

Original Research Article

POSTPARTUM MOOD DISTURBANCES AND THEIR PREDICTORS: ASSOCIATION WITH MATERNAL MEDICAL DISORDERS, OBSTETRIC RISK FACTORS AND PERINATAL OUTCOMES

Bushra Shereen¹, Sreelakshmi U², Prathyusha Tanuku³

¹Associate Professor, Department of Obstetrics and Gynaecology, Malla Reddy Medical College for Women, Hyderabad, Telangana, India.

²Professor, Department of Obstetrics and Gynaecology, Malla Reddy Medical College for Women, Hyderabad, Telangana, India.

³Associate Professor, Department of Obstetrics and Gynaecology, Malla Reddy Medical College for Women, Hyderabad, Telangana, India.

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Corresponding Author:

Dr. Sreelakshmi U,
Professor, Department of Obstetrics
and Gynaecology, Malla Reddy
Medical College for Women,
Hyderabad, Telangana, India.
Email: dr.sreelakshmi@yahoo.com

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ABSTRACT

Background: Postpartum mood disturbances including postpartum blues, postpartum depression and postpartum psychosis, are important contributors to maternal morbidity and adverse neonatal outcomes. Early identification of women at risk is essential for timely intervention. This study aimed to determine the prevalence of postpartum mood disturbances and evaluate their association with maternal medical disorders, obstetric risk factors, perinatal outcomes and postpartum psychosocial factors.

Materials and Methods: A prospective observational study was conducted among postpartum women delivering in the department of obstetrics and gynaecology, Malla Reddy medical college for women which is a tertiary care teaching hospital. A total of 317 women were recruited, of whom 17 were lost to follow-up, leaving 300 women for final analysis. Participants were assessed during the postpartum period using validated screening tools for postpartum mood disturbances. Maternal demographic characteristics, socioeconomic status, medical disorders, obstetric complications, neonatal outcomes and postpartum psychosocial variables were recorded using a predesigned and pretested proforma. Associations between risk factors and postpartum mood disturbances were analysed using appropriate statistical tests, with $p < 0.05$ considered statistically significant.

Results: The overall prevalence of postpartum mood disturbances was 22.7%, comprising postpartum blues (16.0%), postpartum depression (6.0%) and postpartum psychosis (0.7%). Postpartum mood disturbances were significantly associated with lower socioeconomic status, primiparity, anaemia, pregnancy-induced hypertension, hypothyroidism, prolonged labour, operative vaginal delivery, emergency caesarean section, postpartum haemorrhage, postpartum complications, unplanned pregnancy, inadequate postpartum pain control and neonatal intensive care unit admission (all $p < 0.05$). Women with postpartum mood disturbances also had significantly longer hospital stay, sleep deprivation, impaired mother–infant interaction, poorer postnatal care compliance and low voluntary help-seeking behaviour. Gestational diabetes mellitus, preterm birth and low birth weight were not significantly associated.

Conclusion: Nearly one in four postpartum women experienced a mood disturbance during the puerperium. Maternal medical disorders, adverse obstetric events and postpartum psychosocial factors significantly influenced the risk of postpartum mood disturbances. Routine perinatal mental health screening, particularly among women with identifiable risk factors, together with multidisciplinary management and timely psychological support, may improve maternal psychological well-being, mother–infant bonding and neonatal outcomes.

Keywords: Postpartum mood disturbances; postpartum depression; postpartum blues; postpartum psychosis; maternal mental health; perinatal mental health.

INTRODUCTION

The postpartum period represents a unique and vulnerable phase in a woman's life, marked by significant physiological, hormonal, psychological, and social transitions. While child birth is often considered a positive life event, it is also associated with an increased susceptibility to mental health disorders. Postpartum mood disturbances encompass a broad clinical spectrum, ranging from self-limiting conditions such as postpartum blues to more severe and debilitating disorders including postpartum depression and postpartum psychosis.^[1] These conditions not only compromise maternal well-being but also adversely affect infant care, breastfeeding practices, mother–infant bonding, and long-term cognitive and emotional development of the child.^[2]

Globally, postpartum depression is a leading cause of maternal morbidity, affecting 10–20% of women in high-income countries and up to 25–30% in low- and middle-income countries.^[3] In India, the burden is further increased by socioeconomic challenges, limited mental health resources, cultural stigma and the lack of routine screening. The World Health Organization recognizes maternal mental health as a key component of reproductive health and advocates integrating mental health services into maternal and child health programs.^[4] Untreated postpartum mood disorders contribute to maternal suffering, impaired quality of life and, in severe cases, maternal suicide, an important cause of maternal mortality worldwide.^[5]

The etiology of postpartum mood disturbances is multifactorial, involving a complex interaction of biological, psychological and social factors. Rapid postpartum hormonal changes, particularly the decline in estrogen and progesterone, together with neuroendocrine alterations, sleep deprivation and stress-related neurobiological changes, play a central role. Psychosocial factors, including inadequate social support, marital discord, unintended pregnancy and financial constraints, further increase vulnerability.^[7] Maternal medical disorders during pregnancy and the puerperium are increasingly recognized as important predictors of postpartum mood disturbances. Conditions such as anaemia, hypertensive disorders of pregnancy, gestational diabetes mellitus, thyroid dysfunction and chronic systemic illnesses contribute to physiological stress and psychological burden. These disorders may influence mood through inflammatory pathways, altered metabolic states and increased obstetric interventions.^[8] Women with pre-existing medical conditions may also experience greater anxiety regarding pregnancy outcomes, further predisposing them to postpartum psychological disturbances. Obstetric risk factors also play an important role in postpartum mental health. Complications such as prolonged or obstructed labour, emergency caesarean section,

instrumental delivery, postpartum haemorrhage and perinatal loss are associated with increased emotional distress and psychological trauma.^[9] Adverse perinatal outcomes, including preterm birth, low birthweight, neonatal intensive care unit (NICU) admission and congenital anomalies, further increase maternal anxiety and depressive symptoms.^[10]

The cumulative effect of these factors may significantly impair maternal coping during the postpartum period. Recognizing the burden of perinatal mental health disorders, the American College of Obstetricians and Gynecologists (ACOG) and the Royal College of Obstetricians and Gynaecologists (RCOG) recommend routine screening for depression and anxiety during the antenatal and postpartum periods using validated tools.^[11-12] These guidelines emphasize early identification of high-risk women, multidisciplinary management and timely referral to mental health services. However, implementation remains inconsistent, particularly in resource-limited settings.

Despite increasing awareness, comprehensive studies evaluating the combined influence of maternal medical disorders, obstetric risk factors and perinatal outcomes on postpartum mood disturbances remain limited. Most existing studies assess isolated risk factors, restricting the understanding of their combined and interactive effects. Regional data, particularly from developing countries, are also scarce. A comprehensive evaluation of these predictors is essential for early risk stratification, targeted surveillance and implementation of preventive strategies. Identifying women at increased risk during the antenatal and intrapartum periods may facilitate timely counselling, psychological support and appropriate interventions, ultimately improving maternal and neonatal outcomes.

Therefore, the present study aimed to assess postpartum mood disturbances and their predictors, with particular emphasis on maternal medical disorders, obstetric risk factors and perinatal outcomes. By exploring these associations, the study seeks to strengthen existing evidence and support the development of integrated, evidence-based approaches to maternal mental health care.

Aim and Objective

- To determine the prevalence of postpartum mood disturbances in the study population.
- To assess the association between maternal medical disorders, obstetric risk factors and adverse perinatal outcome with postpartum mood disturbances.
- To assess the severity of postpartum mood disturbances using a standardized screening tool such as the Edinburgh Postnatal Depression Scale (EPDS).

MATERIALS AND METHODS

This hospital-based prospective observational study was conducted in the Department of Obstetrics and Gynaecology at Malla Reddy Medical College for Women, a tertiary care teaching hospital in South India over a period of 1 year from June 2024 to May 2025. The study aimed to evaluate postpartum mood disturbances and identify their association with maternal medical disorders, obstetric risk factors and perinatal outcomes.

All eligible women who fulfilled the inclusion criteria and provided informed consent were included in the study. The women who were lost to follow-up during subsequent postpartum visits were excluded from the final analysis.

Inclusion Criteria

- Women in the postpartum period up to six weeks after delivery.
- Women delivering in the study institution.
- Women willing to participate and provide written informed consent.

Exclusion Criteria

- Women with a known pre-existing psychiatric disorder diagnosed before pregnancy.
- Women with severe medical illness rendering them unable to participate.
- Women unwilling to participate in the study.
- Women with cognitive impairment or inability to comprehend the questionnaire.

Screening Strategy

Repeated Screening Approach

To capture the complete spectrum of postpartum mood disturbances, a serial screening strategy was adopted. Since postpartum psychological disorders may manifest at different time intervals, repeated assessments were performed at four predetermined time points.

Screening was first conducted within 72 hours after delivery to detect early postpartum mood disturbances, including postpartum blues and acute psychosis. A second assessment was performed at one week postpartum to identify persistent mood symptoms. Screening at three weeks postpartum facilitated the detection of emerging postpartum depression, while a final assessment at six weeks postpartum was aimed at identifying late-onset depression and ongoing symptoms. This repeated screening approach was adopted to capture the full spectrum of postpartum mood disturbances and to improve the detection of cases that may be missed with a single postpartum assessment. Women found to have significant symptoms at any of the screening visits were considered cases and included in the analysis.

Postpartum mood disturbances were assessed using the Edinburgh Postnatal Depression Scale (EPDS), a validated self-administered screening tool consisting of ten questions, each scored from 0 to 3, with a maximum score of 30. An EPDS score of ≥ 13 was considered indicative of probable postpartum

depression. Women with high scores or severe symptoms suggestive of psychosis were referred for psychiatric evaluation and further management.

Data were collected using a predesigned and pretested proforma. The variables recorded included sociodemographic characteristics like maternal age, parity, socioeconomic status and planned or unplanned pregnancy. Data regarding the associated medical disorders like anemia, hypertensive disorders of pregnancy, gestational diabetes mellitus and thyroid disorders was obtained from clinical records and patient interviews. Obstetric variables including mode of delivery, instrumental delivery, emergency cesarean section, postpartum hemorrhage, and other postpartum complications were documented. Participants were screened for postpartum mood disturbances, and the prevalence of different types of postpartum mood disturbances and the timing of their detection during the postpartum period were recorded and analysed.

Perinatal outcome variables such as preterm delivery, low birth weight, neonatal intensive care unit (NICU) admission and perinatal mortality were also recorded. In addition, postpartum and psychosocial factors, including adequacy of pain control, sleep deprivation, mode of infant feeding, compliance with postnatal care, quality of maternal–infant interaction, and help-seeking behaviour for psychological symptoms, were assessed.

These data were subsequently analyzed to determine their association with postpartum mood disturbances and to identify potential predictors of adverse maternal psychological outcomes.

The primary outcome of the present study was the presence of postpartum mood disturbances during the first six weeks postpartum. The secondary outcomes included evaluation of the association between postpartum mood disturbances and maternal medical disorders, obstetric risk factors, adverse perinatal outcomes, postpartum care and mother–infant bonding, as well as the identification of independent predictors of postpartum mood disturbances.

Statistical Analysis

Data were entered into Microsoft Excel and analyzed using the Statistical Package for Social Sciences (SPSS). For the purpose of analysis, all the study variables were expressed as categorical variables and presented as frequencies and percentages. The Chi-square test or Fisher's exact test was used to compare categorical variables. A p-value of <0.05 was considered statistically significant.

Ethical Considerations

Approval for the study was obtained from the Institutional Ethics Committee prior to commencement of the study. Written informed consent was obtained from all participants. Confidentiality and anonymity of the participants were maintained throughout the study. Women identified with significant depressive symptoms or features suggestive of severe psychiatric illness

were counseled and referred to the Department of Psychiatry for further evaluation and management.

RESULTS

A total of 317 postpartum women were initially recruited for the study. Of these, 17 women were lost to follow-up. The remaining 300 women completed the follow-up and constituted the final study sample. Among these, 68 women were identified with postpartum mood disturbances, yielding an overall prevalence of 22.7% (68/300).

Table 1: Age Distribution of Women with Postpartum Mood Disturbances

Age Group (years)	Number of Cases	Percentage
≤ 20	6	9%
21–25	24	35%
26–30	28	41%
31–35	8	12%
> 35	2	3%
Total	68	100%

Table 2: Parity Distribution of Women with Postpartum Mood Disturbances

Parity	Number of cases	Percentage
Primiparous	40	~59%
Multiparous	28	~41%
Total	68	100%

Table 3: Socioeconomic status Distribution of Women with Postpartum Mood Disturbances

Socioeconomic Status	Number of Cases	Percentage
Lower	28	~41%
Lower middle	24	~35%
Upper middle	12	~18%
Upper	4	~6%
Total	68	100%

Table 4: Prevalence of Postpartum Mood Disturbances

Condition	Number of women	Prevalence
Postpartum blues	48	16.00%
Postpartum depression	18	6.00%
Postpartum psychosis	2	0.70%
Total	68	22.60%

Table 5: Association of Maternal Medical Disorders with Postpartum Mood Disturbances

Maternal Medical Disorder	With Postpartum Mood Disturbances (n = 68)	Without Postpartum Mood Disturbances (n = 232)	p value
Anemia	26 (38.2%)	46 (19.8%)	0.004*
Pregnancy-induced hypertension (PIH)	18 (26.5%)	34 (14.7%)	0.02*
Gestational diabetes mellitus (GDM)	8 (11.8%)	24 (10.3%)	0.72
Hypothyroidism	14 (20.6%)	20 (8.6%)	0.01*
No medical disorder	20 (29.4%)	108 (46.6%)	—

Table 6: Association of Obstetric Risk Factors with Postpartum Mood Disturbances

Obstetric Risk Factor	With Postpartum Mood Disturbances (n = 68)	Without Postpartum Mood Disturbances (n = 232)	p value
Prolonged labour	12 (18%)	22 (9.5%)	0.02*
Operative delivery (LSCS/assisted vaginal)	20 (29%)	45 (19%)	0.03*
Postpartum hemorrhage (PPH)	14 (21%)	25 (10.8%)	0.004*
No obstetric risk factor	22 (32%)	140 (60.3%)	—

Table 7: Association of Perinatal Outcomes with Postpartum Mood Disturbances

Perinatal Outcome	With Postpartum Mood Disturbances (n = 68)	Without Postpartum Mood Disturbances (n = 232)	p value
Preterm birth (<37 weeks)	12 (18%)	35 (15%)	0.52
Low birth weight (<2500 g)	15 (22%)	45 (19%)	0.48
NICU admission	18 (26%)	20 (8.6%)	0.001

No perinatal complication	30 (44%)	132 (56.9%)	-
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Table 8: Association of Mode of Delivery with Postpartum Mood Disturbances

Mode of delivery	With Postpartum Mood Disturbances (n = 68)	Without Postpartum Mood Disturbances (n = 232)	p value
Normal vaginal delivery (NVD)	22 (32%)	105 (45.3%)	0.11
Forceps delivery	10 (15%)	25 (10.8%)	0.03*
Emergency LSCS	18 (26%)	35 (15.1%)	0.001*
Elective LSCS	18 (26%)	67 (28.9%)	0.08

Table 9: Association of postpartum complications with Postpartum Mood Disturbances

Postpartum Complication	With postpartum mood disturbances (n = 68)	Without postpartum mood disturbances (n = 232)	p value
Febrile morbidity	10 (14.7%)	16 (6.9%)	0.04*
Wound complications (LSCS / episiotomy)	12 (17.6%)	20 (8.6%)	0.03*
Lactation difficulties	16 (23.5%)	30 (12.9%)	0.02*
No postpartum complications	22 (32.4%)	166 (71.6%)	<0.001*

Table 10: Association of Pregnancy Planning with Postpartum Mood Disturbances

Pregnancy type	With Postpartum Mood Disturbances (n = 68)	Without Postpartum Mood Disturbances (n = 232)	p value
Planned pregnancy	38 (55.9%)	168 (72.4%)	
Unplanned pregnancy	30 (44.1%)	64 (27.6%)	0.01*

Table 11: Association of Pain with Postpartum Mood Disturbances

Pain Control Adequacy	With postpartum mood disturbances (n = 68)	Without postpartum mood disturbances (n = 232)	p value
Adequate pain control	48 (70.6%)	190 (81.9%)	
Inadequate pain control	20 (29.4%)	42 (18.1%)	0.03*

Table 11: Association of Length of Hospital Stay with Postpartum Mood Disturbances

Length of hospital stay	With Postpartum Mood Disturbances (n = 68)	Without Postpartum Mood Disturbances (n = 232)	p value
≤10 days	60 (88.2%)	220 (94.8%)	
>10 days	8 (11.8%)	12 (5.2%)	0.03*

Table 12: Impact of Postpartum Mood Disturbances on Maternal–Infant Interaction

Interaction Type	Mood Disturbance (n=68)	Percentage	No Mood Disturbance	Percentage	p value / Risk Interpretation
Adequate interaction	30	44%	200	86%	
Impaired interaction	38	56%	32	14%	p = 0.001* Significant negative impact on mother–infant bonding

Table 13: Impact of Postpartum Mood Disturbances on postnatal care compliance

Compliance Status	Mood Disturbance (n=68)	Percentage	No Mood Disturbance	Percentage	p value / Risk Interpretation
Adequate compliance	28	41%	200	86%	
Poor compliance	40	59%	32	14%	p = 0.001*; Significant reduction in postnatal care compliance

Table 14: Timing of Symptom Detection in Postpartum Mood Disturbances

Mood Disturbance	0–1 week	1–3 weeks	4–6 weeks	Total
Postpartum blues (48 cases)	48	0	0	48
Postpartum depression (18 cases)	4	6	8	18
Postpartum psychosis (2 cases)	2	0	0	2

Total (n = 68)	54	6	8	68
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Table 15: Association of mode of feeding with Postpartum Mood Disturbances

Mode of Feeding	With Postpartum Mood Disturbances (n=68)	Percentage	Without Mood Disturbances (n=232)	Percentage	p value
Exclusive breastfeeding	40	58.8%	170	73.3%	0.03*
Mixed feeding	18	26.5%	40	17.2%	0.08
Formula feeding only	10	14.7%	22	9.5%	0.12

Table 16: Association of sleep pattern with Postpartum Mood Disturbances

Sleep Pattern	With Postpartum Mood Disturbances (n=68)	Percentage	Without Mood Disturbances (n=232)	Percentage	p value
Adequate sleep (≥6 hours/day)	30	44.1%	162	69.8%	—
Inadequate sleep (<6 hours/day)	38	55.9%	70	30.2%	0.002*

Table 17: Patient help seeking behavior

Category	Number of Women	Percentage (%)
Sought help spontaneously	18	26%
Identified only on screening	50	74%

DISCUSSION

In the present prospective study of 300 postpartum women, the overall prevalence of postpartum mood disturbances (PPMDs) was 22.7%, including postpartum blues (16.0%), postpartum depression (6.0%) and postpartum psychosis (0.7%). Thus, nearly one in four women experienced a clinically significant postpartum mood disturbance. This prevalence is comparable with reports from India and other low-and middle-income countries, where postpartum depression ranges from 15% to 23%, while global estimates range from 10% to 20%, depending on the study population, timing of assessment and screening tools used.^[1-4] The slightly higher prevalence in our study is expected, as it included the entire spectrum of postpartum mood disorders rather than postpartum depression alone. Postpartum blues were the most common disorder, followed by postpartum depression and postpartum psychosis. This pattern agrees with previous literature showing that postpartum blues are the commonest postpartum psychological disorder, whereas postpartum psychosis, though rare, is a psychiatric emergency because of its association with maternal suicide, infanticide and severe psychiatric morbidity.^[2,5,16] The temporal pattern also reflected the natural course of these disorders, with postpartum blues occurring mainly during the first postpartum weekend postpartum depression presenting between one and six weeks postpartum.^[2,6]

Women aged 26–30 years formed the largest proportion of mothers with postpartum mood disturbances. However, maternal age was not an independent predictor, consistent with recent systematic reviews showing inconsistent associations after adjustment for socioeconomic and

obstetric factors.^[3,7] Primiparous women comprised nearly 59% of affected mothers, similar to previous cohort studies identifying first-time motherhood as a vulnerable period because of increased parenting anxiety, childcare responsibilities and adjustment to the maternal role.^[7,8] significant socioeconomic gradient was observed, with postpartum mood disturbances occurring more often among women from lower socioeconomic groups. Similar findings have been reported in Indian and international studies, where poverty, financial insecurity, limited education and poor social support are major determinants of maternal mental health.^[1,3,9] The World Health Organization also recognizes poverty, gender inequality and other adverse social determinants as important contributors to perinatal mental disorders, particularly in low-resource settings.^[4]

Among the maternal medical disorders evaluated, anaemia, pregnancy-induced hypertension (PIH) and hypothyroidism were significantly associated with postpartum mood disturbances, whereas gestational diabetes mellitus (GDM) was not. Anaemia showed one of the strongest associations, affecting 38.2% of women with postpartum mood disturbances versus 19.8% of unaffected women. Similar findings have been reported in recent systematic reviews identifying iron deficiency anaemia as an independent risk factor for postpartum depression through impaired neurotransmitter synthesis, fatigue and reduced cognitive function.^[10,11] These findings highlight the importance of early detection and treatment of antenatal anaemia to improve both obstetric and psychological outcomes. Women with pregnancy-induced hypertension were also more likely to develop postpartum mood disturbances. Hypertensive disorders increase maternal stress because of prolonged antenatal surveillance, fear of

maternal and fetal complications, emergency delivery and neonatal intensive care admission. Similar associations have been reported in recent systematic reviews and cohort studies.³ The association between hypothyroidism and postpartum mood disturbances is also consistent with previous evidence demonstrating the role of thyroid hormones in mood regulation and cognitive function.^[12,13] In contrast, GDM was not significantly associated with postpartum mood disturbances, supporting studies suggesting that well-controlled gestational diabetes does not independently increase postpartum depression risk after adjusting for maternal and psychosocial confounders.^[14]

The present study also identified several significant obstetric risk factors, including prolonged labour, operative vaginal delivery, emergency caesarean section, postpartum haemorrhage, postpartum complications, unplanned pregnancy and inadequate postpartum pain control. Similar findings have been reported in recent systematic reviews showing that traumatic childbirth and obstetric emergencies markedly increase the risk of postpartum anxiety and depression.^[15,7] Women experiencing prolonged labour or emergency obstetric interventions often report fear, loss of control, severe pain and concerns about maternal and neonatal survival, leading to adverse psychological outcomes. The Royal College of Obstetricians and Gynaecologists (RCOG) also recognizes traumatic childbirth as a major contributor to postnatal psychological morbidity and recommends psychological assessment after major obstetric complications.^[16]

Analysis of the mode of delivery showed that women undergoing emergency caesarean section and forceps-assisted vaginal delivery had significantly higher rates of postpartum mood disturbances than those with uncomplicated vaginal birth or elective caesarean section. Similar findings have been reported in observational studies linking emergency operative deliveries with childbirth-related psychological trauma, whereas elective caesarean section may have less psychological impact because women have more time for counselling and preparation before delivery.^[17] Women with unplanned pregnancies were significantly more likely to develop postpartum mood disturbances than those with planned pregnancies, consistent with recent meta-analyses identifying unintended pregnancy as an important psychosocial risk factor.³ Similarly, inadequate postpartum pain control was significantly associated with postpartum mood disturbances. Persistent pain impairs maternal recovery, sleep, infant care and breastfeeding, thereby increasing psychological distress. Current evidence and ACOG recommendations emphasize effective multimodal postpartum analgesia to improve both physical and psychological recovery.^[18]

Among the neonatal variables, NICU admission was significantly associated with postpartum mood

disturbances, whereas preterm birth and low birth weight were not. Mothers of newborns requiring intensive care often experience prolonged mother–infant separation, uncertainty about neonatal prognosis and disruption of breastfeeding, increasing psychological stress. Similar findings have been reported in recent systematic reviews.^[19] The absence of significant associations with preterm birth and low birth weight in our study may be due to the smaller number of affected neonates and the availability of specialized neonatal care at our tertiary centre.

Postpartum behavioral and psychosocial factors also showed significant associations with postpartum mood disturbances. Women with postpartum mood disturbances had longer hospital stays, with 11.8% hospitalized for more than 10 days compared with 5.2% of unaffected women. Prolonged hospitalization may indicate complicated maternal or neonatal recovery, increased healthcare costs and reduced family support, contributing to psychological distress. Similar findings have been reported in women with complicated postpartum recovery.^[8,20] Sleep deprivation was another important finding, with 55.9% of affected women sleeping less than six hours daily. This is consistent with recent systematic reviews identifying postpartum sleep disturbance as an independent predictor of postpartum depression through circadian, neuroendocrine and emotional dysregulation.^[21] Sleep loss may further impair maternal coping, increase fatigue and adversely affect mother–infant interaction. Although exclusive breastfeeding remained the predominant feeding practice, it was relatively less common among women with postpartum mood disturbances, while mixed and formula feeding were more frequent. This supports previous evidence demonstrating a bidirectional relationship between breastfeeding and maternal mental health, where by depressive symptoms reduce breastfeeding confidence and continuation, while breastfeeding difficulties further worsen psychological distress.^[22] Breastfeeding counselling and lactation support should therefore be integrated into routine postpartum mental health care.

A significant association was also observed between postpartum mood disturbances and impaired mother–infant interaction. More than half of the affected mothers showed impaired interaction, consistent with longitudinal studies demonstrating that untreated postpartum depression adversely affects maternal responsiveness, infant attachment, breastfeeding success and early cognitive and behavioral development.^[23,24] The World Health Organization also recognizes maternal mental health as essential for optimal early childhood development and recommends early identification and intervention for at-risk women.^[4]

Women with postpartum mood disturbances also showed significantly poorer compliance with postnatal care. Persistent sadness, anxiety, fatigue

and poor concentration may reduce follow-up attendance and adherence to medical advice, delaying recognition and management of maternal and neonatal complications. Similar findings have been reported in studies evaluating healthcare utilization among women with postpartum depression.^[25]

Another important finding was the low rate of voluntary help-seeking. Only 26% of women with postpartum mood disturbances sought professional help, while nearly three-fourths were identified through active screening. Similar findings have been reported worldwide, where stigma, poor mental health literacy and fear of social judgement remain major barriers to seeking care.^[1,26] These findings support WHO, ACOG and RCOG recommendations advocating routine screening for perinatal mental health disorders using validated tools such as the Edinburgh Postnatal Depression Scale during antenatal and postnatal care.^[4,13,16]

CONCLUSION

The present study demonstrated that postpartum mood disturbances affected 22.7% of women during the first six weeks postpartum, emphasizing their significant public health burden. Lower socioeconomic status, primiparity, anaemia, pregnancy-induced hypertension, hypothyroidism, prolonged labour, emergency operative delivery, postpartum haemorrhage, postpartum complications, unplanned pregnancy, inadequate pain control, neonatal intensive care unit admission, prolonged hospital stay, sleep deprivation, impaired mother–infant interaction and poor postnatal care compliance were significantly associated with postpartum mood disturbances. The low rate of voluntary help-seeking highlights the need for routine screening using validated tools during the antenatal and postnatal periods. Early identification of high-risk women, coupled with multidisciplinary management and timely psychological intervention, has the potential to improve maternal mental health, strengthen mother–infant bonding and optimize neonatal outcomes. Integrating perinatal mental health screening into routine maternal healthcare should be prioritized, particularly in resource-limited settings.

REFERENCES

- O'Hara MW, McCabe JE. Postpartum depression: current status and future directions. *Annu Rev Clin Psychol*. 2013;9:379-407.
- Stein A, Pearson RM, Goodman SH, Rapa E, Rahman A, McCallum M, et al. Effects of perinatal mental disorders on the fetus and child. *Lancet*. 2014;384(9956):1800-19.
- World Health Organization. Maternal mental health. Geneva: World Health Organization; 2022.
- World Health Organization. Guide for integration of perinatal mental health into maternal and child health services. Geneva: World Health Organization; 2022.
- World Health Organization. Trends in maternal mortality 2000–2020. Geneva: World Health Organization; 2023.
- Meltzer-Brody Samantha, Stuebe Alison. The long-term psychiatric and medical prognosis of perinatal mental illness. *Best Pract Res Clin Obstet Gynaecol*. 2014;28(1):49-60.
- Robertson Emma, Grace Sherry L., Wallington Tamara, Stewart Donna E.. Antenatal risk factors for postpartum depression: a synthesis of recent literature. *Gen Hosp Psychiatry*. 2004;26(4):289-95.
- Silverman Mark E., Reichenberg Abraham, Savitz David A., et al. The risk factors for postpartum depression: a population-based study. *Depress Anxiety*. 2017;34(2):178-87.
- Ayers Susan. Thoughts and emotions during traumatic birth: a qualitative study. *Birth*. 2007;34(3):253-63.
- Vigod Simone N., Villegas Lilian, Dennis Cindy-Lee, Ross Lori E.. Prevalence and risk factors for postpartum depression among women with adverse perinatal outcomes: a systematic review. *BJOG*. 2010;117(5):540-50.
- American College of Obstetricians and Gynecologists. Screening and diagnosis of mental health conditions during pregnancy and postpartum. ACOG Clinical Practice Guideline No. 4. *Obstet Gynecol*. 2023;141(5):1262-88.
- Royal College of Obstetricians and Gynaecologists. Management of Mental Health Disorders in Pregnancy and the Postnatal Period. Green-top Guideline. London: RCOG; 2023
- American College of Obstetricians and Gynecologists. Screening and diagnosis of mental health conditions during pregnancy and postpartum. ACOG Clinical Practice Guideline No. 4. *Obstet Gynecol*. 2023;141(5):1262-88.
- Kozhimannil KB, Pereira MA, Harlow BL. Association between gestational diabetes and postpartum depression. *Paediatr Perinat Epidemiol*. 2009;23(1):17-26.
- Ayers S, Bond R, Bertullies S, Wijma K. The aetiology of post-traumatic stress following childbirth: A meta-analysis and theoretical framework. *Psychol Med*. 2016;46(6):1121-34.
- Royal College of Obstetricians and Gynaecologists. Management of Mental Health Disorders in Pregnancy and the Postnatal Period. Green-top Guideline. London: RCOG; 2023
- Xu H, Ding Y, Ma Y, Xin X, Zhang D. Cesarean section and risk of postpartum depression: A meta-analysis. *J Psychosom Res*. 2017;97:118-26.
- American College of Obstetricians and Gynecologists. Pharmacologic stepwise multimodal approach for postpartum pain management. Clinical Consensus No. 1. *Obstet Gynecol*. 2021;138(3):507-17.
- Vigod SN, Villegas L, Dennis CL, Ross LE. Prevalence and risk factors for postpartum depression among women with adverse perinatal outcomes: A systematic review. *BJOG*. 2010;117(5):540-50.
- Rowlands IJ, Redshaw M. Mode of birth and women's psychological and physical wellbeing in the postnatal period. *BMC Pregnancy Childbirth*. 2012;12:138.
- Okun ML. Disturbed sleep and postpartum depression. *Curr Psychiatry Rep*. 2016;18(7):66.
- Dias CC, Figueiredo B. Breastfeeding and depression: A systematic review of the literature. *J Affect Disord*. 2015;171:142-54.
- Stein A, Pearson RM, Goodman SH, Rapa E, Rahman A, McCallum M, et al. Effects of perinatal mental disorders on the fetus and child. *Lancet*. 2014;384(9956):1800-19.
- Murray L, Cooper PJ. Effects of postnatal depression on infant development. *Arch Dis Child*. 1997;77(2):99-101.
- Flynn HA, Blow FC, Marcus SM. Rates and predictors of mental health treatment among women with postpartum depression. *Gen Hosp Psychiatry*. 2006;28(2):145-53.
- Dennis CL, Chung-Lee L. Postpartum depression help-seeking barriers and maternal treatment preferences: A qualitative systematic review. *Birth*. 2006;33(4):323-31.