

Postpartum Mood Disorders: A Short Review

Manisha Andela¹, Deepika Dewani²

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ABSTRACT

Background: Mental health is considered one of the most significant contributors to the global burden of disease. During the puerperium, the most important mood disorders are maternity blues, postpartum depression, and postpartum psychosis. Above 75% of women are found to experience some type of mood disturbance during the postpartum period.

Aim: Considering the high global burden of mood disorders, a short review of this problem was done on the aspects like the prevalence, clinical manifestations, and management.

Review results: During the puerperium, mood disorders constitute entities with higher prevalence both at the worldwide as well as in our country.

Conclusion: This review not only helps health-care professionals become aware of these conditions but also aids in providing adequate and timely management.

Clinical significance: In addition to pharmacological treatment, interpersonal or cognitive-behavioral therapy, as well as family therapy plays significant role in management of mood disorders during pregnancy and puerperium.

Keywords: Maternity blues, Mood disorders, Postpartum depression, Postpartum psychosis.

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INTRODUCTION

During the postpartum period, around 70–80% of women are found to experience various kinds of mood disturbances. In most instances, symptoms are generally short-lived and mild; however, around 10–20% of women may suffer from more significant symptoms of anxiety and depression. Postpartum psychiatric illness can be broadly classified into three major categories: (1) postpartum blues, (2) postpartum depression, and (3) postpartum psychosis.¹ It is highly useful to conceptualize the mentioned mental disorders as existing along a continuum, among which postpartum blues is generally considered to be the mildest whereas postpartum psychosis is the most severe form of postpartum psychiatric ailments.

Maternity blues is considered a transient physiological and psychological disorder with potential symptoms of unstable mood, weeping, sorrow, tearfulness, depression, anxiety, confusion, and insomnia.² In individual studies, the prevalence of postpartum blues was around 10–80%.³ Maternity blues causes disruption in infant care and is found to aggravate the risk of developing symptoms of impaired maternal–infant interactions, postpartum depression, and also affects child development.^{4,5}

Postpartum depression begins to show soon after the child's birth or may present as a prolongation of antenatal depression, which deserves immediate attention. The global prevalence of postpartum depression was estimated to be around 150–200 per 1,000 live births.⁶ Postpartum depression may later predispose to recurrent or chronic depression that affects the mother–baby relationship and also hinders the growth and development of the child. In mothers suffering from postpartum depression, children are often found to have higher interpersonal, behavioral, and cognitive problems when compared to other children.^{7,8} A study of meta-analysis conducted among developing countries demonstrated that the children of mothers with postpartum mood disorders are found to be at a higher risk of being stunted or underweight.⁸ Moreover, those mothers suffering from depression are less likely to breastfeed their infants and also do not seek appropriate health care.⁹

^{1,2}Department of Obstetrics and Gynaecology, Datta Meghe Institute of Medical Sciences, Wardha, Maharashtra, India

Corresponding Author: Manisha Andela, Department of Obstetrics and Gynaecology, Datta Meghe Institute of Medical Sciences, Wardha, Maharashtra, India, Phone: +91 9705005293, e-mail: manishaandela.thesis@gmail.com

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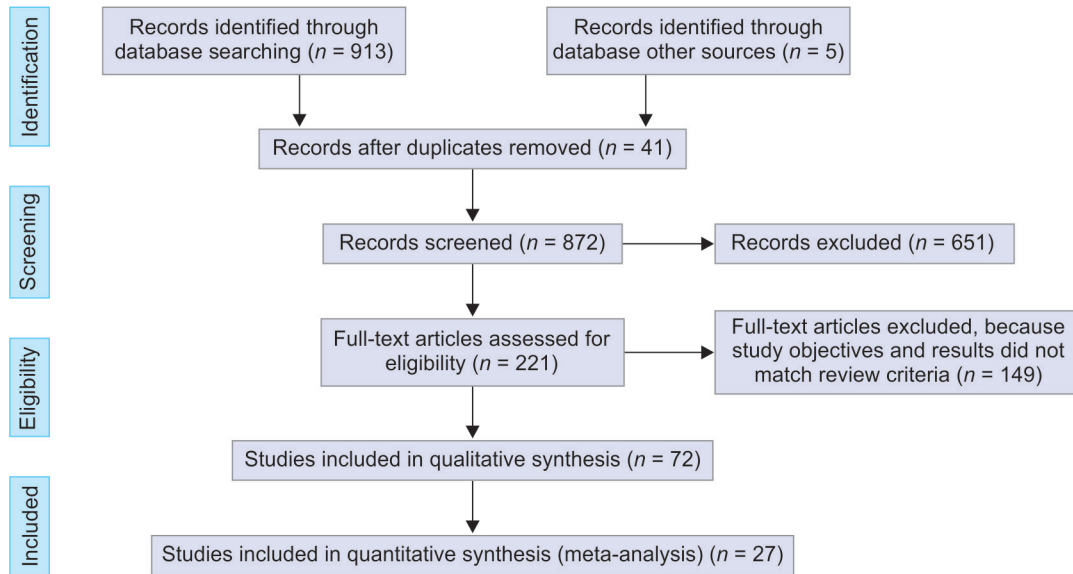
Postpartum psychosis, a severe disorder that begins within four weeks postpartum, is found to have a global prevalence ranging between 0.87 and 2.5 per 1,000 live births and requires hospitalization.¹⁰ Though postpartum psychosis is rare when compared to several other mental disorders, the acuity and gravity of its consequences such as infanticide or suicide warrants not only specific attention but also immediate action.¹¹ Postpartum psychosis is considered a critical indicator of an underlying grave diagnosis of bipolar disorder. It also increases the future risk of nonpregnancy-related psychotic episodes.^{12,13}

MATERIALS AND METHODS

Data Sources and Search Strategy

Data sources and search strategy comprising of two authors have solitarily searched PubMed®, Scopus, Embase®, and Google Scholar databases for informative and relevant articles, which were published from the time of inception of the databases till November, 2021. The search strategy was used comprising of keywords and subject headings without any language barriers. If there were any discrepancies in the search results, it was further planned to be discussed and resolved with a third author.

Flowchart 1: Methodology of review



Search keywords used for the identification of articles for the review of the postpartum mood disorders are “blues” OR “distress” OR “bipolar” OR “depression” OR “depressive disorder” OR “bi-polar” OR “mood disorder” OR “anxiety disorder” OR psychosis” OR “postpartum” OR “postnatal” OR “perinatal” OR “post birth” OR “after delivery” OR “after birth” OR “puerperium” OR “puerperal” OR “prevalence” OR “incidence” OR “burden” OR “estimate” OR “epidemiology.” Original research; published in the past 15 years; were considered.

Study Selection and Data Extraction

According to the study protocol, two researchers have independently screened the titles as well as abstracts strictly following the criteria of eligibility. After the elimination of duplicate articles, complete texts of all the remaining articles were meticulously screened following the criteria of eligibility, and the required information was then obtained. Any disparity between the two researchers was resolved by consensus. Prospective, retrospective, and descriptive cross-sectional studies have been included. Letter to the editor, reviews, case reports, correspondence, case series, and articles without available full texts have been excluded. The systematic review was developed by adapting the methods in accordance with the Cochrane Handbook for Systematic Reviews, and the results thus obtained have been reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) tool. Flowchart 1 explains the methodology of the review.

RESULTS

During the puerperium, mood disorders constitute entities with higher prevalence both at the worldwide as well as in our country. These include postpartum sorrow or baby blues, postpartum depression, and postpartum psychosis. Throughout pregnancy, and even weeks after childbirth, biochemical changes continue to take place, which include hormonal, psychological, and social factors. They increase the mother’s susceptibility to develop such psychiatric disorders.

Considering that 80% of women suffer from some of these alterations during pregnancy and/or puerperium, these entities should be recognized as a problem of important public health

concern. It is common for these disorders to not be classified as a real disease given the lack of information, attributed to the low capacity of the strength of the mother to cope with motherhood, having as a consequence that almost half of the cases are not diagnosed. The lack of an adequate clinical approach does not allow patients to have access to management and treatment, which endangers the mother’s life, family stability, and the well-being and healthy development of the newborn.^{14,15}

DISCUSSION

Postpartum Blues

Postpartum blues or baby blues consists of an alteration of the state of mind, characterized by the tendency to cry, sadness, and irritability often observed during the initial 15 days following childbirth. It is often found as a result of hormonal changes, in the levels of cortisol and progesterone after the conclusion of the pregnancy as well as the social and family adjustments experienced by the mother.¹⁶ So far, it has not been possible to determine an exact cause for this condition; despite this, it is considered a strong predictor of postpartum depression.¹⁷

Given the absence of validated diagnostic tools, there are no specific data about its prevalence globally; however, various authors point out that it can range from 14% to 80%. The overall prevalence of postpartum blues, based on the random-effects model as reported by Rezaie-Keikhaie et al. in 5,667 women, was found to be 39.0%.¹⁸ Additionally, it has been observed that the prevalence of maternity blues was higher in middle- and low-income countries when compared to high-income countries.^{19,20}

The most associated risk factors include having presented depressive symptoms or episodes of depression experienced during pregnancy, the existence of stressful conditions during pregnancy, cesarean section, anxiety symptoms, hypochondriasis, history of the premenstrual dysphoric syndrome, history of deaths, changes in the dream as well as having had a female baby.²¹ It was also observed that mothers with newborn female children tend to experience more maternity blues. In developing countries, the factors associated with the increased prevalence of maternity blues include a lack of social

and emotional support as they give lesser importance to female newborns in these countries.^{22,23}

The main manifestations consist of emotional lability, a marked tendency to cry easily, anxiety, irritability, and sorrow. These alterations have a variable intensity and duration, are more frequent in the first 2–4 days of the puerperium, and present spontaneous remission from 2 weeks of postpartum.²⁴

Despite not requiring medical or psychological treatment, it is important to inform the family about the need for constant support to be provided to the mother, bearing in mind if the symptoms last more than 3 weeks, it is important for the gynecologist to detect the risk of developing depression and postpartum blues, for which a comprehensive approach is required along with psychiatry, pediatrics, and psychology.

Postpartum Depression

Postpartum depression constitutes a major episode of depressive illness after the birth of a baby, usually during the first postpartum month, which lasts at least 2 weeks with symptoms such as depressed mood, anhedonia, weight and sleep disturbances, feeling of guilt or worthlessness, psychomotor retardation, fatigue or agitation, inability to make decisions, thinking and concentration as well as thoughts of death or suicidal ideation.^{24,25}

The prevalence of PPD worldwide reported in a systematic review of 48 studies conducted in over 19 countries was around 18.6%.²⁶ In an Indian meta-analysis on PPD, they reported an overall pooled estimate of 22%.²⁷

The most commonly encountered risk factors of postpartum depression include giving the history of depressive and anxiety disorders, premenstrual dysphoric syndrome, episodes of depression during pregnancy, postpartum depression in previous pregnancies, stressful events or obstetric complications throughout pregnancy, undesired pregnancy, lack of healthy relationship with the partner, poor family support network, economic problems, history of recurrent pregnancy losses, alterations in thyroid function (mainly hypothyroidism), difficulty in breastfeeding, or that the newborn has been suffering from some disease.^{28,29}

Its etiology remains uncertain; however, several authors have pointed out several possible mechanisms that could explain the pathophysiology of the disorder. It has been determined that postpartum women are more susceptible to fluctuations in estradiol and progesterone levels once pregnancy is over, with consequences for emotional lability and sleep disturbances.³⁰ Similarly, the hypothalamic–pituitary adrenal axis could contribute as there is an increase in serum cortisol, a finding that would be consistent with the levels of this hormone in major depressive disorder.^{30,31} Likewise, arginine vasopressin, also called antidiuretic hormone, has been implicated, which, when decreased, produces a deterioration in functional capacity. In the nutritional aspect, being reduced in serum concentration, long-chain and cerebral polyunsaturated fatty acids also contribute to depressive mood.³¹ Finally, a decrease in serotonin receptors in the postsynaptic cleft has been reported.³² Though the pathophysiology of postpartum depressive disorders has not been entirely defined, these factors could be involved in the manifestations that women present during the puerperium.

The clinical picture generally takes place during the first 4 weeks after the birth of the baby, the symptoms being more important than those established largely by the depression criteria of the (DSM-5) diagnostic and statistical manual of mental disorders, fifth edition. In addition, the patient usually refers to persistent crying, anxiety, panic attacks, irritability, difficulty establishing a proper

bond with the newborn, overprotective behaviors toward the child, related obsessive thoughts and behavior toward the child, and negative thoughts regarding the baby.

To carry out its detection, in addition to the DSM-V criteria, there are several other diagnostic tools, such as the Edinburgh Postpartum Depression Scale, which consists of a 10-item questionnaire, which when throwing a score greater than 12 establishes the diagnosis. Depending on the cut-off point chosen, it has a variable sensitivity and specificity.³³ The best time to apply this questionnaire is from the second week of puerperium until 6 months after birth. There are diagnostic alternatives, such as the Beck Depression Questionnaire, the Patient Health Questionnaire, and the Anxiety and Depression Scale; however, it is recommended to preferably use the Edinburgh Scale in cases of suspected diagnosis.

During the approach, thyroid function should be evaluated, which, if altered, may be responsible for clinical manifestations that resemble those of depressive disorders, mainly hypothyroidism. On the other hand, the differential diagnosis should be made with other postpartum mood disorders, that is, postpartum blues and postpartum psychosis. The main difference with postpartum sadness is that in the former the symptoms occur during the first week of the puerperium and tend to resolve within 10 days, not being a threat to the functional capacity of the patient. For its part, postpartum psychosis represents the most serious of these disorders; it is considered a psychiatric emergency marked by hallucinations, disorganized thinking, and delirium.

Regarding management, a complementary approach between psychiatry and psychology is required. In the medical aspect, the most used drugs are tricyclic antidepressants and selective serotonin reuptake inhibitors (SSRIs), despite the controversy over their use during lactation. Tricyclic antidepressants have been considered safe, with the exception of doxepin. For their part, SSRIs are also suitable, being the drugs of choice for postpartum depression.^{24,34} Only the use of fluoxetine is discouraged, since it has been shown to cause irritability, sleep and feeding disorders in infants.³⁴ Escitalopram has been considered a safe drug for use during lactation in this type of condition, representing a useful alternative for patients who do not adequately tolerate sertraline or paroxetine.³⁵

In short, the most suitable antidepressants for this context are sertraline, paroxetine, nortriptyline, and imipramine. It is necessary to prescribe the selected drug until the remission of symptoms and maintain it for 6 months more in order to avoid recurrences. In the psychological aspect, cognitive behavioral therapy or interpersonal therapy acts as an adjunct to pharmacological management. For patients presenting with the history of postpartum depression, it has been highly recommended to use an antidepressant or SSRIs prophylactically, as they have been proven beneficial in managing the previous episode.

Timely detection and establishment of treatment are essential, since postpartum depression can recur, become chronic or refractory, which will have negative consequences for the mother as well as the newborn if it does not receive adequate management.

Postpartum Psychosis

Puerperal psychosis or postpartum psychosis is a psychiatric disorder of insidious onset, characterized by alterations in behavior and thought content, manifested by hallucinations and delusions, and considered a true psychiatric emergency that endangers the life of the mother and the baby.³⁶

It occurs between one and two in every 1000 deliveries, being more frequent in primipara. Terp et al.³⁷ conducted a study for a

period of 3-month postpartum that had the largest sample size (over 1.25 million) reported the lowest incidence (0.89 in 1000), whereas a study by Vesga-Lopez et al.³⁸ had reported the highest prevalence of postpartum psychosis (6 in 1,000). It generally occurs in the first 2–4 weeks of the puerperium; although it can occur even up to sixth months, the risk factors being family or personal history of affective disorders, mainly bipolar disorder, history of schizophrenia or schizoaffective disorder, having presented postpartum psychosis in previous pregnancies as well as stressful events or obstetric complications during pregnancy.

Although the DSM-V does not consider puerperal psychosis as an independent entity, it has been classified as a severe form of major depression or as the onset or recurrence of a psychotic disorder, especially schizophrenia, or bipolar disorder. About 72–88% of patients with postpartum psychosis have a bipolar or schizophreniform disorder, while only 12% have a history of schizophrenia.

In addition to the above, the relationship of this type of psychosis with the disorders mentioned above helps to explain its pathophysiology. Genetically, alterations in the serotonin transporter gene (5-HTT) on chromosome 16p13 have been detected in women with a history of bipolar disorder together with the presence of postpartum psychosis. Regarding the hormonal aspect, the decrease in estrogen production after the birth of a baby, as these hormones mediate receptors dopaminergic in the hypothalamus, as a consequence of their serum decrease these receptors increase their sensitivity to dopamine leading to manifestations of psychosis. Similarly, the immunological system has been involved, showing that the coexistence of thyroiditis and preeclampsia is a frequent finding along with psychosis, suggesting an inflammatory and autoimmune etiology; furthermore, in 4% of cases autoantibodies develop in the immune system. The central nervous system could be related to autoimmune encephalitis. Alterations have also been observed in the activation of cells of the immune system, mainly monocytes and T lymphocytes, with postpartum physiological leukocytosis being absent. All of this contributes to emotional instability and the development of psychotic symptoms.

The course of this entity begins suddenly during the second week of the puerperium, with sleep disturbances (insomnia), symptoms of anxiety, and sudden changes in mood. Subsequently, behavioral disturbances, irritability, hostility, confusion, and disorganized thinking and speech are arise. Finally, there are hallucinations and different types of delirium that can result in suicide or infanticide.

Given the seriousness of this disorder, the physician should pay attention during postpartum follow-up to any symptoms of sadness, mania, or changes in mood that may lead to it. For its detection, the Edinburgh Postpartum Depression Scale is used to rule out depressive symptoms and the Mood Disorders Questionnaire, which focuses on symptoms of mania and alterations in thought or behavior. If these tests detect a risk of postpartum psychosis or the patient shows warning signs such as threatening to harm herself or the baby, urgent referral to psychiatry should be made.

Likewise, the differential diagnosis is made with other psychiatric disorders such as sadness and postpartum depression, bipolar disorder, obsessive-compulsive disorder, schizophrenia, schizophreniform disorder, or major depression with psychotic features. Regarding organic causes, metabolic or nutritional disorders such as hyponatremia, hypernatremia, hypoglycemia,

diabetic ketoacidosis, uremic encephalopathy, thiamine deficiency, thyroid disorders, and use of medications such as steroids, sympathomimetics, narcotics, anticholinergics, and nervous system infections must be ruled out.

Antipsychotics are used for pharmacological management. Drugs such as clozapine, olanzapine, quetiapine, and risperidone, mood stabilizers, benzodiazepines, and even electroconvulsive therapy, the latter in refractory cases, the presence of catatonia or depression with psychotic features, or for those who cannot tolerate the effects drug side effects. The treatment of choice to stabilize the patient is lithium, while the rest of the mentioned drugs are indicated for the control of manic and psychotic symptoms. After the acute phase, lithium management is maintained for 6–9 months and then begins a decline in dose gradually, as long as the manifestations have completely subsided. In relation to breastfeeding, atypical antipsychotics have been considered safe; however, lithium is not recommended; so, breastfeeding should be discontinued while it is being used.

In addition to pharmacological treatment, interpersonal or cognitive-behavioral therapy should be used, as well as family therapy. It is estimated that patients who presented postpartum psychosis have a 50–60% risk of recurrence in subsequent pregnancies, for which lithium prophylaxis is implemented from the third trimester. In the case of women with a history of bipolar disorder, prophylaxis is also implemented.

The prognosis of puerperal psychosis is good, as long as it is detected early and appropriate management is established during the acute phase. A comprehensive approach between gynecology and psychiatry is essential to minimize the risk of infanticide or suicide.

CONCLUSION

Postpartum mood disorders represent an undervalued public health problem given the repercussions they imply for the health of the mother and the newborn. In India, these disorders tend to be underdiagnosed due to the lack of information for doctors about the subject that allows an opportune diagnosis, and also due to factors related to the patients, mainly feelings of shame, guilt, or fear of expressing their symptoms. Therefore, it is essential that prenatal care visits identify risk factors for psychiatric disorders as well as manifestations related to mood disorders. Once the pregnancy is over, the gynecologist must be attentive and know the symptoms that may alert to the onset of any of the previously mentioned entities, in order to refer the patient to a psychiatrist to initiate the corresponding management. These types of conditions require a joint approach by the gynecology, psychiatry, pediatrics services, and not forgetting the role that can have psychology in the establishment of therapy behavior and management of the family support network.

The previously conducted studies on postpartum mood disorders have shown the following:

- Mental health contributes to the global burden of disease.
- Around 70–80% of women experience some kind of mood disturbances while 10–20% of them are found to develop various symptoms of anxiety and depression.
- Among postpartum mood disorders, postpartum blues is considered to be the milder form whereas postpartum depression and postpartum psychosis are severe forms of disease requiring immediate medical attention.

This study has been conducted meticulously including prospective, retrospective, and descriptive cross-sectional studies. The study thus elaborates on the following information:

- Around 80% of women are found to suffer from some alterations during pregnancy or puerperium, out of which around 14–80% suffer from postpartum blues according to random-effects model.
- According to an Indian meta-analysis on postpartum depression, an overall pooled estimate of 22% was discovered to present with depressive and anxiety disorders, premenstrual dysphoric syndrome, episodes of depression during pregnancy, postpartum depression in previous pregnancies, stressful events, or obstetric complications.
- DSM-V does not consider puerperal psychosis as an independent entity, around 72–88% of patients with postpartum psychosis have bipolar or schizophreniform disorder, while only 12% have a history of schizophrenia and require immediate medical management.

AUTHORS' CONTRIBUTION

AM: gathered relevant information and prepared the article. DD: reviewed the manuscript.

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