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Original Research Article

Assessing the prevalence, sociodemographic factors and psychosocial determinants associated with postpartum depression: a cross-sectional study in the urban field practice area of Bidar

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ABSTRACT

Background: Postpartum depression (PPD) is a serious health issue that affects many women after childbirth. It includes a range of mood problems from mild sadness to severe depression, usually starting within four weeks after delivery and may last up to one year. To estimate the prevalence of postpartum depression among women within six months of delivery and to identify the socio-demographic, obstetric and psychosocial determinants associated with it.
Methods: An observational cross- sectional study was conducted among 150 Postpartum women (within 6 months of delivery) residing in the urban field practice area from 01 February 2026 to April 2026.Universal sampling method was used to collect the information from eligible postpartum women. A pretested questionnaire including socio-demographic, obstetric and psychosocial determinants and Edinburgh Postnatal Depression Scale (EPDS) – validated Hindi version were used to assess postpartum depression among the participants. Data was analysed using Microsoft excel and SPSS software.
Results: The prevalence of postpartum depression was 15 (10%) among study participants. Significant associations of postpartum depression among study participants were observed with age <25 years, uneducated, belonging to lower socioeconomic class, primiparous, caesarean section delivery, having female child, substance use by husband, having poor social support from husband and in-laws and domestic violence ($p<0.05$).
Conclusions: Poverty, caesarean section, female child, primiparous, domestic violence, substance use by husband and poor support from husband & in-laws have been identified as major contributors towards postpartum depression. This cross-sectional study highlights the need for early screening, counselling and strengthening of social support systems for mothers during the postpartum period to promote maternal mental health and overall family well-being.

Keywords: Domestic violence, Edinburgh postnatal depression scale, Postpartum depression

INTRODUCTION

PPD is a serious health problem that affects many women after childbirth. It includes a range of mood problems, from mild sadness to severe depression, usually starting within four weeks after delivery and may last up to one year. PPD not only impacts the mother's mental and emotional well-being, but also affect the baby's growth, development and bonding with the mother. Despite being common and harmful, PPD is often not recognized or treated, especially in low-resource settings. This makes it important to increase awareness, screening and support for affected mothers.[1] There are various stressors for psychiatric morbidity during the postpartum period. These include endocrine changes, changes of body image, activation of unconscious psychological conflicts and intrapsychic recognition of becoming a mother.[2] Postpartum depression mainly occurs due to the sudden decline of progesterone but other factors like lack of support from husband and family, delivery of a female child, intimate partner violence and the effect of traditional rituals as risk factors for PND.[3] Postpartum psychiatric

disorders are classified into five classes postpartum blues, PPD, postpartum psychosis, postpartum post-traumatic stress disorder and postpartum anxiety and obsessive compulsive disorder.[4] Globally, about 10% of pregnant women and 13% of new mothers experience mental health issues, mainly depression. In developing countries, the numbers are higher 15.6% during pregnancy and 19.8% after childbirth. In severe cases, mothers may attempt or commit suicide. Mental illness can affect a mother's daily functioning and ability to care for her baby. Children's growth and development may also suffer as a result. These mental health disorders are treatable. Effective care can be given even by non-specialist health workers who are well-trained.[5]

India has made significant strides in improving maternal and child health outcomes through initiatives such as the Reproductive, Maternal, New-born, Child and Adolescent Health (RMNCHA+) strategy under the National Health Mission.[6] The Pradhan Mantri Surakshit Matritva Abhiyan strives to offer guaranteed, thorough and high-quality prenatal care at no charge to all expectant mothers on the ninth of each month.[7] Mother's Absolute Affection (MAA) prioritizes the promotion of breastfeeding and the provision of counselling services to strengthen breastfeeding support within healthcare systems.[8] Surakshit Matritva Aashwasan (SUMAN) is dedicated to ensure the dependable delivery of maternal and new-born healthcare services, emphasizing broader access to free and high-quality care while maintaining a policy of zero tolerance for service denials.[9] The quality improvement initiative in labour room and maternity OT (LaQshya) targets enhancing the quality of care provided to mothers and new-borns during labour and immediately after childbirth.[10]

Despite growing global and national evidence, limited data is available from urban field settings in Bidar, Karnataka. Identifying the prevalence and determinants in this population will help in developing targeted interventions and improving maternal mental health services at the primary care level.

Objectives

To estimate the prevalence of postpartum depression among women within 6 months of delivery in an urban field practice area of Bidar. To identify the socio-demographic, obstetric and psychosocial determinants associated with postpartum depression.

METHODS

An observational cross-sectional study was conducted in the urban field practice area of Bidar institute of medical science located in Bidar district of Karnataka. It was undertaken over a period of 3 months from 01 February 2026 to April 2026 after receiving approval from the Institutional Ethics Committee on 03 March 2026. The study included postnatal mothers with infants less than 6 months of age residing in urban field practice area. Mothers with known history of psychiatric illness and critically ill were excluded from study. Sample size was calculated using the Cochrane formula $n= Z^2pq/d^2$ where n is the sample size, z is value of normal deviate at considered level of confidence α=1.96 (95% confidence interval). Based on a previous study in Vellore, South India, where the prevalence of PPD was found to be 11%, with 5% margin of error, the sample size was calculated to be 150.[11] Universal sampling method was used to collect the information from eligible postpartum women delivered at urban health centre. A pretested questionnaire including socio-demographic, obstetric, psychosocial determinants and Edinburgh postnatal depression scale (EPDS) validated Hindi version was used to assess postpartum depression among the participants.[12]

The procedure included detailed history, socio demographic variables and postnatal mental evaluation of mother by diagnostic interview technique using the EPDS. The EPDS is a short structured validated screening scale of choice in the community setup with a sensitivity of 95% and specificity 93%. The EPDS consists of 10 questions each having 4 point Likert type agreement scale options as responses. Responses are scored 0, 1, 2 or 3 according to increased severity of the symptom for questions 1, 2 and 4 and for questions 3 and 5 10 the score being reversed. The mother was asked about one of the four possible responses that comes the closest to how she has been feeling in the previous 7 days. The following severity ranges were used on adding the score of each question out of the maximum score of 30 points none or minimal depression (0–6 points) mild depression (7–13 points) Moderate depression (14–19 points) severe depression (20–30 points). A psychiatric referral and consultation were reserved for the cases with presence of psychiatric morbidity.[13]

Categorical and nominal data was expressed in frequency and percentage. The data was analysed using Chi square test. The significance threshold of P value was set at <0.05. Analysis was carried out by using SPSS software version 21.

RESULTS

Table 1 show that the prevalence of depression among study population was 10%. Table 2 showed that out of total 150 study participants, 94 (62.66%) were more than 25 years of age, 85 (56.67%) were Hindu, 106 (70.67%) were educated, 83 (55%) belongs to joint or extended family, 134 (89%) were housewives and 59 (39.33%) belong to lower middle class as per Modified B G Prasad classification. The prevalence of depression was statistically significant among study participants with less than 25 years of age, uneducated and belonging to lower socioeconomic class with p value<0.05. The association of postpartum depression was not found statistically significant in religion, type of family and occupation of mothers. Table 3 showed association of postpartum depression with obstetric and psychosocial factors. Out of

total 150 study participants, depression was more common among primiparous (73.33%), mothers having caesarean delivery (80%), having complications of delivery (60.00%), having female child (80.00%), history of substance use by husband (66.67%), having poor support from husband (60%), having poor support from in-laws (66.67%) and having history of domestic violence (66.67%) and all these obstetric and psychosocial factors are statistically significant with p value<0.05. There was no statistical association between postpartum depression and place of delivery as p value was >0.05.

Table 1: Prevalence of postpartum depression among study participants (n=150).

Postpartum depression	Frequency	(%)
Present	15	10
Absent	135	90

Table 2: Association of postpartum depression with sociodemographic variables of study participants (n=150).

Variables	Category	Total n (%)	Postpartum depression		P value
			Absent 135 (90%)	Present 15 (10%)	
Age (in years)	>=25	94 (62.66)	91 (67.41)	3 (20.00)	0.0003
	<25	56 (37.34)	44 (32.59)	12 (80.00)	
Religion	Hindu	85 (56.67)	75 (55.55)	10 (66.67)	0.5052
	Muslim	56 (37.33)	51 (37.78)	5 (33.33)	
	Christian	9 (6.00)	9 (6.67)	0 (0)	
Education of mother	Uneducated	44 (29.33)	34 (25.18)	10 (66.67)	0.0008
	Educated	106 (70.67)	101(74.82)	5 (33.33)	
Type of family	Nuclear	67 (44.00)	58 (42.96)	9 (60.00)	0.2080
	Joint/Extended	83 (55.00)	77 (57.04)	6 (40.00)	
Occupation of mother	Housewife	134 (89.00)	121 (89.63)	13 (86.67)	0.7244
	Employed	16 (11.00)	14 (10.37)	2 (13.33)	
Socioeconomic status	Upper	15 (10.00)	15 (11.11%)	0 (0)	0.00018
	Upper Middle	15 (10.00)	15 (11.11%)	0 (0)	
	Middle	35 (23.33)	33 (24.45%)	2 (13.33)	
	Lower middle	59 (39.33)	55 (40.74%)	4 (26.67)	
	Lower	26 (17.34)	17 (12.59%)	9 (60.00)	

Table 3: Association of postpartum depression with obstetric and psychosocial factors (n=150).

Variables	Category	Total participants (%)	Postpartum depression		P value
			Absent 135 (90%)	Present 15 (10%)	
Parity	Primiparous	68 (45.33)	57 (42.22)	11 (73.33)	0.0217
	Multiparous	82 (54.67)	78 (57.78)	4 (26.67)	
Mode of delivery	Vaginal	76 (50.67)	73 (54.07)	3 (20.00)	0.0166
	Caesarean	74 (49.33)	62 (45.93)	12 (80.00)	
Place of delivery	Government	139 (92.67)	126 (93.33)	13 (86.67)	0.3474
	Private	11 (07.33)	9 (06.67)	2 (13.33)	
Complications of delivery	Yes	10 (06.67)	1 (00.74)	9 (60.00)	<0.0001
	No	140 (93.33)	134 (99.26)	6 (40.00)	
Sex of the infant	Male	70 (46.67)	67 (49.63)	3 (20.00)	0.0291
	Female	80 (53.33)	68 (50.37)	12 (80.00)	
History of substance use by husband	Yes	50 (33.33)	40 (29.63)	10 (66.67)	0.0039
	No	100 (66.67)	95 (70.37)	5 (33.33)	
Support from husband	Good	87 (58.00)	86 (63.70)	1 (6.67)	<0.0001
	Average	35 (23.33)	30 (22.22)	5 (33.33)	
	Poor	28 (18.67)	19 (14.08)	9 (60.00)	
Support from in-laws	Good	70 (46.66)	69 (51.11)	1 (6.66)	<0.0001
	Average	58 (38.67)	54 (40.00)	4 (26.67)	
	Poor	22 (14.67)	12 (8.89)	10 (66.67)	
Domestic violence	Yes	15 (10.00)	5 (03.70)	10 (66.67)	<0.0001
	No	135 (90.00)	130 (96.30)	5 (33.33)	

DISCUSSION

The present study found a 10% prevalence of postpartum depression among women in the urban field area of Bidar which closely aligns with a study by Chandran et al, who reported the PPD prevalence of 11%.[14] A study done in rural community in northern India included 680 women during the postpartum period shows higher education, marital satisfaction and higher support from partners and in-laws reduce the risk of developing PPD, aligns with finding of present study showing association of PPD with illiteracy, low support from husband and in-laws, domestic violence and substance use by husbands.[15] In a cross-sectional study done in UHTC, Tripuri, Patiala conducted on 250 post-natal mothers. Regarding various factors associated with PPD, Poverty, Caesarean section, domestic violence and poor spousal support have been identified as major contributors towards psychiatric morbidities similarly with findings from present study. Taking care of these largely modifiable risk factors can prevent development of postpartum depression.[16]

In a cross-sectional study conducted in tertiary care centre in Gorakhpur from January 2024 to March 2024. The prevalence of PPD was 12.14% among 280 postpartum mothers aligning closely with present study. PPD affects many women, emphasizing the need for effective measures like the appointment of healthcare counsellors and PPD screening programs in healthcare settings to detect and support affected mothers.[1]

Sociodemographic factors

In THE study, a higher proportion of PPD cases (80%) were observed in participants <25 years of age ($p<0.05$) possibly due to early marriage practices in the region where young women might not adequately prepared to manage the responsibility of motherhood. This trend is consistent with findings from other studies showing association of age factor in PPD development.[17-19] Regarding education, study shows that (66.67%) uneducated women shows postpartum depression which was statistically significant ($p<0.05$), this finding aligns with findings from previous study done in Tamil Nadu.[20] Most of women having PPD in our study were house wives (86.67%), consistent with finding from other study.[21] Religion, type of family and occupation of study participants in our study were not statistically associated with PPD.

Obstetric and psychosocial factors

Regarding various obstetric and Psychosocial factors, the prevalence of PPD was significant associations with primiparous women, caesarean section delivery, complications associated with delivery, having female infant, history of substance use by husband, presence of domestic violence and having poor support from husband and in-laws with $p<0.05$. Present study shows that 80% Caesarean section delivery were associated PPD and there was strong statistical association between PPD and Caesarean section delivery with $p<0.05$, similar to study done by Barbadoro et al in Italy.[22] In present study, we observed a significant association between PPD and gender of child i.e., female child with $p<0.05$, reasons could be preference for male child, similar findings were reported by study done by Zaidi et al showing higher rates of depression among women who delivered the female child.[23] Present study also showed that PPD was significantly associated with domestic violence with $p<0.05$, similar finding were reported by study done by Mallikarjun et al.[24] Present study also showed statistical association between PPD and substances used by husband with $p<0.05$, similar findings were reported from study done by Modi et al.[17] In context with relationship with husband and in-laws, PPD was strongly associated with poor relationship with husband and In-laws with $p<0.05$, similar finding were reported by study done by Modi et al and also by Savarimuthu et al.[17,19] These results underline the importance of the social environment and emotional security in maternal mental health.

Strengths

Use of validated tool

The EPDS (Hindi version) was used, which is a standardized and widely validated screening tool for postpartum depression.

Universal sampling

All eligible mothers within the area were included, reducing sampling bias.

Focus on psychosocial determinants

Unlike many studies that focus only on biological or obstetric factors, this research highlights psychosocial stressors (social support from husband and In-laws, domestic violence, substance use by husband).

Limitations

The study was limited to an urban area; rural populations were not included. Small sample size may limit generalizability. Self-reported data could lead to reporting bias.

CONCLUSION

This study revealed a 10% prevalence of postpartum depression among postpartum women in Bidar. Psychosocial determinants like poor social support from husband and In-laws, domestic violence, history of substance use by husband, birth of a girl child were significantly associated with PPD. Early identification and timely intervention through routine screening and counselling can help to reduce maternal morbidity and improve quality of life. Integrated approach is needed from

family, health workers, doctors for the wellbeing of mother and infant.

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REFERENCES

1. Romero Kapoor B, Malik N, Gupta G. A Cross-Sectional Study Exploring Postpartum Depression at a Tertiary Care Center in Eastern Uttar Pradesh, India. Cureus. 2024;16(4):58653.
2. Upadhyay RP, Chowdhury R, Salehi A, Sarkar K, Singh SK, Sinha B, et al. Postpartum depression in India: A systematic review and meta analysis. Bull World Health Organ. 2017;95:706-17.
3. Chandra PS: Post-partum psychiatric care in India: the need for integration and innovation. World Psych. 2004;3:99-100.
4. Randhawa A, Chaudhary N, Brar MS, Verma V, Munder SP. A community based cross sectional study to assess the prevalence of post partum depression: Why are the mothers depressed. J Family Med Prim Care. 2021;10:4536-41.
5. World Health Organization. Perinatal mental health. Geneva: World Health Organization. Available at: https://www.who.int/news-room/fact-sheets/detail/mental-health-of-women-during-pregnancy-and-after-childbirth. Accessed on 21 December 2025.
6. Kumar R. Impact of National Health Mission of India on infant and maternal mortality: A logical framework analysis. J Heal Man. 2021;23(1):155-65.
7. Bhakta M, Satapathy DM, Padhy M. Assessing the prevalence and risk factors of postpartum depression: a cross-sectional study conducted in the urban areas of Ankuli in southern Odisha. Cureus. 2024;16(6):61503.
8. Bhakta M, Satapathy DM, Padhy M, Dalai S, Panda JN, Marandi P, Svn S, Pattnaik A. Assessing the prevalence and risk factors of postpartum depression: a cross-sectional study conducted in the urban areas of Ankuli in southern Odisha. Cureus. 2024;16(6):61503.
9. Surakshit Matritva Aashwasan (SUMAN). Accessed: February 29, 2024: https://suman.mohfw.gov.in/.
10. Singh S, Hasan Z, Sharma D, Kaur A, Khurana D, Shrivastava JN, Gupta S. Appraising LaQshya's potential in measuring quality of care for mothers and newborns: a comprehensive review of India's labor room quality improvement initiative. BMC Pregn Childbirth. 2024;24(1):239.
11. Shivali S, Gururaj N. Postnatal depression among rural women in South India: Do socio demographic, obstetric and pregnancy outcome have a role to play. PloS One. 2015;10:122079.
12. Cox JL, Holden JM, Sagovsky R: Detection of postnatal depression: development of the 10-item Edinburgh Postnatal Depression Scale. Br J Psychiatry. 1987;150:782-6.
13. Harris B, Huckle P, Thomas R, Johns S, Fung H. The use of rating scales to identify post natal depression. Br J Psych. 1989;154:813 7.
14. Dubey c, Gupta N, Bhasin S, Muthal RA, Arora R. Prevalence and associated risk factors for postpartum depression in women attending a tertiary hospital, Delhi, India. Int J Soc Psych. 2012;58:577-80.
15. Balaji A, Bhuvaneshwari V. Postpartum psychiatric morbidities in a South Indian tertiary hospital: prevalence and obstetric correlates. Int J Med Pharma Res. 2026;7:2813-9.
16. Randhawa A, Chaudhary N, Brar MS, Verma V, Munder SP. A community based cross sectional study to assess the prevalence of postpartum depression: Why are the mothers depressed. J Family Med Prim Care. 2021;10:45:36-41.
17. Modi VP, Parikh MN, Valipay SK: A study on prevalence of postpartum depression and correlation with risk factors. Ann Indian Psych. 2018;2:27-32.
18. Khan B, Basu R. A study on evaluation of prevalence and risk factors of postpartum depression (PPD) in Indian women: IOSR J Dent Med Sci. 2016;15:59-62.
19. Savarimuthu RJ, Ezhilarasu P, Charles H, Antonisamy B, Kurian S, Jacob KS. postpartum depression in the community: A qualitative study from rural South India. Int J Soc Psychiatry. 2010;56:94-102.
20. Chandran M, Tharyan P, Muliyil J, Abraham S. Postpartum depression in a cohort of women from a rural area of Tamil Nadu, India. Incidence and risk factors. Br J Psychiatry. 2002;181:499-504.
21. Abraham AS, Thomas SC, Olickal JJ. Prevalence and determinants of post natal depression in Ernakulum district, India: A cross-sectional study. Cureus. 2024;16 (11):74449.
22. Barbadoro P, Coticchelli G, Chiatti C, Simonetti ML. Socio-economic determinants and self-reported depressive symptoms during postpartum period. Women Health. 2012;52:352-68.
23. Zaidi F, Nigam A, Anjum R, Agarwalla R. Postpartum depression in women: A risk factor analysis. J Clin Diagn Res. 2017;11:13-6.
24. Mallikarjun PK, Oyebode F. Prevention of Postnatal depression. J R Soc Promot Health. 2005;125:221-6.

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