

EXPLORING THE IMPACT OF MODIFIED PRENATAL YOGA ON EMOTIONAL WELL-BEING AMONG THIRD-TRIMESTER PREGNANT WOMEN: A QUALITATIVE PHENOMENOLOGICAL STUDY

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ABSTRACT

Third-trimester anxiety affects 28–34% of pregnant women globally and is associated with adverse birth outcomes. Prenatal yoga represents a promising non-pharmacological intervention, yet qualitative evidence exploring women's lived experiences remains limited. This study aimed to explore the impact of modified prenatal yoga on emotional well-being among third-trimester pregnant women through phenomenological inquiry. A qualitative phenomenological design was employed with ten purposively sampled third-trimester pregnant women attending prenatal yoga classes at Pondok Labu Primary Health Center, Jakarta. Data were collected via in-depth semi-structured interviews, participant observation, and document review, then analysed using Braun and Clarke's six-phase thematic analysis. Five interconnected themes emerged: (1) enhanced calmness and emotional regulation through mind-body integration; (2) deepened maternal-fetal bonding facilitated by mindful awareness; (3) cognitive reframing and enhanced childbirth self-efficacy through positive affirmations; (4) holistic wellness integration addressing physical-emotional-spiritual dimensions; and (5) perceived program value and sustainability expectations. Participants reported transformative experiences characterized by anxiety reduction, increased confidence, and strengthened maternal identity. Modified prenatal yoga positively influences third-trimester emotional well-being through multidimensional mechanisms encompassing physiological relaxation, cognitive restructuring, and relational bonding. These findings support integration of prenatal yoga as a routine component of primary maternity care to address perinatal mental health needs.

Keywords: *prenatal yoga, emotional, qualitative, third trimester, maternal mental health, phenomenology*

INTRODUCTION

Pregnancy constitutes a critical developmental transition characterized by profound biopsychosocial adaptations¹.

The third trimester is a crucial period for preparing the body for childbirth², represents a period of heightened psychological vulnerability, with 28–34%

of pregnant women experiencing clinically significant anxiety symptoms globally^{3,4}. Maternal anxiety during late pregnancy is associated with adverse outcomes including preterm birth, prolonged labor, increased caesarean delivery rates, and impaired maternal-infant attachment⁵. These associations underscore the imperative for effective, accessible interventions supporting perinatal mental health.

Prenatal yoga, a mind-body practice that integrates physical postures (asanas), breath regulation (pranayama), meditation, and relaxation, has emerged as a promising non-pharmacological approach to alleviating anxiety and depression during pregnancy⁶⁻⁸. Systematic reviews and meta-analyses demonstrate consistent evidence that prenatal yoga interventions significantly reduce anxiety and depressive symptoms compared to standard care or active controls^{9,10}. A recent randomized controlled trial (YOGESTA) involving 200 pregnant women revealed that structured prenatal yoga program significantly reduced perceived stress (Cohen's $d=0.68$), anxiety ($d=0.54$), and depression ($d=0.47$) while improving quality of life across multiple domains¹¹.

Previous studies have shown that prenatal yoga can reduce stress and anxiety levels in pregnant women, improve sleep quality, and strengthen the emotional bond between mother and fetus¹²⁻¹⁹. In this study, researchers provided modified prenatal yoga interventions with a modified sequence including mindfulness, breathing exercises, warm-ups, yoga asanas (poses), and relaxation using props such as birth balls and yoga blocks. The exercise in the session emphasized instilling positive affirmations and communicating with the fetus from the beginning to the end of the

session, focused on childbirth preparation and maternal-fetal connection.

Despite robust quantitative evidence, qualitative research exploring pregnant women's lived experiences of prenatal yoga remains scarce^{20,21}. Understanding the subjective meanings women ascribe to their yoga practice is essential for optimizing intervention design, enhancing acceptability, and identifying mechanisms underlying observed effects²². Phenomenological inquiry is a rigorous methodological approach that captures the essence of lived experience. It provides rich contextual insights that complement experimental findings²³.

In the Indonesian primary healthcare context, the promotion of maternal health is traditionally centered around 'Kelas Ibu Hamil' (antenatal classes). While these programs successfully deliver standardized biomedical education and basic physical exercises, they prioritize clinical outcomes to the detriment of the psychological and emotional vulnerabilities of expectant mothers. Consequently, perinatal anxiety is not adequately addressed due to limited resources and the absence of integrated mental health sub-programs within routine care. This study addresses this critical issue by implementing a modified prenatal yoga protocol specifically designed to support the emotional and holistic needs of women in their third trimester within the infrastructure of public health centers.

METHODS

This study employed a descriptive phenomenological design grounded in Husserlian philosophy²⁴, which seeks to describe the essential structures of lived experience as they appear to consciousness. The phenomenological approach was selected for its capacity to capture the

subjective, first-person perspectives of participants while maintaining methodological rigor through systematic data collection and analysis procedures.

The study was conducted at Pondok Labu Primary Health Center (Puskesmas Pondok Labu) in South Jakarta, Indonesia, between July and October 2025. The researcher offers a structured prenatal yoga program consisting of 60-minute session, led by a certified midwife-instructor trained in prenatal gentle yoga. The modified prenatal yoga program is divided into five structured phases: (1) Centering/mindfulness (5 minutes), (2) Pranayama/deep diaphragmatic breathing (10 minutes), (3) Warming up (10 minutes), (4) Modified asanas utilizing yoga blocks and mattress to support pelvic alignment (25 minutes), (5) Guided savasana with positive affirmations and fetal communication (10 minutes).

Purposive sampling was employed to recruit participants who could provide information-rich accounts of the phenomenon under investigation²⁵. Inclusion criteria were: (1) third-trimester pregnancy (≥ 28 weeks gestation); (2) ability to communicate fluently in Indonesian; (3) willingness to participate in in-depth interviews; and (4) absence of high-risk pregnancy complications requiring specialized obstetric care. Ten pregnant women were recruited, a sample size consistent with phenomenological research principles emphasizing depth over breadth and aligned with recommendations for achieving data saturation in homogeneous samples²⁶.

Third-trimester pregnant women (≥ 28 weeks) were purposely selected due to their heightened psychological vulnerability, which is characterized by acute childbirth anxiety, catastrophic

thinking and physical discomfort that typically peaks during the final weeks of pregnancy. Focusing on this critical period enables a deeper exploration of how yoga can facilitate immediate cognitive reframing and emotional stabilization before labor begins.

Data were collected through three complementary methods to enhance trustworthiness through triangulation²⁷:

In-depth Semi-structured Interviews: Individual interviews lasting 45–75 minutes were conducted in a private room at the health center. An interview guide developed through literature review and expert consultation explored: 1) participants' feelings after doing prenatal yoga; 2) feelings when trying to communicate with the fetus during the prenatal yoga session; 3) your feelings when saying positive affirmations during the prenatal yoga session; 4) participants' opinions about the perceived differences between modified prenatal yoga and other pregnancy exercises or workouts; 5) feelings after doing prenatal yoga as a whole; and 6) expectations after participating in this modified prenatal yoga session. Interviews were audio-recorded with participants' consent and transcribed verbatim in Indonesian.

Participant Observation: The authors attended a prenatal yoga session, documenting observations of participants' engagement, interactions, and non-verbal expressions in detailed field notes. Observational data provided contextual understanding and triangulated interview accounts.

Document Review: Program attendance records, participants' personal journals (when available), and clinical notes were reviewed to corroborate self-

reported experiences and track participation patterns.

In order to establish credibility in this single-session intervention design, the researchers focused on achieving and maintaining persistent and intensive engagement during the designated field interaction. The first author, who is a certified prenatal yoga instructor, personally led the 60-minute session and was present throughout the subsequent 45–75 minute in-depth interviews. This ensured an immediate, contextualized and empathetic environment for data collection. To prevent 'going native' and maintain analytical objectivity despite the intimate setting, the researchers used structural bracketing and maintained continuous reflexive journaling to separate their own professional preconceptions from the participants' raw expressions. Furthermore, peer debriefing was conducted bi-weekly throughout the analysis phase. These peers included two senior midwifery lecturers and a qualitative research expert from Poltekkes Kemenkes Jakarta I. This ensured an impartial and rigorous audit of the emerging themes.

Transcripts were analysed using Braun and Clarke's six-phase reflexive thematic analysis²⁷, a flexible yet rigorous approach compatible with phenomenological inquiry: 1) Familiarization: Repeated reading of transcripts while noting initial impressions; 2) Coding: Systematic line-by-line coding to identify semantic and latent meanings; 3) Theme Development: Collating codes into candidate themes representing patterns across the dataset; 4) Theme Review: Iteratively refining themes to ensure internal coherence and external distinctiveness; 5) Theme Definition: Articulating the essence of each theme and

its contribution to the overall narrative; 6) Report Writing: Selecting compelling extracts to illustrate themes and contextualizing findings within existing literature.

Analysis was conducted collaboratively by three researchers (YLA, M, AA) to enhance interpretive rigor. NVivo 12 software facilitated data management and coding. The analytical process moved iteratively between data, codes, and emerging themes, maintaining fidelity to participants' accounts while identifying shared patterns.

Lincoln and Guba's criteria for qualitative rigor were addressed: Credibility through prolonged engagement, triangulation, and member checking (participants reviewed preliminary findings); Transferability through thick description enabling readers to assess applicability to other contexts; Dependability through detailed audit trails documenting analytical decisions; and Confirmability through reflexive journaling and peer debriefing to acknowledge researcher positionality and minimize interpretive bias.

Ethical approval was obtained from the Research Ethics Committee of Poltekkes Kemenkes Jakarta I (No. 020/KEPK-PKJI/VII/2025). All participants provided written informed consent after receiving comprehensive information about study purposes, procedures, risks, and benefits. Confidentiality was maintained through pseudonymization, and participants retained the right to withdraw at any time without consequences for their clinical care.

RESULTS AND DISCUSSIONS

Participants' Characteristics

Based on Table 1, the results of data analysis show that the participants were dominated by pregnant women aged 20–35 years (90%). This indicates that the

majority of respondents in the study were of healthy reproductive age. All participants were at the third trimester, more than half of them were multigravidas.

Table 1. Characteristics Distribution (N=10)

Characteristics	Frequency (n)	Percentage (%)
Age (years)		
20-35	9	90
= > 35	1	10
Gestational Age (weeks)		
28–29	3	30
30–32	4	40
33–34	1	10
35–37	2	20
Parity		
Primigravida	4	40
Multigravida	6	60
Education		
Elementary-High school	8	80
Diploma/Bachelor's	2	20
Employment		
Employed	4	40
Housewife	6	60
Total	10	100

Analysis of the mothers' education shows that the majority had a high school education (80%). According to the occupations, most of the mothers were housewives (60%), so they had more flexible time to participate in activities.

Thematic findings

Five interconnected themes emerged from the analysis, capturing the multidimensional nature of participants' experiences with prenatal yoga and its perceived impact on emotional well-being.

a. Theme 1: Enhanced calmness and emotional regulation through mind-body integration

All participants described experiencing profound calmness during

and following the yoga session, characterized by reduced anxiety, diminished rumination, and increased emotional stability. This calmness was attributed to the integration of breath awareness, gentle movement, and focused attention:

"When I do the breathing exercises, it's like all my worries just flow out with each exhale. My mind becomes quiet, and I feel this deep peace I never experienced before pregnancy." (P3)

Participants contrasted this state with their typical emotional volatility, describing yoga as creating a "safe space" where they could temporarily

escape pregnancy-related stressors. The physiological sensations of relaxation—slowed breathing, muscle release, warmth—were interpreted as evidence of yoga's effectiveness:

"After the final relaxation, my whole body feels loose, like I'm floating. That physical feeling of letting go helps me realize I can also let go of my anxious thoughts." (P7)

Several participants reported transferring breath-regulation techniques learned in yoga to manage

acute anxiety episodes at home, demonstrating skill generalization beyond the class context²⁸.

Prenatal yoga can help pregnant women reduce stress by increasing endorphin production. Endorphins are hormones that can provide relaxation and improve mood. In addition, prenatal yoga can also help pregnant women release muscle and mental tension. Prenatal yoga can help pregnant women feel more in control of their pregnancy. This can reduce anxiety caused by feelings of insecurity or uncertainty²⁹.

Table 2. Summary of Themes and Subthemes

Theme	Key Dimensions	Representative Participant Experiences
1. Enhanced Calmness and Emotional Regulation	Anxiety reduction; Rumination decrease; Emotional stability; Skill generalization	Profound peace during practice; Transfer of breath techniques to daily life; Reduced emotional volatility
2. Deepened Maternal-Fetal Bonding	Mindful awareness; Fetal communication; Maternal identity formation	Heightened sensitivity to fetal movements; Visualization of baby; Anticipatory love and protectiveness
3. Cognitive Reframing and Enhanced Self-Efficacy	Positive affirmations; Fear reduction; Mastery experiences; Optimistic expectancy	Reframing childbirth narratives; Increased confidence in coping ability; Reduced catastrophic thinking
4. Holistic Wellness Integration	Physical-emotional-spiritual connection; Whole-person care; Faith compatibility	Simultaneous relief of multiple symptoms; Integration with religious practices; Sense of wholeness
5. Program Value and Sustainability	Accessibility appreciation; Barrier identification; Continuity concerns	Advocacy for program expansion; Desire for postnatal options; Need for home practice guidance

The results of Battle et al's (2015) study showed a decrease in anxiety and depression over time using the Quick Inventory of Depressive

Symptomatology (QIDS) and the Edinburgh Postnatal Depression Scale. The initial anxiety score before the intervention was 10, and after the 10-

week intervention, the anxiety score decreased to 5²⁹. These results indicate that prenatal yoga intervention is feasible and acceptable for pregnant women. No study-related injuries or other safety concerns were observed during the trial. Participants' average anxiety and depression scores decreased significantly, especially at the end of the intervention²⁹.

The results of Kusaka et al.'s (2016) study showed a significant decrease in anxiety after prenatal yoga intervention using POMS scores, Trait-Anxiety, Depression, Anger-Hostility, Fatigue, and Confusion, which decreased significantly after yoga classes at times 1 and 2³⁰. The percentage of women who showed a decrease in the negative mood dimension of POMS at time 1 was as follows: (77.2%) tension-anxiety, (65.9%) depression, 85 77.2% anger-hostility, (81.8%) fatigue, and (79.5%) confusion. The percentages at time 2 were as follows: (60.0%) tension-anxiety, (57.1%) depression, (48.6%) anger, (74.3%) fatigue, and (68.6%) confusion³⁰.

This study reinforces previous evidence that nonpharmacological yoga-based approaches are effective for supporting mental health during pregnancy^{17,19,31}. In addition, these findings have practical implications for healthcare providers in primary care settings to integrate modified prenatal yoga programs as a promotive and preventive intervention for pregnant women.

b. Theme 2: Deepened maternal-fetal bonding facilitated by mindful awareness

Participants (80%) consistently described how yoga's emphasis on mindful body awareness and intentional attention to fetal movements strengthened their sense of connection with their unborn babies. The practice provided dedicated time and space for maternal-fetal communication:

"During yoga, especially in the quiet moments, I really focus on my baby. I feel her movements more clearly, and I talk to her in my mind. It's like we're doing yoga together." (P5)

This heightened awareness fostered feelings of maternal protectiveness, responsibility, and anticipatory love. Participants described visualization exercises—imagining the baby's position, picturing the birth process—as particularly powerful for cultivating relational intimacy:

"When the instructor guides us to visualize holding our baby, I can almost feel her in my arms. It makes the baby feel more real, not just a belly but a person I'm going to meet soon." (P2)

The bonding theme was especially prominent among primigravidae, who reported that yoga helped them transition psychologically into motherhood by making the maternal role feel tangible and meaningful²⁸.

c. Theme 3: Cognitive reframing and enhanced childbirth self-efficacy through positive affirmations

Participants valued the integration of positive affirmations and guided imagery focused on childbirth confidence and maternal capability.

These cognitive techniques facilitated reframing of childbirth from a feared ordeal to an anticipated accomplishment:

"I feel touched and sad because my first child will be born into this world soon." (P10)

"When I say positive affirmations, my feelings become calmer. What was previously emotional and uncomfortable becomes more comfortable and relaxed." (P8)

Participants described how affirmations countered negative cultural narratives surrounding childbirth pain and danger, replacing catastrophic thinking with optimistic expectancy. This cognitive shift was accompanied by increased self-efficacy—confidence in their ability to cope with labor demands:

"Yoga taught me that I'm stronger than I thought. If I can hold difficult poses and control my breathing, I can handle contractions too. It's the same skills." (P4)

The theme reflects cognitive-behavioral mechanisms whereby repeated positive self-statements and mastery experiences (successfully completing yoga poses) enhance perceived control and reduce anticipatory anxiety^{32,33}.

Prenatal yoga is a form of non-pharmacological intervention to overcome anxiety in pregnant women³⁴. Prenatal yoga is a skill of mind management, in the form of a comprehensive personality development technique that encompasses physical, psychological, and spiritual aspects. Prenatal yoga is one of the best ways for

pregnant women to stay healthy during their pregnancy. Prenatal yoga can help pregnant women prepare for childbirth and also improve the health of the baby³⁵.

d. Theme 4: Holistic wellness integration addressing physical-emotional-spiritual dimensions

Participants appreciated yoga's holistic approach, which simultaneously addressed physical discomforts, emotional distress, and spiritual well-being. Unlike conventional antenatal care perceived as narrowly biomedical, yoga was experienced as attending to the whole person:

"Yoga doesn't just treat my back pain or my anxiety separately. It's all connected—when my body feels better, my mood improves, and when I'm spiritually centered, everything else follows." (P6)

"After doing yoga, I feel more relaxed, my breathing is more regular, my body feels better, and my emotions feel more controlled." (P10)

This integrative experience fostered a sense of wholeness and balance, countering the fragmentation often associated with medicalized pregnancy care.

Participants consider prenatal yoga to be different from other forms of exercise because the movements are gentle, not tiring, and provide inner peace. They feel that yoga is not just a physical activity, but also a mental and spiritual practice.

Breathing exercises in prenatal yoga also help reduce stress and anxiety

experienced by mothers during pregnancy. This is because breathing techniques in prenatal yoga can increase parasympathetic activity, regulate breathing, and provide a feeling of calm and relaxation. In addition, serotonin levels increase and cortisol levels decrease, thereby preventing stress during pregnancy^{6,17,19,36,37}.

Yoga exercises performed during pregnancy can strengthen the muscles that support the pregnancy process, help the mother's breathing and balance the body to prepare the mother for childbirth. Some of the movements performed in prenatal yoga are focused on helping pregnant women reduce various complaints. In addition to improving the mother's physical condition, prenatal yoga can also reduce stress during pregnancy³⁸.

Some other benefits of prenatal yoga are for the mental and spiritual health of pregnant women. Prenatal yoga can be used as a self-help medium to help pregnant women when they feel anxiety and fear. Breathing techniques in prenatal yoga can be useful for controlling negative thoughts, emotions, worries, and self-confidence during pregnancy. This can increase inner peace, self-acceptance, and surrender when going through difficulties in the pregnancy and childbirth process later on.

Prenatal yoga is also one of several alternatives that can provide balance to the body, mind, and personality. One way to reduce discomfort during pregnancy is through prenatal yoga². Prenatal yoga is a safe form of exercise during pregnancy. Prenatal yoga, when done regularly, can reduce discomfort felt by pregnant women in their third

trimester³⁹. Pregnant women are encouraged to do prenatal yoga regularly every week as an effort to help maintain the elasticity and strength of the pelvic ligaments, hips, and leg muscles, thereby reducing the pain caused by the birthing process.

e. Theme 5: Perceived program value and sustainability expectations

All participants expressed strong appreciation for the prenatal yoga program and advocated for its continuation and expansion. They perceived yoga as a valuable, low-cost intervention that should be routinely available in primary care settings:

"This program is so helpful and it's free! Every pregnant woman should have access to it. I wish I had known about it earlier in my pregnancy." (P10)

However, participants identified barriers to sustained practice, including competing time demands, lack of home practice guidance, and absence of postnatal yoga options. Several expressed concern about losing the benefits gained during pregnancy if yoga practice ceased after delivery:

"I want to keep doing yoga after my baby is born, both for my recovery and to maintain this calmness I've found. But I don't know if there will be classes I can attend with a newborn." (P1)

Participants recommended integrating yoga education into routine antenatal visits, providing home practice resources, and establishing postnatal yoga programs to ensure continuity of care⁴⁰.

Importantly, our findings suggest that yoga's emphasis on mindful body awareness and intentional fetal-directed attention creates conditions conducive to attachment formation. The practice provides pregnant women with structured opportunities to "be with" their babies in a focused, meditative way, fostering relational intimacy that participants described as transformative.

This finding has important implications for understanding prenatal yoga's mechanisms of action. Enhanced maternal-fetal bonding may mediate yoga's effects on emotional well-being by increasing maternal motivation to engage in health-promoting behaviors, reducing ambivalence about pregnancy, and fostering a sense of purpose and meaning that buffers against depressive symptoms.

Pathophysiological Mechanism

From a pathophysiological standpoint, specific yoga components, including *pranayama* (breathing), meditation, and *asanas* (postures), significantly boost vagal tone to promote predominant parasympathetic activity⁴¹. Recent studies heavily highlight yoga's role in improving physical and mental well-being through the modulation of the autonomic nervous system (ANS). This involuntary regulatory system balances the sympathetic ('fight or flight') and parasympathetic ('rest and digest') networks. Evidence demonstrates that structured yoga intervention facilitates autonomic balance by actively stimulating parasympathetic pathways and dampening sympathetic stress responses^{42,43}.

Kaur and Ahluwalia (2025) reported evidence that engagement in yoga yields substantial improvements in heart rate

variability (HRV) parameters, decreased cortisol secretion and heightened stress recovery capacities⁴¹. This indicates a clear transition from sympathetic activation to parasympathetic dominance. Of the various components, *pranayama* (yogic breathing) is a particularly effective way to stimulate the vagal nerve, as slow, deep breathing with prolonged exhalations activates the parasympathetic nervous system via vagal afferent pathways. While breathing exercises offer the most immediate pathway to vagal activation, physical postures (*asanas*) also support this parasympathetic shift through distinct bodily mechanisms that optimize overall vagal tone⁴¹.

Implementation considerations

Participants' strong endorsement of the prenatal yoga program, coupled with their identification of sustainability barriers, provides actionable guidance for implementation in primary healthcare settings. The key recommendations are as follows: (1) integrating brief yoga education into routine prenatal visits, (2) offering prenatal yoga classes, (3) creating postnatal yoga programs to ensure continuity, and (4) training midwives to facilitate basic prenatal yoga to increase scalability.

The Indonesian context, characterized by well-established primary health center infrastructure, a robust midwifery workforce, and cultural openness to complementary practices, presents favorable conditions for integrating yoga. However, limited space, competing service demands, and a lack of instructor training are barriers that require systematic attention.

Strengths and limitations

This study's strengths include its rigorous phenomenological methodology, triangulation of multiple data sources, reflexive analytical approach, and focus on an under-researched population. The findings provide rich, contextualized insights that complement and extend quantitative yoga research.

Limitations include the single-site design, which may limit transferability to other Indonesian regions or cultural contexts. The absence of a comparison group precludes causal inferences about yoga's effects. Future research should employ mixed-methods designs comparing yoga participants with matched controls, longitudinal follow-up to assess postpartum outcomes, and multi-site studies encompassing diverse socioeconomic and cultural contexts.

CONCLUSIONS

This phenomenological inquiry reveals that modified prenatal yoga positively influences third-trimester emotional well-being through multidimensional mechanisms encompassing physiological relaxation, cognitive restructuring, enhanced maternal-

fetal bonding, holistic wellness integration, and spiritual meaning-making. Pregnant women experience yoga not merely as an exercise intervention but as a transformative practice that addresses their physical, emotional, relational, and spiritual needs during a vulnerable life transition.

Future research should examine long-term outcomes, mechanisms of action through mixed-methods designs, and optimal implementation strategies for diverse healthcare settings. By illuminating pregnant women's lived experiences, this study contributes to a more comprehensive understanding of how mind-body practices promote maternal mental health and well-being.

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REFERENCES

1. Guardino CM, Schetter CD. *Understanding Pregnancy Anxiety: Concepts, Correlates, and Consequences*. Los Angeles, 2014.
2. Aprillia Y. *Prenatal Gentle Yoga*. Jakarta: Gramedia Pustaka Utama, 2020.
3. Bayrampour H, Ali E, McNeil DA, et al. Pregnancy-related anxiety: A concept analysis. *Int J Nurs Stud* 2016; 55: 115–130.
4. Biaggi A, Conroy S, Pawlby S, et al. Identifying the women at risk of antenatal anxiety and depression : A systematic review. *J Affect Disord* 2016; 191: 62–77.
5. Staneva A, Bogossian F, Pritchard M, et al. The effects of maternal depression , anxiety , and perceived stress during pregnancy on preterm birth : A systematic review. *Women and Birth* 2015; 28: 179–193.
6. Thakur J, Thakur J. Yoga in pregnancy: A boon to motherhood. *J Ayurveda Holist Med* 2016; 3: 121–129.
7. Quzmar Y, Istiatieh Z, Nabulsi H, et al. The use of complementary and alternative medicine during pregnancy: a cross-sectional study from Palestine. *BMC Complement*

- Med Ther* 2021; 21: 1–11.
8. Corrigan L, Moran P, McGrath N, et al. The characteristics and effectiveness of pregnancy yoga interventions: a systematic review and meta-analysis. *BMC Pregnancy Childbirth* 2022; 22: 1–22.
 9. Xiang Q, Venkatanarayanan N, Loke W, et al. Complementary Therapies in Clinical Practice A meta-analysis of the effectiveness of yoga-based interventions for maternal depression during pregnancy. *Complement Ther Clin Pract* 2020; 34: 8–12.
 10. Kwon R, Kasper K, London S, et al. European Journal of Obstetrics & Gynecology and Reproductive Biology Review article A systematic review : The effects of yoga on pregnancy. *Eur J Obstet Gynecol* 2020; 250: 171–177.
 11. Nadholta P, Kumar K, Saha PK, et al. Mind-body practice as a primer to maintain psychological health among pregnant women – YOGESTA – a randomized controlled trial. *Front Public Heal*. Epub ahead of print 2023. DOI: 10.3389/fpubh.2023.1201371.
 12. Astuti YL, Chou H, Liu C, et al. Prenatal Gentle Yoga Helps Pregnant Women in Reducing Fear of Childbirth. 2023; 11: 95–102.
 13. Astuti YL, Kao C-H. Penerjemahan dan validasi instrumen takut melahirkan ke dalam bahasa indonesia: W-DEQ Versi A. *J Midwifery Sci Women's Heal* 2022; 3: 23–31.
 14. Azward H, Ramadhany S, Pelupessy N, et al. Prenatal yoga exercise improves sleep quality in the third trimester of pregnant women &. *Gac Sanit* 2021; 35: S258–S262.
 15. Babbar S, Parks-Savage A, Chaihan SP. Yoga during Pregnancy: A Review. *Am J Perinatol* 2012; 29: 459–464.
 16. Battle CL, Uebelacker LA, Magee SR, et al. Potential for prenatal yoga to serve as an intervention to treat depression during pregnancy. *Women's Heal Issues* 2015; 25: 134–141.
 17. Field T. Yoga clinical research review. *Complement Ther Clin Pract* 2011; 17: 1–8.
 18. Hamdiah H, Suwondo A, Hardjanti TS, et al. Effect of Prenatal Yoga on Anxiety, Blood Pressure, and Fetal Heart Rate in Primigravidas Mothers. *Belitung Nurs J* 2017; 3: 246–254.
 19. Newham JJ, Wittkowski A, Hurley J, et al. Effects of antenatal yoga on maternal anxiety and depression: A randomized controlled trial. *Depress Anxiety* 2014; 31: 631–640.
 20. Mercedes M, Buttner MM. Efficacy of Yoga for Depressed Postpartum Women : a Randomized Controlled Trial .
 21. Muzik M, Hamilton SE, Lisa Rosenblum K, et al. Mindfulness yoga during pregnancy for psychiatrically at-risk women: Preliminary results from a pilot feasibility study. *Complement Ther Clin Pract* 2012; 18: 235–240.
 22. Smith JA, Flowers P, Larkin M. Interpretative Phenomenological Analysis: Theory, Method and Research. *SAGE Publ* 2021; 1–5.
 23. Braun V, Clarke V. *Thematic analysis*. 2021. Epub ahead of print 2021. DOI: 10.1037/13620-004.
 24. Manen M Van. *Phenomenology of Practice*. Second Edi. New York: Routledge, 2023.
 25. Baker S, Waterfield J, Bartlam B. Saturation in qualitative research : exploring its conceptualization and operationalization. *Qual Quant* 2018; 52: 1893–1907.
 26. Vasileiou K, Barnett J, Thorpe S, et al. Characterising and justifying sample size sufficiency in interview-based studies : systematic analysis of qualitative health research over a 15-year period. 2018; 7: 1–18.
 27. Braun V. Using thematic analysis in psychology. 2006; 1–41.
 28. Alhusen JL. A literature update on maternal-fetal attachment. *J Obstet Gynecol Neonatal Nurs* 2008; 37: 315–328.

29. Ginting A. Effectiveness Of Prenatal Yoga In Reducing Anxiety And Back Pain In Pregnancy: A Systematic Literature Review. *J Anesthesiol Clin Res* 2024; 5: 531–4.
30. Kusaka M, Matsuzaki M, Shiraishi M, et al. Immediate stress reduction effects of yoga during pregnancy : One group pre – post test. *Women and Birth* 2016; 29: e82–e88.
31. Astuti YL, Chou H, Liu C, et al. The Effect of Prenatal Gentle Yoga on Maternal-Fetal Attachment among First-time Expectant Mothers in Indonesia. *J Midwifery Reprod Heal* 2021; 3: 1–10.
32. Chen P, Yang L, Chou C, et al. Complementary Therapies in Medicine Effects of prenatal yoga on women ' s stress and immune function across pregnancy : A randomized controlled trial. 2017; 31: 109–111.
33. Putri CRA, Arlym LT, Yuanti Y. Pengaruh Prenatal Yoga dalam Mengurangi Kecemasan pada Kehamilan: Systematic Literature Review. *J Akad Baiturrahim Jambi* 2022; 11: 81.
34. Jannah M, Ningsih TR. PENGARUH PRENATAL YOGA TERHADAP TINGKAT KECEMASAN PADA IBU HAMIL: LITERATURE REVIEW. *J Ilmu Keperawatan dan Kebidanan* 2021; 12: 279–286.
35. Noriani NK, Nurtini NM, Dewi KP. TINGKAT PENGETAHUAN DAN MINAT IBU HAMIL TENTANG PRENATAL YOGA DI PUSKEMAS II DENPASAR SELATAN. *J Kesehat Terpadu* 2017; 1: 34–39.
36. Sulastri A, Syamsuddin S, Idris I, et al. The effectiveness of gentle prenatal yoga on the recovery of anxiety level in primigravid and multigravid pregnant women. *Gac Sanit* 2021; 1: S245-7.
37. Williams AN. *The impact of mindfulness-based prenatal yoga on maternal attachment*. California State University, Stanislaus, 2015.
38. Margawati A, Syauqy A, Utami A, et al. Anxiety among Pregnant Women in Rural-Urban Area Indonesia during the COVID-19 Pandemic in Semarang, Indonesia. *Open Access Maced J Med Sci* 2022; 10: 1830–1837.
39. Wayan N, Adnyani S, Dewi AAS, et al. Pengaruh Kombinasi Prenatal Yoga dan Inhalasi Aromaterapi Lavender terhadap Kecemasan pada Ibu Hamil Trimester III. *J Genta Kebidanan* 2023; 12: 50–56.
40. World Health Organization. *WHO Recommendations on Antenatal Care for A Positive Pregnancy Experience*,
https://www.researchgate.net/publication/269107473_What_is_governance/link/548173090cf22525dcb61443/download%0Ahttp://www.econ.upf.edu/~reynal/Civilwars_12December2010.pdf%0Ahttps://think-asia.org/handle/11540/8282%0Ahttps://www.jstor.org/stable/41857625 (2016).
41. Kaur A, Ahluwalia PS. The Vagus Nerve and Yoga : Parasympathetic Activation Through Practice. *Sanatanodaya* 2025; 2: 358–366.
42. Naragatti S. A Comparative Analysis of Yoga Practices and their Effects on Autonomic Nervous System Functionality. *Int J Sci Res* 2025; 14: 555–563.
43. Shobana R, Maheshkumar K, Venkateswaran ST, et al. Effect of long - term yoga training on autonomic function among the healthy adults. *J Fam Med Prim Care* 2022; 11: 3471-5.