



Mindfulness Supports Maternal Mental Health

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Abstract. *This study aims to explore the role of mindfulness in supporting maternal well-being. It adopts a qualitative research approach through a systematic literature review. The data used are secondary sources obtained from a variety of scientific materials, including indexed national and international journal articles, academic books, research reports, dissertations, theses, and official publications from related institutions. Scientific journal articles published between 2020 and 2025 are collected from leading databases such as PubMed, Scopus, ScienceDirect, PsycINFO, and Google Scholar. Recent literature highlights mindfulness as a promising intervention to improve maternal well-being during pregnancy. It offers psychological benefits, supports physiological regulation, and strengthens the bond between mother and baby. Mindfulness as a promising intervention to improve maternal well-being during pregnancy. It offers psychological relief, physiological regulation, and a stronger mother-baby connection. However, more rigorous, inclusive, and long-term research is needed to fully understand this potential and optimize its application in prenatal care. Although the benefits of mindfulness during pregnancy are promising, there are limitations in the amount of research currently available. Many studies rely on self-reported measures, which may be susceptible to bias. Sample sizes are often small and may lack diversity in terms of race, socioeconomic status, or previous mental health conditions. In addition, not all mindfulness interventions are standardized, which makes it difficult to compare results across different studies.*

Keywords: *Maternal well-being, Mental Health, Mindfulness, Pregnancy, Stress reduction*

Abstrak. Studi ini bertujuan untuk mengeksplorasi peran mindfulness dalam mendukung kesejahteraan maternal. Ini mengadopsi pendekatan penelitian kualitatif melalui tinjauan pustaka sistematis. Data yang digunakan adalah sumber sekunder yang diperoleh dari berbagai materi ilmiah, termasuk artikel jurnal nasional dan internasional yang terindeks, buku akademik, laporan penelitian, disertasi, tesis, dan publikasi resmi dari institusi terkait. Artikel jurnal ilmiah yang diterbitkan antara tahun 2020 dan 2025 dikumpulkan dari database terkemuka seperti PubMed, Scopus, ScienceDirect, PsycINFO, dan Google Scholar. Literatur terkini menyoroti mindfulness sebagai intervensi yang menjanjikan untuk meningkatkan kesejahteraan maternal selama kehamilan. Ini menawarkan manfaat psikologis, mendukung regulasi fisiologis, dan memperkuat ikatan antara ibu dan bayi. Mindfulness sebagai intervensi yang menjanjikan untuk meningkatkan kesejahteraan ibu selama kehamilan. Ini menawarkan kelegaan psikologis, regulasi fisiologis, dan koneksi ibu-bayi yang lebih kuat. Namun, penelitian yang lebih ketat, inklusif, dan jangka panjang diperlukan untuk memahami sepenuhnya potensi ini dan mengoptimalkan penerapannya dalam perawatan prenatal. Meskipun manfaat mindfulness selama kehamilan menjanjikan, ada keterbatasan dalam jumlah penelitian yang ada saat ini. Banyak studi mengandalkan ukuran yang dilaporkan sendiri, yang mungkin rentan terhadap bias. Ukuran sampel seringkali kecil dan mungkin kurang keberagaman dalam hal ras, status sosial ekonomi, atau kondisi kesehatan mental sebelumnya. Selain itu, tidak semua intervensi mindfulness terstandarisasi, yang membuat sulit untuk membandingkan hasil di berbagai studi.

Kata kunci: Kesejahteraan Maternal, Kesehatan Mental, Kesadaran, Kehamilan, Pengurangan Stress

1. INTRODUCTION

Pregnancy is often described as one of the most transformative and meaningful periods in a woman's life (Suminaga et al., 2022). While it is a time of great anticipation and joy, it is also a period marked by profound physical, emotional, and psychological changes. Hormonal fluctuations, bodily discomfort, lifestyle adjustments, and the anticipation of labor and parenting responsibilities can lead to heightened levels of stress, anxiety, and

emotional vulnerability (Younis, Alyousefi, Al-Habib, & Al-Omran, 2021). For many expectant mothers, maintaining mental well-being during this time becomes an essential, yet often overlooked, part of prenatal care (Ribeiro, Andrade, & Nunes, 2022). Historically, maternal health has been viewed primarily through a physical and medical lens (ACSM, 2020). While prenatal checkups, nutrition, and physical exercise are vital aspects of ensuring a healthy pregnancy, recent developments in psychological and holistic health research have highlighted the equally important role of mental and emotional well-being. In this context, mindfulness has emerged as a promising, non-invasive, and accessible tool to help support maternal mental health and emotional balance during pregnancy (Wojtyła et al., 2020).

Mindfulness, defined as the ability to be fully present and aware of the moment without judgment, stems from ancient meditative practices, particularly within Buddhist traditions. Over the past few decades, it has gained popularity in Western healthcare settings as a mental health intervention. Programs such as Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT) have demonstrated significant benefits for managing stress, depression, and anxiety (Douglas et al., 2022). As such, mindfulness is now being explored in a variety of health domains, including prenatal and maternal care. Pregnancy-specific mindfulness programs, such as Mindfulness-Based Childbirth and Parenting (MBCP), have been developed to address the unique psychological and emotional needs of pregnant women (Musa et al., 2020). These programs are tailored to help expectant mothers manage the mental challenges of pregnancy, prepare emotionally for childbirth, and foster a deeper connection with their unborn child. Through techniques such as breath awareness, body scanning, and mindful movement (e.g., prenatal yoga), women can develop the skills to remain calm, centered, and resilient throughout their pregnancy journey (Rusadi, Sugara, & Isti'adah, 2023).

Research on the effectiveness of mindfulness in pregnancy has yielded encouraging results. Studies have shown that mindfulness practice during pregnancy can lead to a significant reduction in perceived stress, anxiety, and depressive symptoms (Hulsbosch, Potharst, Boekhorst, Nyklíček, & Pop, 2021). This is particularly important given the potential risks of untreated perinatal mood disorders, which may negatively impact both the mother and the developing fetus. High stress levels during pregnancy have been linked to premature birth, low birth weight, and developmental delays in children (Tickell et al., 2020). Therefore, promoting mental health through mindfulness not only supports the well-being of the mother but also contributes to healthier outcomes for the baby. Moreover, mindfulness can enhance a pregnant woman's ability to cope with pain and discomfort, both

during pregnancy and in labor. Mindfulness practices encourage a shift in one's relationship with pain, fostering acceptance rather than resistance (Lucena et al., 2020). This change in perspective has been found to reduce the intensity and emotional reactivity to pain, which can be especially beneficial during labor and delivery. Mindful awareness also helps women become more in tune with their bodies, leading to increased self-trust and empowerment throughout the birthing process (Li et al., 2022).

In addition to managing stress and pain, mindfulness fosters emotional regulation and self-compassion two critical factors during the identity transition to motherhood. Pregnancy often stirs up unresolved emotions, fears, and insecurities. Mindfulness helps women recognize these emotions without judgment, allowing them to respond with greater clarity and compassion. This internal clarity contributes to a more positive self-image, improved relationships, and greater emotional resilience as women prepare for the life changes that come with motherhood. Importantly, the benefits of mindfulness are not limited to individual well-being; they extend to family dynamics and early parenting experiences. Mothers who practice mindfulness during pregnancy tend to report higher levels of maternal-fetal attachment, which is linked to more responsive and sensitive parenting postpartum. They are also better equipped to manage postpartum challenges, such as sleep deprivation and emotional fatigue, due to the mental habits of awareness and presence cultivated during pregnancy (Nyklíček, Truijens, Spek, & Pop, 2018).

Despite its potential, mindfulness is not a one size fits all solution, and it must be approached with sensitivity to individual experiences, cultural backgrounds, and health needs. For some women, especially those with histories of trauma or mental health conditions, mindfulness practices may need to be adapted or accompanied by professional psychological support. As mindfulness becomes more integrated into maternal health programs, healthcare providers must ensure that these interventions are evidence-based, trauma-informed, and accessible to diverse populations (Yosep, Suryani, Mediani, Mardhiyah, & Ibrahim, 2024).

Mindfulness represents a valuable, holistic approach to maternal well being that complements traditional prenatal care. Its emphasis on present-moment awareness, emotional regulation, and compassionate self care aligns closely with the needs of pregnant women navigating physical and psychological changes (Hulsbosch, Boekhorst, Potharst, Pop, & Nyklíček, 2021). As research continues to affirm its benefits, mindfulness has the potential to transform how we support mothers not only during pregnancy but as they transition into parenthood (Yuan, Sun, Zhao, Liu, & Liang, 2023). By incorporating

mindfulness into maternal health strategies, we can promote healthier, more empowered experiences for mothers and their families (Yosep et al., 2024).

2. METHOD

This study employs a qualitative research approach using a literature review (library research) method (Sugiyono, 2022). The data used in this study are secondary in nature, obtained from various scholarly sources such as indexed national and international journal articles, academic books, research reports, dissertations, theses, and official documents from relevant institutions. Scientific journal articles published between 2020 and 2025 were sourced from reputable databases such as PubMed, Scopus, ScienceDirect, PsycINFO, and Google Scholar. The inclusion criteria for article selection consist of primary studies that investigate the relationship between mindfulness and maternal well-being, articles written in either English or Indonesian, peer-reviewed publications within the 2020–2025 timeframe, and studies utilizing either qualitative or quantitative approaches that analyze perceptions, experiences, or the effectiveness of mindfulness interventions on pregnant or postpartum women. Conversely, the exclusion criteria include non-systematic reviews, editorials, or commentaries, studies that focus on non-maternal populations, and interventions unrelated to mindfulness (such as yoga without meditative elements). The search process was conducted using relevant keywords including “mindfulness,” “maternal well-being,” “pregnancy,” “postpartum,” and “mental health,” along with appropriate Boolean combinations. All articles that meet the inclusion criteria will be selected for further analysis. The subject of this study is not individuals but rather the concepts, theories, and empirical findings found in the reviewed literature. The unit of analysis consists of the content of each scientific document examined. The data were analyzed using qualitative content analysis, which involves several stages: data reduction by selecting and filtering relevant information, data display through the organization of findings into key themes or categories, conclusion drawing based on identified patterns or relationships, and verification to ensure the consistency and validity of the findings. To enhance the credibility of the results, source triangulation was also conducted by comparing information from various types of documents and different sources.

3. RESULTS AND DISCUSSION

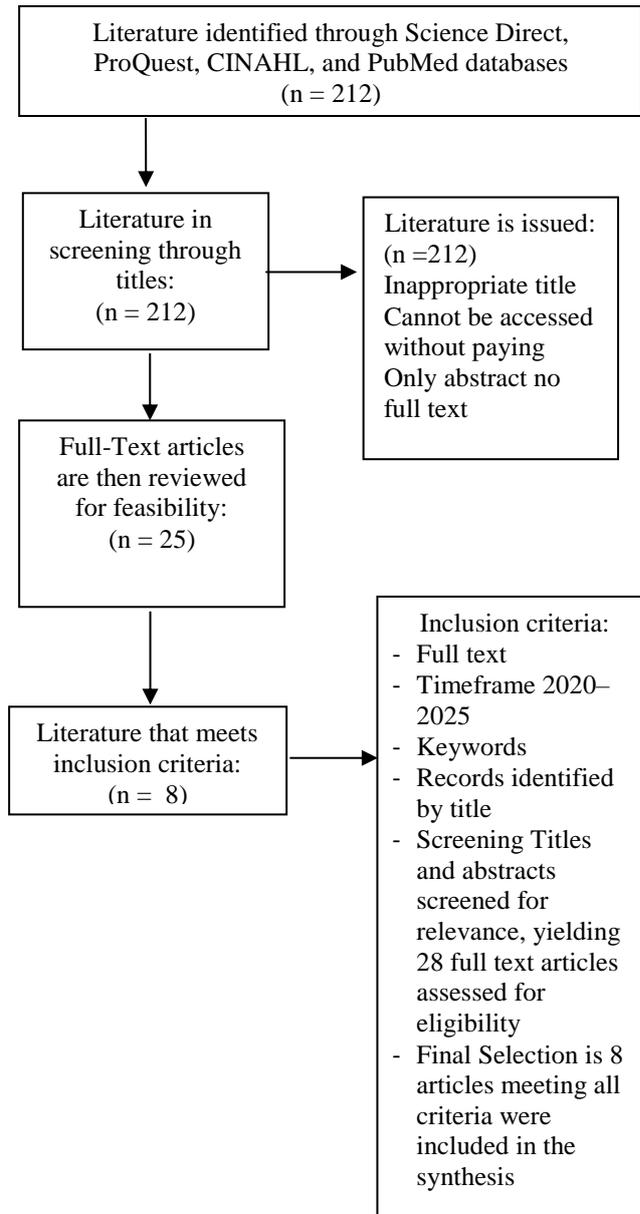


Figure 1. Flow Diagram of the Literature Selection Process Flow

The Effectiveness of Mindfulness-Based Interventions on Maternal Mental Health

The effectiveness of mindfulness-based interventions (MBIs) in supporting maternal mental health during the perinatal period that is, from pregnancy through the early postpartum phase has become a rapidly growing focus of research in recent years. Maternal mental health during this time is highly vulnerable to various psychological challenges such as anxiety, stress, and depression. According to the World Health Organization (WHO), approximately 10% of pregnant women and 13% of new mothers experience mental disorders, primarily depression. These rates are even higher in developing countries.

Therefore, addressing maternal mental health has become a priority in midwifery and public health practice, and one non-pharmacological approach showing great potential is mindfulness (de Waal, Boekhorst, Nyklíček, & Pop, 2023).

Several major studies have specifically evaluated how mindfulness whether in the form of training, guided meditation, or structured interventions such as Mindfulness-Based Stress Reduction (MBSR) and The Effectiveness of Mindfulness-Based Interventions on Maternal Mental Health Cognitive Therapy (MBCT) can help women navigate the perinatal period with better mental well-being. In a meta-analysis conducted by de Waal et al. (2023) it was found that MBIs significantly reduce symptoms of depression, anxiety, and stress among perinatal women who had a history of or current symptoms of mental health disorders. This meta-analysis pooled data from various experimental and quasi-experimental studies published between 2010 and 2022, involving thousands of participants from diverse cultural and economic backgrounds. The researchers concluded that mindfulness works by enhancing emotional regulation abilities, increasing awareness of thoughts and feelings, and reducing emotional reactivity that often exacerbates mental health conditions (Ocak Aktürk & Yilmaz, 2023).

However, the effectiveness of these interventions appears less consistent when applied to women without prior symptoms of mental disorders. Yet, when compared to other interventions such as behavioral counseling or structured social support the advantages of MBIs were less pronounced (de Waal et al., 2023). This suggests that the greatest benefits of mindfulness interventions may be experienced by individuals currently under psychological distress or at high risk for mental disorders. The study also emphasized the importance of early screening to identify the groups of mothers most likely to gain significant benefits from such interventions.

The effectiveness of MBIs also depends on the duration, intensity, and format of the intervention delivery. A study evaluating the Mindfulness-Based Childbirth and Parenting (MBCP) program demonstrated that active participation and full engagement in the eight-week program led to significant reductions in stress and depression levels during pregnancy. However, these effects tended to diminish in the postpartum period if participants did not continue mindfulness practice independently. This means the positive effects of MBIs are temporary unless supported by a long-term commitment. The study highlighted an important point: mindfulness interventions should not be designed merely as short-term activities but rather as sustainable lifestyle practices that require environmental support and adequate resources (Lönnberg, Jonas, Bränström, Nissen, & Niemi, 2021).

Long-Term Impact of Mindfulness Interventions

In a global context, in the Netherlands and Indonesia found that the implementation of Mindfulness-Based Interventions (MBIs) in communities with low educational levels or limited access to health information faces significant challenges, such as low participant retention and limited understanding of mindfulness concepts that are still unfamiliar. (Altaş, Lüleci, & Hıdıroğlu, 2023) Cultural barriers also hinder the effectiveness of these interventions. Therefore, local adaptation of mindfulness training methods becomes an important aspect to consider. Mindfulness programs localized in the appropriate language and cultural context are more likely to be accepted by the community and have a sustainable impact (Bernardo, Carvalho, Leirós-Rodríguez, Mota, & Santos, 2023).

On the other hand, advancements in digital technology have opened new opportunities to disseminate mindfulness interventions to mothers who lack access to formal psychological services. Studied the effectiveness of app-based mindfulness interventions (self-help digital programs) among pregnant and postpartum women in urban environments. The study showed that independent use of mindfulness apps over six weeks significantly reduced depression and anxiety scores and increased feelings of connection with their babies. The main advantages of this approach are flexibility in time, low cost, and high privacy, which are especially important for new mothers who face mobility difficulties or feel uncomfortable speaking directly with mental health professionals (Krøner, Knudsen, Roland, Alomairah, & Molsted, 2022).

Nevertheless, digital approaches also have limitations, particularly regarding emotional engagement and social interaction. Mindfulness is fundamentally a practice requiring deep introspection and proper guidance, so without direct coaching or supportive communities, some participants struggle to maintain motivation and discipline in their practice. A study by Gascoigne et al. (2023) suggests that combining digital interventions with face-to-face sessions either individual or group can be the most effective form of MBIs in the maternal health context. Other factors influencing the effectiveness of MBIs include hormonal conditions, family support, economic status, and previous pregnancy experiences. Women experiencing high-risk pregnancies, such as those with medical complications or past trauma, may require more intensive and personalized interventions (Gascoigne et al., 2023). MBIs are flexible and can be adapted for these contexts, for example by integrating mindfulness elements with other therapeutic techniques such as Dialectical Behavior Therapy (DBT) or interpersonal therapy. This is supported by findings in a study by Khodabakhshi-Koolae et al. (2024), which showed that mindfulness interventions

combined with community social support had a greater impact on reducing anxiety symptoms in first-time mothers compared to single interventions (Khodabakhshi-Koolaei et al., 2024).

Mindfulness-based interventions have gained significant attention in maternal mental health, especially during the perinatal period. Vogel et al (2021) highlighted that mindfulness interventions during pregnancy have long-term effects in reducing depressive symptoms up to several years postpartum, particularly in populations with high racial and economic diversity. The study found that women receiving mindfulness interventions during pregnancy reported significantly lower depressive symptoms at each annual or biennial assessment throughout an eight-year follow-up period compared to controls. Additionally, participants in the intervention group were less likely to develop moderate or severe depressive symptoms during this period (Vogel et al., 2021).

However, the sustainability of the positive effects of mindfulness interventions heavily depends on the consistency of mindfulness practice after the formal intervention ends. Lönnberg et al (2020) found that the Mindfulness-Based Childbirth and Parenting (MBCP) program resulted in significant reductions in stress and depression during pregnancy, but these effects did not persist during the postpartum period unless mindfulness practice was maintained consistently (van Steensel, Veringa-Skiba, Sauer, de Bruin, & Bögels, 2024). In this study, the majority (70%) of mothers in the MBCP group continued mindfulness practice during the follow-up period. These mothers showed greater treatment effects from pre- to postpartum compared to those who did not continue practicing. They also maintained significantly higher positive effects from the intervention throughout the follow-up period (Lönnberg, Jonas, et al., 2021).

These findings suggest that the dose-response effect of mindfulness practice is not linear but involves a threshold effect between not practicing at all and practicing even minimally. Factors contributing to whether participants continue practicing may include the extent to which they perceive the intervention as helpful. Among MBCP participants, women who continued practicing experienced greater stress reduction and improved positive mood after the intervention compared to those who did not continue, supporting this hypothesis (Riquelme-Marín, Rosa-Alcázar, & Ortigosa-Quiles, 2022).

Furthermore, research by Gheibi et al (2020) demonstrated that guided self-help mindfulness programs delivered digitally effectively reduce maternal psychological distress and promote infant neuropsychological development. These programs offer flexibility in time, low cost, and high privacy, which is crucial especially for new mothers facing mobility

challenges or discomfort with direct communication with mental health professionals. Yet, digital approaches also have limitations, particularly regarding emotional engagement and social interaction. Mindfulness inherently requires deep introspection and appropriate guidance; thus, without direct support or community, some participants find it difficult to maintain motivation and discipline (Lönnberg, Niemi, et al., 2021).

Additional factors influencing the effectiveness of MBIs include hormonal status, family support, socioeconomic status, and previous pregnancy experiences. Women with high-risk pregnancies, such as those complicated by medical issues or past trauma, may need more intensive and personalized interventions (Vogel et al., 2021). MBIs are adaptable and can be combined with other therapies like Dialectical Behavior Therapy (DBT) or interpersonal therapy (Asarnow et al., 2021). Mindfulness-based interventions during pregnancy hold potential for delivering long-term benefits in reducing depressive symptoms and improving maternal mental well-being. However, sustaining these positive effects depends greatly on the ongoing practice of mindfulness after formal interventions conclude (Khodabakhshi-Koolae et al., 2024). Thus, it is crucial to develop strategies that support mothers in maintaining mindfulness practice in their daily lives, whether through social support, digital technology, or integration with existing healthcare services. With a holistic and sustainable approach, mindfulness interventions can become an effective tool for enhancing maternal mental health and child development over the long term (Lammers, Vroling, Crosby, & van Strien, 2022).

The Effect of Mindfulness on Mother and Baby Attachment

The influence of mindfulness on mother-infant attachment has become an important focus in recent research, given the critical role that a strong emotional bond between mother and child plays in optimal child development (Afshari et al., 2022). Mindfulness, defined as nonjudgmental awareness of the present moment, is believed to enhance this relationship by helping mothers be more emotionally present and responsive to their infants' needs. A notable study by Kim et al (2023) evaluated the effects of a prenatal mindfulness program on stress, anxiety, depression, and mother-infant attachment (Zalewski et al., 2023). The findings revealed that mindfulness interventions effectively reduced prenatal and postnatal stress and depression. However, no significant difference was found in the quality of mother-infant attachment between the mindfulness intervention group and the control group. This suggests that while mindfulness may alleviate psychological distress, its influence on mother infant attachment may be more complex and moderated by additional factors (Asarnow et al., 2021).

Supporting this complexity, research Jnaneswar & Sulphey (2023) conducted in Iran found that the Mindfulness based Childbirth and Parenting (MBCP) program significantly enhanced maternal-fetal attachment. This study indicated that mindfulness interventions can strengthen the emotional bond between mother and fetus during pregnancy, which may continue into the postnatal period. However, cultural differences, intervention methods, and timing may affect these outcomes (Jnaneswar & Sulphey, 2023).

Furthermore, Dwidiyanti et al (2022) demonstrated that home-based mindfulness interventions, such as listening to the baby's heartbeat and receiving mindfulness activity text messages, improved mother-fetal attachment. These low cost, simple approaches suggest that mindfulness practices do not need to be complex to offer benefits and can be seamlessly integrated into the daily routines of pregnant women (Dwidiyanti et al., 2022).

It is important to note that mother-infant attachment is influenced by numerous factors, including maternal mental health, social support, and previous experiences. Some research suggests that the effects of mindfulness on attachment may be mediated by factors such as stress reduction and improved emotion regulation. Consequently, mindfulness interventions might be most effective when combined with approaches that directly target attachment enhancement, such as maternal sensitivity training or social support programs (Babbar, Oyarzabal, & Oyarzabal, 2021).

Healthcare practitioners should consider adopting a holistic approach to supporting mother-infant attachment. Integrating mindfulness into prenatal care can be one component of broader strategies aimed at improving maternal and infant well-being (Boekhorst et al., 2020). However, more research is needed to elucidate the specific mechanisms through which mindfulness affects attachment and to identify moderators and mediators of this relationship. Thomas & Rizvi (2023) Overall, although mindfulness shows promise in supporting mother-infant attachment, its effectiveness likely depends on contextual and individual factors. Therefore, interventions should be tailored to meet the unique needs and circumstances of each mother and be combined with complementary strategies that promote healthy mother-child relationships. With the right approach, mindfulness can serve as a valuable tool in fostering strong emotional bonds between mothers and their babies (Hulsbosch, Boekhorst, et al., 2021).

4. CONCLUSIONS AND SUGGESTIONS

Mindfulness is recognized as a promising intervention to support maternal well-being during pregnancy, offering psychological relief, physiological balance, and stronger mother-

infant bonding. However, current research has limitations. Many studies rely on self-reported data, use small sample sizes, and lack diversity in terms of race, socioeconomic status, and mental health history. Inconsistencies in mindfulness program design also make it difficult to compare outcomes across studies. Moreover, not all pregnant women are comfortable with meditative practices, particularly those with trauma histories or anxiety disorders. Therefore, mindfulness should be offered as a complementary, not mandatory, part of prenatal care, with proper screening and support.

To optimize its application, further research is needed. Future studies should involve larger and more diverse populations to improve generalizability. Longitudinal research is essential to understand the longterm impact of mindfulness on both maternal mental health and child development. Additionally, exploring the biological and neurological mechanisms behind its effects such as changes in stress hormones or brain activity can deepen understanding. There is also a need to develop culturally sensitive and accessible mindfulness programs for women with limited access to mental health services. Finally, comparing mindfulness-based interventions with other psychological approaches can help determine the most effective strategies for supporting maternal well being.

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