequently, this results in a decrease in the synthesis of adrenal hormones and cortisol, while simultaneously stimulating the anterior lobe pituitary gland to emit the hormone endorphin [13]. Yoga can suppress the growth of sympathetic nerves, hence decreasing the abundance of hormones that disrupt the body's control. Reduced heart rate, respiration pattern, blood pressure, muscular tension, metabolic rate, and secretion of chemicals that induce anxiety or stress are all results of the parasympathetic nervous system's modulation of catecholamine release [8]. According to a prior study conducted by Sulistiyarningsih & Rofika (2020) , it was discovered that there was a notable impact both before and after engaging in gentle prenatal yoga. The study conducted by Yuniarti & Eliana (2020) revealed a significant impact of prenatal yoga activities on the preparedness of first-time pregnant moms in dealing with childbirth. The study concluded that prenatal yoga is a viable and well-received treatment, which resulted in a decrease in symptoms related

to anxiety and depression [15]. According to Wijaya (2023) antenatal yoga is beneficial in alleviating women's anxiety related to labor and preventing the occurrence of depressive symptoms. The literature and journals indicate that prenatal yoga has a notable impact on reducing anxiety in pregnant women. However, further examination and <sup>28</sup>ussion of journals and literature are required to assess the effect of prenatal yoga exercises on the anxiety levels of first-time pregnant women in their third trimester, specifically about labor. Hence, it is imperative to synthesize the existing literature that seeks to ascertain the impact of prenatal yoga activities on the anxiety levels of first-time pregnant women in their third trimester as they prepare for labor.

## 2. Materials and Methods

This research involves utilizing the literature study method or literature review, employing the research design of Quasi Experiment and Randomized Controlled Trial (RCT) [17]. This research aims to ascertain the presence or absence of a treatment's impact on the subject under investigation. In this design, a quasi-experiment and a randomized controlled trial (RCT) are conducted by grouping members of the control group who meet the inclusion requirements without providing them with any intervention. The intervention group, on the other hand, consists of members who meet the inclusion criteria and are given the intervention. The study focused on a population of primigravida pregnant women in their third trimester who were experiencing anxiety. These women were provided with a prenatal <sup>26</sup>oga intervention aimed at reducing their anxiety levels. This study aimed to assess the impact of prenatal yoga intervention on anxiety levels in first-time pregnant women in their third trimester.

### 2.1 Literature Search Strategy

#### 2.1.1 Protocol

A thorough literature analysis was conducted to examine the <sup>9</sup>mpact of prenatal yoga exercises on the preparedness of pregnant women in their third trimester of childbirth. The <sup>13</sup>ol and evaluation of the literature review will employ the Preferred Report Items for Systematic Reviews and Meta-analyses (PRISMA) [18] to ascertain the inclusion of studies that have been identified and aligned with the aims of the literature review.

#### 2.1.2 Search Database

Systematic literature searches were performed spanning the years 2018 to 2023. The data utilized in this study are derived from secondary sources, specifically from the findings of previous researchers rather than from firsthand observation. The secondary data sources were acquired as respectable journal papers from national and international sources. These publications focused on the issue of 'The impact of prenatal yoga exercises on the anxiety levels of pregnant women in their third trimester as they prepare for labor.' The literature study employs a search strategy that utilizes three databases, Science Direct, Google Scholar, and Pubmed, which are selected based on their high and medium-quality criteria. Article searches employ keywords and boolean operators (And, Or, Not, or And Not) to broaden or refine the search, facilitating the identification of relevant articles. The keywords in this literature review have been modified to align with the Medical Subject Heading (MeSH) [19] contained in table 1.



### 2.1.3 Inclusion and Exclusion Criteria

The article search technique employed the PICOS framework, comprising Population/Problem, Intervention, Comparison, Outcome, and Study Design. Contained in table 2.

## 3. Results and Discussions

### 3.1 Result

#### 3.1.1 Study Selection

Researchers obtained a total of 261 articles by conducting a literature search in three databases and using MeSH-adjusted keywords. Pre-screening exclusions: 16 dataset consisted of 95 duplicate records, 72 records that were deemed ineligible by automated tools, 38 records that were eliminated for various reasons, and 29 records that were excluded from the analysis. Eleven reports were not retrieved. Upon evaluation, 16 reports were deemed eligible, while other reports were excluded. Literature review with a sample size of 2. Incomplete text ( $n = 3$ ) year of publication ( $n = 1$ ). The assessment was conducted according to the eligibility criteria for selecting studies include 40 the review. A total of 10 publications were identified that met the criteria and could be included in the literature review. The results of the research article are depicted in the flow diagram in Figure 1.

#### 3.1.2 Quality Assessment

The methodological quality of each study ( $n=10$ ) was assessed through an analysis using a checklist consisting of multiple questions to evaluate the study's quality. The assessment of bias in this literature review was contingent upon the research methodologies employed in each study, encompassing: 1. The theory is inappropriate, outmoded, and lacks credibility. 2. The design does not align with the study's aims. Four factors need to be considered: population, sample, sampling, and variable size, which do not comply with the sampling rules. 4. The variables chosen are inadequate in quantity, control of confounding variables, and other relevant variables. 5. The instruments lack sensitivity, parameters, and validity-reliability. 6. The data analysis does not adhere to the usual analysis standards [20]. The study search yielded 10 papers that satisfied the inclusion criteria. The sub-discussion revolves around the impact of prenatal yoga activities on the anxiety levels of expectant women when confronted with the process of giving birth. The study methodology employed in this literature review encompasses both Quasi Experiment and Randomized Controlled Trial (RCT) methodologies. These approaches are utilized to ascertain the presence or absence of a treatment impact on the issue under investigation.

#### 3.1.3 Characteristics of Respondents

Engage in academic activities or acquire knowledge through the process of methodical learning and assessment. Women who were pregnant and having their first pregnancy participated in the study, the participants were in their third trimester. There was a range of thirty to one hundred and twenty participants. Ages ranging from 20 to 35 years old were represented among the participants. The range of their educational experiences included elementary school all the way up to college. A further point to consider 3 is that the bulk of the pregnant women were without jobs. The results of the article analysis can be seen in table 3.

## 3.2 Discussion

This literature review conducted an analysis 42 of the data of ten research publications that investigated 34 the effect of prenatal yoga activities on the levels of anxiety experienced by first-time pregnant women during the labor and delivery process. Anxiety in pregnant women can be effectively reduced by the practice of prenatal yoga, according to the findings of the review. This suggests that prenatal yoga exercises are a legitimate treatment option for pregnant women who experience anxiety during their pregnancy. The sense of concern that something will occur as a result of the expectation of risk is known as anxiety. Anxiety is a signal that assists individuals in getting ready to take action against threats. A number of factors can affect one's physical and mental health, including the effects of demands, competitiveness, and calamities that occur in life [21]. Anxiety is one of the psychological effects that come about. The researcher contends, based on the findings of the study, that excessive anxiety during pregnancy can be detrimental to the mother-baby relationship and diminish the mother's capacity to play a role. As a result, anxiety must be conquered, and prenatal yoga activities are one of the self-help options that can be utilized. Results of the research According to Aryani et al (2018), the findings of a study that measured anxiety using the Anxiety scale for pregnant (ASP) demonstrated that prenatal yoga had a significant effect, with a sig value (two-tailed) 33 of 0.000. It has been demonstrated that the practice of prenatal gentle yoga can have an effect on the anxiety that is experienced by women who are pregnant for the first time 1 are expecting their first child together. Furthermore, the fact that the p-value is lower than 0.05 provides evidence that this is the case. Antenatal anxiety and depression correlate with negative mental health consequences [3]. Untreated prenatal anxiety and depression can adversely affect both the mother and the baby [22]. Increases in the hormone progesterone are the root cause of the anxiety that pregnant women experience during their pregnancy. The rise in hormones not only causes pregnant women to experience feelings of anxiety but also produces emotional disturbances, which in turn causes moms to feel exhausted even more quickly [2]. Results obtained from the research by Ashari et al (2019) were the ones who carried out the research. When it comes to reducing the levels of anxiety that pregnant women experience throughout the third trimester of their pregnancy, prenatal yoga activities are essential. According to the findings of this study, a sizeable percentage of pregnant women, precisely fifty percent of those in the intervention group and forty percent of those in the control group, reported experiencing considerable anxiety at the beginning of the study. Following the administration of the Questionnaire twice to each pregnant woman, a significant reduction in anxiety level 10 was observed in the intervention group, as indicated by a significant decrease in the mean score ( $p = 0.000$  10) contrast, the control group did not significantly differ in the mean score ( $p = 0.162$ ). According to the study findings, the researcher contends that pregnancy anxiety, particularly in first-time pregnant women, stems from concerns about their ability to undergo labor, the well-being of the baby, and their capacity to care for the child. By the findings of Bangun (2019) research, yoga has been found to enhance physical well-being by stimulating the hypothalamus, hypophysis, and sympathetic nerves to release corticosteroid hormones and catecholamines (epinephrine

and norepinephrine), which can mitigate the impact of stress. Yoga is highly beneficial during pregnancy as it allows women to exercise physically and spiritually, fostering self-assurance and mindfulness, particularly about stress. According to the findings of a study, researchers contend that engaging in prenatal yoga during the final trimester of pregnancy has a beneficial effect in alleviating anxiety among expectant mothers [24]. Stress impacts the sympathetic nervous system and our body's hormone systems, including cortisol, epinephrine, norepinephrine, glucocorticoids, cortisol, and cortisone. The hypothalamus releases corticotropin-releasing factor (ACTH), which prompts the anterior hypothalamus to generate glucocorticoids, particularly cortisol. Cortisol affects the body's ability to adjust to stress, especially anxiety [8]. Aryani et al (2018) conducted research demonstrating a significant reduction in prenatal anxiety levels with gentle yoga throughout pregnancy, as indicated by a two-tailed significance value of 0.000. The value 0.000 is less than 0.05. Ashari et al (2019), study demonstrated a notable reduction in the experimental group's average anxiety level score ( $p=0.000$ ). In contrast, the control group did not exhibit a statistically significant difference in the mean score ( $p=0.162$ ). The findings of Charla Bingan (2019) study conducted were derived from statistical testing utilizing the dependent T-test. The p-value is less than  $\alpha$  (0.05), indicating statistical significance. Additionally, Maharani & Hayati (2020) study reveals a significant reduction in anxiety levels among pregnant women when confronted with labor, with a p-value  $<0.001$ . The purpose of prenatal gentle yoga is to alleviate anxiety in pregnant women during the third trimester. Engaging in yoga practice yields benefits not just for physical well-being but also for mental, emotional, and spiritual development. The research conducted by Maharani & Hayati, (2020) utilized questionnaires as anxiety measurement instruments to obtain the results. Prenatal gentle yoga significantly reduces anxiety levels in third-trimester primigravida pregnant women facing labor. Prior to engaging in prenatal gentle yoga, the average pregnant woman experiences severe anxiety. However, after participating in prenatal gentle yoga, the average pregnant woman's anxiety level decreases to a mild level. This effect is statistically significant, as indicated by a p-value of less than 0.05. The study findings indicate that yoga can decrease the anxiety levels of pregnant women. Pregnant women also require sufficient physical activity to attain optimal health during pregnancy and exceptional endurance to cope with labor.

According to Indrayani & Mahaya (2020), engaging in prenatal yoga can induce mental calmness and tranquility through relaxation and meditation. It also offers a peaceful opportunity to establish a deep connection between the mother and the baby while fostering patience, intuition, and wisdom. According to the study's findings, the researcher asserts that the anxiety reduction caused by prenatal gentle yoga is a result of the feeling of comfort experienced by pregnant women during class. This feeling of comfort leads to muscle relaxation, mental calmness, and enhanced concentration. The study conducted by Sulistiyansih & Rofika (2020) found that engaging in gentle prenatal yoga during the third trimester has a significant impact on reducing anxiety levels in first-time pregnant women preparing for

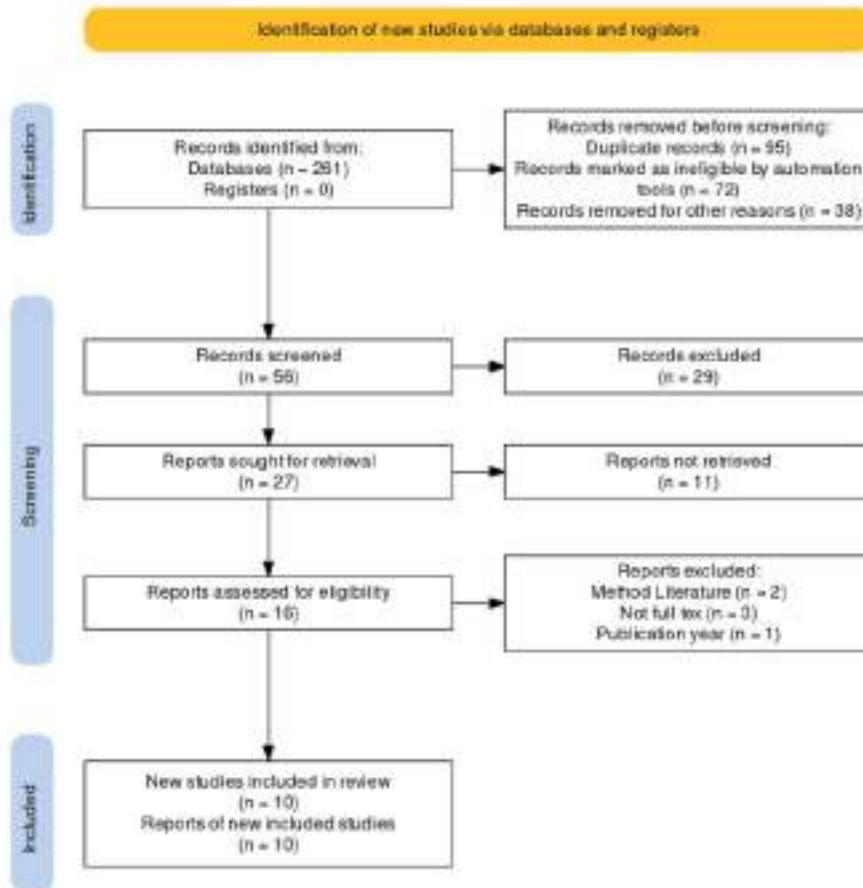
childbirth. The research involved 30 pregnant women, and the results showed a statistically significant decrease in anxiety levels ( $p < 0.05$ ) with a two-tailed significance value of 0.000. The findings of Yuniarti & Eliana (2020), study, utilizing the HARS instrument, demonstrated an anxiety reduction. The mean pre-intervention readiness score for regular gymnastics was 11.47, but the mean readiness score for pregnant yoga gymnastics was 19.67. The mean readiness score following regular gymnastics intervention is 12.69, whereas the mean readiness score after prenatal yoga activities is 10.80. Bivariate analysis yielded a p-value of 0.005. Prenatal yoga activities serve as a beneficial and secure exercise alternative for addressing pregnancy-related issues. By engaging in these exercises, expectant mothers can enhance their physiological and psychological well-being, improving their preparedness for childbirth [14]. According to the findings of the research conducted by Wijaya (2023), the average anxiety level in the experimental group after the intervention was 8.35, but the score in the control group was 23.05. An average difference of -14.700 was observed between the two groups, and the p-value was determined to be 0.000, which is less than the threshold of 0.05. One of the most effective methods for reducing feelings of anxiety and sadness in pregnant women is the practice of prenatal yoga. The Arlym & Pangarsi (2021) study revealed a noteworthy decrease in the average anxiety score among expectant mothers after engaging in prenatal yoga. The decrease was 22.15 points, with a p-value of 0.000 ( $p < 0.05$ ). In their study, Rahayu et al (2023), found that incorporating yoga into pregnancy had a significant effect on reducing anxiety levels in pregnant women throughout the third trimester, with a statistically significant result of  $p < 0.001$ . Engaging in prenatal yoga exercises is a crucial element in reducing anxiety during the final stage of pregnancy.

The findings of the study conducted by Veronica et al (2020) Prior to the implementation of the yoga intervention, pregnant women exhibited a high level of anxiety, with 58.3% experiencing severe anxiety. Only 2.1% of moms did not report any worry, while another 2.1% had light anxiety. The majority of mothers, 37.5%, reported moderate levels of anxiety. Following participation in prenatal yoga, the majority of moms experience a mild anxiety level of 54.1%. Meanwhile, 16.7% of women report no anxiety, and an equal percentage of 14.6% experience moderate and severe anxiety levels, respectively. The Wilcoxon test yielded statistically significant results. Prenatal yoga is more favorable for pregnant women than other physical activities due to its lower exercise intensity and reduced risk of accidental falls. Additionally, respondents expressed high trust and satisfaction with prenatal yoga, and no direct adverse effects were reported during the practice [28]. Prenatal yoga shows potential as a practical approach for managing pregnancy-related sadness and anxiety. Prenatal yoga exercises involve a process of integration that encompasses multiple elements, particularly relaxation. This practice psychologically impacts individuals, inducing a state of increased calm in pregnant women. Additionally, it serves as a tool for managing anxiety [29] [8]. Practicing asanas, or adjusting posture, can enhance physical fitness, boost muscle flexibility, and improve endurance.



**Table 1:** The Keywords in This Literature Review

Prenatal yoga	Anxiety	Pregnant women	Primigravida
Yoga	Anxiety	Pregnant	Primigravida
OR	OR	OR	OR
Prenatal yoga	Depression	Pregnancy	Primi
OR	OR	OR	
Yoga prenatal	Kecemasan	Ibu hamil	
OR	OR		
Prenatal gentle yoga	Pregnancy anxiety		



**Figure 1:** Selection Process of Studies Based on PRISMA [18]

**Table 2:** The Article Search Technique Employed the PICOS

Criteria	Inclusion	Exclusion
Population	Concerned first-time mothers in the third trimester of pregnancy	Multi-gravida pregnant women
Intervention	Prenatal yoga	Not prenatal yoga
Comparison	No comparators	
Outcome	The anxiety that third-trimester pregnant women have when they are about to go into labor can be alleviated via the practice of prenatal yoga.	Prenatal yoga exercises do not have an impact on the anxiety levels of pregnant women in their third trimester when it comes to birthing.
Study Design and publication type	The Randomized Controlled Trial (RCT) and the Quasi-Experiment with a Pre-Post Comparison	Besides Quasi Experiment Pre-Post and Randomized Controlled Trial (RCT)
Publication years	2018 - 2023	< 2018
Language	English and Indonesia	Besides English and Indonesia

**Table 3:** Result of Article Analysis

Authors	Method	The Effect of Yoga on Anxiety	Summary of Results
[3]	Research Methodology: Quasi-experimental Conduct an experiment using a one-group pretest-posttest design. Example: 32 expectant mothers Tool: Anxiety scale for pregnant (ASP) observation sheet Variable: Anxiety	The study observed a noteworthy decrease in prenatal anxiety levels through the implementation of gentle yoga, with a p-value of 0.000. A value of 0.000 is less than 0.05.	In summary, this study demonstrates that engaging in prenatal gentle yoga can effectively alleviate maternal anxiety.
[21]	Studies use a quasi-experimental methodology, specifically a non-randomized pretest-posttest with a control group design. This methodology is used in the study. Here is a sample of 120 pregnant women. A questionnaire is an instrument. Indicator of: Two statistical tests used to compare two groups or samples are the Wilcoxon Signed Rank Test and the Mann-Whitney U Test. Both of these tests are employed in anxiety analysis.	The experimental group had a substantial decrease in the average anxiety level score ( $p = 0.000$ ), whereas the difference in the average score for the control group did not meet the criteria for statistical significance ( $p = 0.162$ ).	During the third trimester of their pregnancies, pregnant women who participate in interventions that involve prenatal yoga experience a significant reduction in the levels of anxiety that they are experiencing.
[2]	Research Methodology: Quasi-experimental Conduct an experiment using a pretest-posttest design with a single group. Example: A group consisting of 31 women who are now pregnant. Tool: Survey Variable: Analyzing Anxiety: Paired t-test.	Decrease in anxiety level Obtained p value smaller than $\alpha$ (0.05)	Prenatal gentle yoga is an effective method for relieving the discomfort usually experienced by pregnant women in their third trimester, including the frequently observed anxiety at this time of pregnancy.

- [8] **Research Methodology:** Quasi-experimental **Conduct** an experiment using a single-subject group design. **Example:** 32 expectant mothers **Assessment tool:** HARS questionnaire, which is a standardized instrument for measuring anxiety levels **Variable:** Analyzing Anxiety: Paired and unpaired t-tests
- The amount of anxiety in pregnant women when confronting labor decreased significantly, with a p-value of less than 0.001.
- During pregnancy, women who practice gentle yoga have a considerable reduction in their levels of anxiety, which ultimately leads to a transition from severe anxiety to mild anxiety. Based on this evidence, it can be concluded that prenatal gentle yoga has a beneficial effect on reducing anxiety levels in pregnant women as they prepare for becoming mothers.
- [14] **Experimental design** with a pretest and posttest **Example:** A group of 30 ladies that are currently pregnant **Instrument:** Observational tool utilizing the Hamilton Anxiety Rating Scale (21) (RS) **Variable:** Anxiety **Analysis:** The Shapiro-Wilk test is employed to assess the normality of the data, specifically to identify non-normally distributed data. Subsequently, data analysis is conducted using the Wilcoxon test.
- The results of a two-tailed t-test with a p-value of 0.000 suggested that the gentle yoga intervention led to a substantial reduction in the levels of pregnant anxiety experience by the participants. It is important to note that this p-value is lower than the standard significance level of 0.05.
- During the third trimester of their pregnancy, first-time mothers who practice prenatal gentle yoga experience a reduction in their levels of anxiety as they get ready to give birth.
- [9] **Research Methodology:** Quasi-experimental **Conduct** an experiment using a pretest and posttest design. **Example:** A group of 30 women who are now pregnant. **Tool:** Survey **Variables:** Anxiety and Readiness **Analysis:** Independent samples t-test Wilcoxon
- The intervention resulted in a significant reduction in anxiety levels. Prior to the intervention, the average anxiety score was 19.67, which reduced to 10.80 after the intervention. Bivariate analysis yielded a p-value of 0.005.
- Prenatal yoga significantly affects the anxiety levels and preparation of primigravida women in managing the delivery process.
- [16] The design of the study featured a quasi-experiment with a control group and a pre-post test phase. Twenty pregnant women is the sample. A questionnaire is the instrument. Anxiety is the variable. T-test with independent samples used for analysis
- Between the experimental group and the control group, the mean anxiety score after the intervention was 8.35, while the control group's score was 23.05, resulting in an average difference of -14.700 between the two groups. The estimated p-value was found to be 0.000, which is less than the threshold of 0.05.
- The practice of prenatal gentle yoga has been shown to have an effect on the levels of anxiety experienced by pregnant women in their third trimester as they get ready to give birth.
- [22] The study was designed using a quasi-experiment design with one group for both the pre-test and the post-test. Twenty pregnant ladies are used as an example. A questionnaire is an instrument. A variable that is anxious about laboring. Statistical analysis using the independent t-test.
- The results of the statistical tests indicate that pregnant women who participated in prenatal yoga experienced a significant drop in their average anxiety level, which was 22.15 points lower than it was before they participated in the program. A p-value of 0.000 ( $p < 0.05$ ) indicates that prenatal yoga had a significant impact on the levels of anxiety experienced by pregnant women throughout their pregnancy.
- It is possible that women who are in their second or third trimester of pregnancy who practice prenatal yoga will experience a reduction in the amount of anxiety they are experiencing.
- [23] In this study, the control group was designed to have both a pre-test and a
- Based on the findings of this study, it appears that the
- The incorporation of yoga into the routine of pregnant women is a



post-test. Take thirty pregnant ladies as a representative sample. In this case, the instrument is the questionnaire. One of the variables is anxiety. In order to conduct the analysis, the non-parametric Man-Whitney test was utilized.

practice of yoga during pregnancy has a substantial impact on lowering the levels of anxiety experienced by women who are currently in the third trimester of pregnancy. Due to the fact that the p-value for this study is lower than 0.001, it can be concluded that the finding is statistically significant.

crucial element that can effectively alleviate anxiety in the final stage of pregnancy.

[15] This study employs a pre-experimental research design, specifically using a single group in both the pre-test and post-test phases. Select a cohort of forty-eight pregnant women in their third trimester for sampling purposes. The questionnaire serves as the tool or device used to collect information or data. The Wilcoxon test was employed for data analysis.

There were 58.3% of pregnant women who experienced severe anxiety prior to the yoga intervention, 2.1% of moms who did not experience any anxiety, 2.1% of mothers who experienced mild anxiety, and 37.5% of mothers who experienced moderate anxiety around their pregnancy. After participating in pregnant yoga, the majority of mother report having a light anxiety level, which accounts for 54.1% of the total. On the other hand, 16.7% of women report having no anxiety at all, while 14.6% of mothers report having moderate or severe anxiety levels. The Wilcoxon test revealed statistically significant results.

A study has shown that prenatal yoga can have an effect on the amount of anxiety that pregnant women experience.

Additionally, asanas impact the endocrine glands, reducing stress hormones and increasing the secretion of relaxation hormones. This can effectively alleviate anxiety in pregnant women [14]. It is possible to predominantly stimulate the parasympathetic nervous system through the practice of pranayama, which involves deep breathing methods. This is accomplished by expanding lung tissue and stimulating the vagal nerves. The physiological response that occurs as a consequence of this is characterized by a decrease in the rate of the heart, blood pressure, metabolic rate, and oxygen consumption. One of the ways that deep breathing can help pregnant women feel less anxious is by enhancing neuroplasticity, which is the adaptive rearranging of brain circuitry [3]. The meditation technique used in this activity is guided imagery, where pregnant women are advised to assume a comfortable position and then instructed to close their eyes and visualize as told by the instructor. Utilizing meditation (dhyana) during pregnancy can be advantageous in promoting a seamless and natural pregnancy and childbirth while also ensuring the infant's well-being [22]. Prenatal gentle yoga activities offer physical, mental, and spiritual preparation for pregnant women, equipping them with knowledge and skills to alleviate anxiety during pregnancy and labor, ultimately enhancing their readiness for the birthing process.

#### 4. Conclusions

Pregnant women who are approaching their due date have a high level of anxiety, especially primigravida pregnant women, which has an impact on the health of the mother and fetus. In this research review, it [38] found that prenatal yoga, which has mind and body, has a significant effect on overcoming anxiety in pregnant women facing childbirth. The need for maternal awareness to carry out prenatal yoga activities for the health of the mother and fetus.

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