

The Exercise After Postpartum and Its Benefits for Maternal Mental Health: A Narrative Review

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Abstract. The postpartum period is a critical phase marked by significant physical and psychological adjustments in mothers, including an increased risk of anxiety and depression. Addressing maternal mental health during this period is essential to ensure maternal well-being and the quality of infant care. This study aims to review the benefits of postpartum physical activity on maternal mental health. A narrative review was conducted using databases such as PubMed, Google Scholar, ScienceDirect, and ResearchGate, focusing on publications from 2020 to 2025. The findings consistently indicate that postpartum exercise, including structured routines such as yoga and postpartum exercise, contributes to reduced levels of anxiety and depression while also promoting emotional balance, neurochemical regulation, and psychosocial adjustment. Therefore, physical activity after childbirth can be considered a safe, effective, and accessible strategy to support maternal mental health.

Keywords: Postpartum exercise, Maternal, mental health

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Introduction

The postpartum period is defined as the phase following the birth of a baby and the expulsion of the placenta from the uterus, typically lasting for approximately six weeks. During this time, mothers generally require between 6 to 12 weeks to recover their physical and emotional health. This period is often marked by significant physiological and psychological changes. Among the psychological adjustments, many postpartum women experience emotional instability, particularly within the first week, often characterized by fluctuations in mood occurring within the first three to four days after childbirth (Yunita et al., 2024).

One of the most serious psychological concerns during this phase is postpartum depression (PPD), a mood disorder that affects approximately 13% of women within the first year following childbirth. PPD is a multifactorial condition, influenced by a range of psychosocial and biological factors, including prior history of depression, antenatal anxiety, stress related to childcare, low levels of social support, unplanned pregnancy, marital dissatisfaction, negative body image, and baby-related challenges such as difficult temperament or health issues (Mulyani et al., 2022). If left

unaddressed, postpartum depression can interfere with maternal-infant bonding and adversely affect both the mother's and the infant's overall well-being.

In recent years, increasing attention has been given to non-pharmacological interventions in addressing postpartum psychological issues. One such approach is the incorporation of physical activity or exercise into postpartum care. Exercise has been shown to yield a wide range of health benefits, not only improving cardiovascular and musculoskeletal recovery but also positively influencing mood, reducing anxiety, improving sleep quality, and enhancing overall psychological resilience. Forms of exercise suitable for postpartum women include yoga and Pilates, which are particularly beneficial due to their gentle nature and emphasis on breathing, posture, and mindfulness. Yoga, in particular, integrates physical movements (Asanas), controlled breathing techniques (Pranayama), and mental relaxation or meditation, providing a holistic approach to recovery (Hasanah et al., 2024).

Beyond its physiological impacts, postpartum exercise offers substantial psychosocial benefits. Engaging in regular physical activity can help establish daily routines, improve self-image and confidence, and foster opportunities for social engagement. These elements are critical in supporting new mothers as they navigate the transition into motherhood and the associated emotional demands. While further studies are warranted to determine the most effective type, frequency, and intensity of exercise for postpartum women, existing evidence strongly supports the inclusion of physical activity as part of comprehensive postpartum care strategies. Therefore, this study aims to review the benefits of postpartum physical activity on maternal mental health, with a particular focus on its role in preventing and alleviating symptoms of anxiety and depression during the postpartum period.

Methods

This study employed a narrative review method to examine the benefits of exercise after childbirth on maternal mental health. The purpose of this method was to gather and synthesize relevant scientific findings from credible academic sources. The literature search was conducted through several scholarly databases, including Google Scholar, PubMed, ScienceDirect, and ResearchGate. To ensure the relevance and timeliness of the sources, the search was limited to articles published between 2020 and 2025. The keywords used in the search process included "Exercise After Childbirth," "Maternal Mental Health," "Postpartum Depression," "Maternal Exercise," and "Mental Health After Childbirth." These keywords were applied individually or in various combinations, adapted to the search functionalities of each database. Inclusion criteria for article selection were: (1) original research articles; (2) published in peer-reviewed journals; (3) written in English; (4) focusing on postpartum exercise and its relationship to maternal mental health outcomes; and (5) studies involving human subjects. Exclusion criteria included: (1) review articles, editorials, or opinion papers; (2) studies not directly addressing the postpartum period; (3) articles not available in full text; and (4) publications in languages other than English.

Result and Discussion

The postpartum period is a critical phase in a woman's life, characterized by significant physiological, emotional, and social transitions. While the birth of a child is often culturally framed as a joyful event, many mothers simultaneously experience psychological distress due to hormonal fluctuations, sleep deprivation, and adjustment to new caregiving responsibilities. These changes can result in mood swings, increased anxiety, and feelings of isolation, which are overwhelming for

many new mothers. Various studies estimate that 10–20% of women globally suffer from mental health disorders during the postpartum period, with anxiety and depression being the most commonly reported conditions. These disorders not only affect the mother's quality of life but can also disrupt the development of early maternal-infant bonding and compromise long-term child outcomes. Mental health complications during the postpartum period can have lasting effects, including challenges in maternal-child interactions, difficulties in emotional regulation, and delays in child development.

In response to this concern, non-pharmacological interventions, particularly physical exercise, have gained increasing attention as a safe and effective strategy for promoting maternal mental well-being. Exercise is considered a low-cost, accessible intervention that can be integrated into routine postnatal care. It is known to influence both psychological and physiological pathways associated with emotional regulation, including the modulation of cortisol levels and the release of endorphins. Additionally, physical activity contributes to improved sleep quality, which is often disrupted during the postpartum period, further enhancing emotional well-being.

Empirical evidence from a study conducted by Hasanah, Azhimia, and Friscila (2024) shows that regular participation in prenatal yoga significantly reduces the risk of postpartum mental distress. The study found a 23% decrease in the incidence of anxiety and depression symptoms among mothers who practiced yoga during pregnancy, compared to those who did not. The integration of breathing techniques, gentle movements, and guided relaxation was found to be particularly effective in activating the parasympathetic nervous system, thereby supporting psychological resilience. The mindfulness aspect of yoga also promotes emotional regulation, helping mothers develop coping strategies for the stressors they face postpartum. By fostering a sense of control and connection with one's body, yoga has proven to be beneficial not just for physical recovery, but also for maintaining mental balance.

In a related study by Yunita et al. (2024), the effect of postpartum gymnastics (senam nifas) was evaluated over a two-week intervention period. The results indicated a mean reduction of 5.4 points in anxiety scores on the Hamilton Anxiety Rating Scale (HARS), demonstrating a measurable improvement in the psychological state of postpartum mothers. These findings underscore the value of structured, low-impact physical activity in alleviating emotional disturbances in the early postpartum period. The benefits of postpartum gymnastics go beyond just improving physical fitness; it enhances mood and helps women regain a sense of empowerment by gradually rebuilding their physical strength and confidence.

Beyond physiological benefits, physical activity also serves as a psychosocial support mechanism. Exercise has been shown to enhance self-efficacy, reinforce daily structure, and serve as a positive coping strategy for emotional stressors. As reported by Mulyani, Dekawaty, and Suzanna (2022), 54% of mothers with postpartum depression identified a lack of emotional support as a contributing factor, while 23% reported persistent physical fatigue. Group-based physical activities such as yoga or gymnastics may help address these issues by providing not only physical stimulation but also opportunities for social engagement and peer support. The shared experience of exercise with other mothers creates a supportive environment where individuals can share their struggles, offer encouragement, and reduce feelings of isolation.

In addition, it is important to consider the role of healthcare providers in facilitating these activities. While non-pharmacological interventions like physical exercise are beneficial, healthcare professionals can further enhance the effectiveness of these approaches by providing personalized guidance and ensuring that mothers feel supported throughout the postpartum recovery process. Tailored programs that take into account individual health needs and preferences are more likely to engage mothers and promote consistent participation.

From a neurobiological perspective, the benefits of exercise are further supported by research on maternal behavior and brain function. A study by Tang et al. (2016), using an animal

model, demonstrated that maternal intake of polyunsaturated fatty acids (PUFAs) often associated with active, health-conscious behaviors then resulted in a 32% increase in hippocampal cell proliferation and reduced neuroinflammatory markers. While the findings are not directly translatable to humans, they suggest that maternal lifestyle, including physical activity and nutrition, has the potential to influence both maternal mental health and early neurodevelopmental outcomes in offspring

Taken together, the findings reviewed in this study suggest that postpartum exercise, whether in the form of structured gymnastics or prenatal yoga plays a meaningful role in supporting maternal psychological well-being. These interventions offer multifaceted benefits: they improve mood through neurochemical pathways, offer psychosocial relief through community participation, and empower mothers by enhancing their perceived sense of control during a challenging life transition.

Table 1. Characteristics of Included Studies

No.	Article Title, Author, Year	Research Sample	Research Design	Research Objectives	Treatments	Research Result
1.	The Effect of Postnatal Exercise on the Anxiety Levels of Postpartum Mothers in the Working Area of Kerang Community Health Center, Syafari Yunita et al. 2024	30 postpartum mothers	Pre-Post Experimental Design (one group pretest-posttest without control).	Analyzing the effect of postpartum exercises on the anxiety levels of postpartum mothers.	Postnatal exercises	There was a significant effect of postnatal exercise on anxiety reduction (p = 0.001).
2.	<i>Effect of Prenatal Yoga Adherence on Postpartum Maternal Mental Health</i> Siti Noor Hasanah et al. 2024	No mention of total sample size; comparison between prenatal yoga group and control group	Quantitative descriptive	Analyzing the effect of prenatal yoga participation on postpartum mental health	Prenatal yoga	Prenatal yoga significantly reduces postpartum depression and anxiety scores.
3.	<i>Effects of Postpartum PTSD Maternal Mental Health and Child Socioemotional Development- a two year follow up</i>	419 mothers in Russia	Longitudinal study	Assessing the long-term impact of PP-PTSD on maternal	No intervention; observational	PP-PTSD is associated with maternal depression and behavioral problems in

	<i>study</i>			mental health and child emotional development		children 2 years after birth.
	Anna Suarez et al. 2024					
4.	<i>Efficacy of Regular Exercise During Pregnancy on the Prevention of Postpartum Depression: The PAMELA Randomized Clinical Trial</i>	639 pregnant women	Randomized Clinical Trial	Assessing the effectiveness of exercise during pregnancy in preventing postpartum depression	Aerobic and strength training program 3 times a week for 16 weeks	There was no statistically significant difference, but a downward trend was observed in the intervention group.
	Coll CDVN et al. 2019					
5.	<i>The Relationship Between Physical Exercise and Postpartum Depression</i>	61 postpartum mothers	Quasi Experimental - Non Equivalent Control Group	Determining the relationship between physical exercise and postpartum depression	Physical exercise (no specific type specified)	Physical exercise is significantly associated with a reduction in postpartum depression (p=0.005).
	Muliatul Jannah, Meilia Rahmawati 2022					

Conclusion

Postpartum exercise is an effective non-pharmacological intervention to improve maternal mental health. Research shows that physical activity, especially structured ones such as yoga and puerperal exercises, can significantly reduce symptoms of anxiety and depression. These psychological benefits are supported by physiological mechanisms such as the release of endorphins and changes in neurochemical pathways that promote emotional stability. In addition to its physiological effects, postpartum exercise also provides psychosocial benefits by establishing a routine, boosting self-confidence and encouraging social interaction. Although further research is needed to determine the most effective types and intensities of exercise, current evidence supports the incorporation of physical activity into postpartum care to improve new mothers' emotional well-being and quality of life.

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