

A Review on Therapeutic Intervention of Yoga and Ayurveda in Post-Partum Depression

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Abstract

Introduction: Postpartum depression often starts two weeks to a month after delivery and can linger for months or even a year. According to the World Health Organization, depression affects roughly 10% of pregnant women worldwide and 13% of women in the immediate postpartum period. In India, the Prevalence of Postpartum Depression (PPD) varies from 15% to 20%. Yoga, which originated in ancient India, is recognized as an alternative medicine practice that incorporates mind-body practices. **Methodology:** This is a review (narrative) study, in which literature has been evaluated using electronic search in databases of PubMed, Google Scholar, Science Direct, ResearchGate, etc. Searching in the databases was made using keywords of postpartum depression, yoga in postpartum depression. There were many articles on yoga in depression but those articles were included in the study that had done research on postpartum depression, which were of research and review article type. **Result:** This review study includes 4 interventional studies that showed a highly significant ($p < 0.001$) decrease in depression after the performance of yoga on postpartum women. **Conclusion:** This study showed the result that different limbs of yoga (*i.e.*, Dhyana, Asanas, and Pranayama, etc.) could considerably reduce depression symptoms in postnatal women. This would also help in reducing the use of antidepressant medications. Therefore, it is recommended that yoga training should be employed in postnatal treatment.

Keywords

Postpartum Depression, Yoga, Meditation, Relaxation, *Sutika*

1. Introduction

For women, childbirth is a moment of considerable vulnerability for mental illness, with postpartum mood disorders being the most common form of mater-

nal morbidity after delivery [1]. Postpartum depression is the most prevalent consequence of childbirth, and it is a significant public health issue that affects women and their families [2]. According to the World Health Organization, depression affects roughly 10% of pregnant women worldwide and 13% of women in the immediate postpartum period [3]. In India, the Prevalence of Postpartum Depression (PPD) varies from 15% to 20% [4]. Postpartum depression often starts two weeks to a month after delivery and can linger for months or even a year [5].

Postpartum depression risk factors are still being studied on a regular basis. Sleep deprivation, a lack of support systems, poverty, a lack of resources such as health insurance or distance from mental health treatments, and the stigma associated with mental illness are all factors that exacerbate PPD [6]. It can be classified in five domains of risk factors, obstetric risk factors, psychiatric risk factors, clinical risk factors, biological risk factors, social risk factors. Obstetric factors can include pregnancy complications like preeclampsia, hyperemesis, and premature contractions, as well as delivery complications like emergency/elective caesarean, instrumental delivery, premature delivery, and excessive intrapartum bleeding. Clinical factors include variables such as previous psychiatric symptoms, a family history of psychiatric illness, and measures of affect during pregnancy. Biological factors include rapid decline in reproductive hormone levels after delivery which has been proposed as a possible cause of postpartum affective disorders. Neurotic disorders are psychological disorders that are typically distressing but allow the individual to think rationally and function socially. The neurotic disorders are commonly regarded as methods of coping with anxiety. Social factors include experiences such as the death of a loved one, relationship breakdowns or divorce, losing a job, or moving home are known to cause stress and can trigger depressive episodes in people who have no previous history of affective disturbance [7]. Postpartum depression, if left untreated, can have long-term consequences. For the mother, the episode can be the precursor of chronic recurrent depression. A mother's sadness can lead to emotional, behavioral, cognitive, and interpersonal issues in her children later in life [8]. Tearfulness, melancholy, anxiety, liability, feelings of guilt, lack of appetite, and sleep difficulties, as well as feelings of being inadequate and unable to manage with the newborn, poor attention and memory, exhaustion, and irritability, are all symptoms of postpartum depression [9].

The ward yoga has its origin from a *Sanskrit* word "Yoj", *Yuto* unite with real and to separate from unreal to this when consonant "j" is combined it means energy or direction [10]. Yoga, which originated in ancient India, is recognized as an alternative medicine practice that incorporates mind-body practices. Researchers are currently investigating the efficacy and effectiveness of mind-body interventions like yoga as an alternative and complementary treatment for depression. This yoga philosophy is divided into eight parts, or limbs: *Yama* (ethical guidelines), *Niyama* (spiritual observances), *Asana* (Physical poses), *Pranayama* (breathing exercises), *Pratyahara* (control of the senses), *Dharana* (concentration), *Dhya-*

na (meditation), and *Samadhi* (State of bliss) [11]. The *Yoga Sutras* are widely regarded as the most important yoga text, providing theoretical frameworks for approaching mind-calming and responding to “mental chatter” [12]. *Hatha*, a more physical form of yoga, is the most commonly practiced style of yoga in Western culture today. In its full expression, this system of yoga integrates three basic components: Yoga postures (*Asanas*), Breathing exercises (*Pranayama*), and Mindfulness and Meditation (*Dhyana*) [13].

Sutika is the Ayurvedic term for postpartum women. *Sutikas* were advised in ancient times to follow a strict diet (*Sutikaparicharya*) and to avoid various *Manasikabhava* (mental factors) such as *Krodha* (anger), *Shoka* (grief), *Bhaya* (fear), and *Sharirikashrama* (physical activity causing fatigue) such as *Maithuna* (sexual union) which can vitiate the *Dosha* in them and lead to *Manas Vyadhies* (mental disorder). Ayurveda has urged an awfully sensible protocol (*Sutikaparicharya*) throughout *Sutika Kala* (puerperal period) which include *Aashwasana* (Psychological Reassurance), *Aahara* (nutrition), *Vihara* (life style), *Aushadhi* (medicine) to keep up the health of the women.

2. Methodology

This is a review (narrative) study, in which literature has been evaluated using electronic search in databases of PubMed, Google scholar, Science Direct, ResearchGate, etc. Searching in the databases was made using key words of postpartum depression, yoga in postpartum depression. There were many articles on yoga in depression but those articles were included in the study that had done research on postpartum depression, which were of research and review article type. Inclusion criteria for studies in this review were the following: 1) Publications in the English language; 2) Publication of studies that measured postpartum depression or postpartum depressive symptoms as an outcome for outcome measures of each study; 3) Publications of studies that used yoga as an intervention in postpartum depression that included the use of one or more of the 8 limbs. The exclusion criteria were the following: 1) Studies that did not measure postpartum depression or postpartum depressive symptoms as an outcome; 2) Studies that were incomplete or ongoing 3) Publications in other than English language. There was one article in 2021 on yoga in post-partum depression but due to incomplete information excluded from study. This review has focused mainly on the effectiveness of yoga in postpartum depression.

3. Result

A total of 4 studies describing interventions that used yoga as a form of treatment for depression, meeting the inclusion criteria, were found through literature search (Table 1).

These 4 Studies were carried out in United State [14], India [17], Iran [16], Egypt [15] and the types of yoga included *Hatha Yoga* [14], Deep breathing exercise (*Pranayama*) [15] [16], mindfulness and meditation [16] [17], *Asanas* (*Savasana*, *Balāsana* and *Padmasana*) [14] [17]. The most commonly used intervention were

Table 1. Summary of yoga-based interventions as a treatment for postpartum depression conducted between 2015 to 2019.

Author name & study, country	Year and Intervention description	Age	Time of assessment	Design and sample size	Outcomes measure	Salient findings
M. Buttner <i>et al.</i> [14] Iowa City, USA	2015 <i>Hatha Yoga</i> —Sun salutations, Balancing and relaxation poses (<i>Savasana</i>) group—60 minute yoga session per week, twice in week Control group—Assessments only	18 - 50 years	At baseline, 2 weeks, 4 weeks, 6 weeks, 8 weeks, and 2 months post treatment	n = 57 Randomized assignment to yoga (N = 28) or wait-list control (N = 29) group. Enrolment time frame: up to 12 months postpartum	HDRS (Hamilton Depression Rating Scale), IDAS (Inventory of Depression and Anxiety Symptoms) and Patient Health Questionnaire (PHQ-9)	Yoga group improved at significantly faster rate: depression, anxiety, well-being, and HRQOL (Health-related quality of life) measures. Depressive symptoms decreased systematically over time for entire sample. Individuals in the yoga group, relative to the control group, experienced steeper linear increase in HRQOL scores during the 8-week intervention (t = 5.09; df = 52; p < 0.001). Reliable Change Index analyses revealed that 78% of women in the yoga group experienced clinically significant change
El-Aziz KSA <i>et al.</i> [15] Egypt	2016 Group (A) received relaxation exercises sessions for 45 minutes, 3 times/ week for 3 months in addition to home instructions and advice about controlling stressful conditions by practicing deep breathing exercise , Group (B) were given home instructions for doing deep breathing exercise during stressful conditions	Primipara women, in postpartum period after at least 1 month of vaginal delivery	At baseline, at 3 month post treatment	N = 30 Randomized assignment	Zung self-rating depression scale	In group A, there was a statistical significant decrease in the mean values of depression scale index measured at post-treatment (50.37 ± 4.35) when compared with its corresponding value at pre-treatment (68.65 ± 5.68) with Z value= -3.410 and p value= 0.001. Also in group B there was a statistical significant decrease in the mean values of depression scale index measured at post-treatment (66.38 ± 4.94) when compared with its corresponding value at pre-treatment (69.63 ± 4.98) with Z value = -2.978 and p value = 0.003. The percentage of improvement of depression scale index was higher in group A (26.63%) than in group B (4.67%)

Continued

Hajieh Sheydaei, <i>et al.</i> [16] City-Tehran, Iran	2017	Experimental group received mindfulness training for 8 sessions, each lasting for two hours, Control group received no training	Not mentioned	At baseline, n = 67 at 8 weeks post treatment	n = 67 Randomized assignment to yoga (N = 32) or Control Group (N = 32)	Beck Depression Inventory (BDI), Structured Clinical Interview and Psychological Clinical Diagnosis	Results showed that based on Beck Inventory, the scores for the experimental group in post-test were significant ($p < 0.001$), compared to those for the control group. Also, it was revealed that pre- and posttest mean scores for postpartum depression in the control group were 25.81 and 25.12 respectively while the scores for the experimental group were 24.75 and 18.5 respectively; <i>i.e.</i> , Mindfulness training, was effective in reducing depression symptoms
Ishita Vijay Kamat, <i>et al.</i> [17] Maharashtra, India	2019	Week 1: Only breathing and mindfulness training + <i>Shavasana</i> (relaxation). Week 2: breathing and mindfulness exercises + <i>Balāsana</i> (child's pose) advice. Week 3: Both <i>Asanas</i> (<i>Balāsana</i> & <i>Padmasana</i>) + week 1 & 2 exercises. Week 4: The patients were able to perform all the taught exercises at home. The intervention was given for 3 days per week for 4 weeks	19 - 28 years	At baseline, N = 20 at 4 weeks post treatment	N = 20 Simple Random sampling	Edinburgh Postnatal Depression Scale (EPDS) Perceived Stress scale (PSS)	For the EPDS, the pre-intervention mean was 13.900 and the post-intervention mean was found to be 6.600 the p-value was < 0.0001 and the t-value was found to be 14.799 with 20 degrees of freedom which was statistically considered to be extremely significant. For the PSS, the pre-intervention mean was 16.350 and the post-intervention mean was found to be 12.050 the p-value was < 0.0001 and the t-value was found to be 7.538 with 19 degrees of freedom which was statistically considered to be extremely significant

Savasana (relaxation technique) and mindfulness meditation. Participants in the studies were all postpartum women between the ages of 18 to 50 [14], 19 to 28 [17], and in one study only included Primipara women [15]. The EPDS-(Edinburgh Postnatal Depression Scale) [17] and the Zung self-rating depression scale [16], PSS (Perceived Stress Scale) [17], HDRS (Hamilton Depression Rating Scale) [14], IDAS (Inventory of Depression and Anxiety Symptoms) [14], and the Beck Depression Inventory (BDI) [16], Patient Health Questionnaire (PHQ-9) [14], these scales were included in these study for diagnosis of postpartum depression. Studies used randomized controlled trials with small No. of sample size in yoga

group N = 28, 30, 32, 20 patients. Intervention periods length was 1 month [17], 2 month [14] [16], 3 month [15]. Among the yoga intervention, participants were encouraged or required to attend yoga classes 2 to 3 times per weeks. In one study, yoga training was given for 8 sessions, each lasting for two hours [16]. There was one study that did not have a comparison or control group [17].

Findings from this review study demonstrate that yoga shows promise in the treatment of PPD; the studies found that yoga was associated with a reduction in depressive symptoms. These changes were statistically significant when compared to the comparison group.

Buttner M.M. [14] (2015), who found that participation in eight weeks of sun salutation balancing and relaxation poses in postpartum women resulted in a reliable change index, revealed that 78% of women in the yoga group experienced clinically significant change. Individuals in the yoga group, relative to the control group, experienced steeper linear increase in HRQOL scores during the 8-week intervention ($t = 5.09$; $df = 52$; $p < 0.001$).

Khadyga Sayed Abd El-Aziz1 [15] (2016), who found that there was a statistically highly significant decrease ($p = 0.001$) in depression after the performance of the selected relaxation techniques sessions on postpartum women for 8 weeks.

Hajieh Sheydaei [16] (2017) discovered that 8 weeks of mindfulness training in postpartum women resulted in significant ($p < 0.001$) post-test scores for the experimental group based on the Beck Depression Inventory, compared to those for the control group.

Ishita Vijay Kamat [17] (2019), who found that the participation in breathing and mindfulness exercises and *Asanas (Balasana & Padmasana)* in postpartum women for 4 weeks, resulted in a statistically highly significant decrease in their stress and depression levels post-distraction. The p-value was 0.0001 and “t” value was 14.799 with 20 degrees of freedom and 7.583 with 19 degrees of freedom for EPDS and PSS, respectively.

In these four studies, it shows a highly significant ($p < 0.001$) decrease in depression after the performance of yoga on postpartum women.

4. Discussion

The purpose of the review is to offer the required information about the topic under consideration. According to the studies, yoga appears to help women with postpartum depression. Various yoga strategies were utilized in these studies with hatha yoga being the foremost, followed by *Asana Pranayama*, mindfulness and meditation. All of them reported reductions in depressive symptoms among participants within the yoga. The interventions have some limitations. Most studies use a small sample that limits the installation of statistical analysis. Most studies have checked the short-term effects of the therapeutic yoga depression. This search consists only of a restricted database. Just include articles in English; do not include other languages. Quality of studies was not assessed. This study only include those articles in which yoga as an intervention in postpartum depression,

omitting articles that include yoga in depression. A few studies show that yoga's nature is to manage the mind and central nervous system, and that, unlike other sports, it has a moderating influence on the neurological system, hormone emissions, physiological factors, and nerve impulse modulation, so it can help with depression and mental problems. Mindfulness training facilitates mothers' concentration on experiences, which enables them to control their feelings, especially those negative ones such as feelings of guilt and worthlessness [17]. *Pranayamic* breathing, also known as abdominal or belly or deep breathing, is distinguished by the expansion of the abdomen rather than the chest when breathing is defined as a manipulation of breath movement, contributing to a physiologic response characterized: by 1) The presence of decreased oxygen consumption, decreased heart rate and blood pressure; and 2) Increased theta wave amplitude in EEG recordings, increased parasympathetic activity accompanied by the experience of alertness and invigorating [15].

5. Conclusion

A postpartum phase is defined as the period following the birth of a child and lasting approximately six weeks. The postnatal period is described by the World Health Organization (WHO) as the most essential and yet most neglected period in the lives of mothers and babies. This study found that several aspects of yoga (such as Dhyana, Asana, and Pranayama, etc.) can significantly reduce depressive symptoms in postpartum mothers. This would also contribute to the reduction of depressive medication use. As a result, it is suggested that yoga training should be included in postnatal care.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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