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Original Article

Community Section

Prevalence of Postpartum Depression among Postnatal Mothers in a Rural Developmental Block of Purba Bardhaman District, West Bengal, India: A Cross-sectional Study

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ABSTRACT

Introduction: Postpartum depression is a complex mood disorder affecting a significant proportion of women after childbirth. It is characterised by feeling of severe sadness, anxiety and exhaustion. It impairs daily functioning, mother-infant bonding and overall family dynamics.

Aim: To estimate prevalence of postpartum depression and find out its associated factors in Bhatar rural developmental block of Purba Bardhaman district, West Bengal, India.

Materials and Methods: The current study was a cross-sectional study conducted from January 2024-July 2024 in Bhatar rural developmental block of Purba Bardhaman district, West Bengal, India. The study population consisted of the postnatal mothers within six weeks to six months of last delivery irrespective of outcome of delivery. The calculated size of 145 postnatal mothers were selected by simple random sampling, interviewed using a pre-validated schedule and Edinburgh Postnatal Depression Scale (EPDS) scale. Chi-square test was applied to assess associations and $p<0.05$ was considered statistically significant.

Results: A total of 16(11%) postnatal mothers had postpartum depression. Age of marriage were less than 18 years in 81 (55.86%) mothers, 107 (73.79%) were schedule tribe, 140 (96.55%) were Hindu, 59 (40.69%) were above secondary, 113 (77.93%) had joint family, 140 (96.55%) mothers were homemaker, 125(86.21%) came under lower middle socioeconomic status. Family h/o psychiatric illness (p-value=0.009), h/o abortion (p-value=0.024), sex of baby as desired (p= 0.011), initiation of breastfeeding (p=0.003), Exclusive Breastfeeding (EBF) status on the day of survey (p=0.004) and birth weight of baby (p=0.012) were found statistically significant with postpartum depression. Binary logistic regression revealed that family history of psychiatric illness was associated with increasing risk of postpartum depression.

Conclusion: The study revealed that prevalence of postpartum depression among postnatal mothers was 11%, indicating a significant public health concern. Thus, strengthening the integration of maternal mental health care into routine maternal health services during postpartum period was of utmost importance.

Keywords: Edinburgh postnatal depression scale, Maternal mental health, Primary healthcare, Risk factors

INTRODUCTION

Depressive disorder (also known as depression) is the commonest mental disorder. It involves low mood or disinterest in any day-to-day activity, affecting all aspects of life, including relationships with family, friends, acquaintance and community [1]. An estimated 3.8% of the population experience depression. Depression is more common among women than among men. Globally, more than 10% of antenatal and postnatal mother suffer from depression [1].

Generally, the birth of a new baby is expected to be a joyful milestone in a woman's life. Although, in some cases, postnatal women experience minor adjustment issues as well as grave and debilitating mood disorder, known as postpartum depression [2]. According to the American Psychiatric Association, postpartum depression is defined as a depressive episode that occurs within four weeks of birth of the baby. Though some researchers regard the postpartum period as lasting up to six months after delivery of the baby [3]. Symptoms may include persistent sadness, low mood, anxiety, irritability, frustration, hopelessness, change in eating patterns and sleep disturbances [4]. Postpartum depression can lead to neglect their own child, affect interpersonal relationships and often result in suicide [3].

Postpartum depression affects approximately 100-150 new mothers per 1,000 births. The global prevalence may surpass 25%. Thus, it is one of the most important public health concerns which is to be addressed thoroughly. Often women who suffer from it do not receive appropriate treatment as it is frequently misdiagnosed. Untreated postpartum depression can adversely influence breastfeeding practices, timely immunisation of baby. It can also have long-lasting impacts on the growth and development of their children [5].

In a systematic review and meta-analysis, the pooled prevalence of postpartum depression among women from high income countries {30.5% (95%CI 16.95-46.02)} did not differ significantly from that of women from low and middle income countries {31.5% (95%CI 19.26-45.15)} [6]. Around one in seven women can result in postpartum depression [7]. The baby blues are self-limiting, whereas postpartum depression is characterised by persistent symptoms of irritability, anxiety, feeling of worthlessness, hopelessness, restlessness, lack of sleep, difficulty in concentrating or making decisions. Women experiencing baby blues tend to come around quickly, whereas postpartum depression tends to be longer and severely affects women's ability to revert back to normal life. There is also a stigma around postnatal mothers in disclosure of postpartum depression because that may lead to abandonment, marital instability, fear of being labelled as unfit mother, fear of lack of social support and motivation [7]. These concerns contribute to concealment of symptoms and delayed help-seeking behaviour. It can thereby worsen maternal symptoms and can progress to severe depression or postpartum psychosis. Postpartum depression not only compromises maternal well-being but also adversely affects growth, neurodevelopment and long-term mental health of the children [8].

Hence, postpartum depression is a burning problem in present day's scenario which often simulates the submerged position of the ice-berg. It is under-recognised because routine maternal health services primarily focus on physical status of the mothers. Hence, there is delayed identification of postpartum depression due to limited mental health screening of the postnatal mothers at the subcenter and village level. It thereby results to inadequate management of the affected mothers. Along with that, awareness and care-seeking behaviour related to postpartum depression among postnatal mothers remain underexplored at the community level. Furthermore, systematic community-based tracking of postpartum depression is limited. In this context, the present study was thus aimed to estimate the prevalence of postpartum depression, assess caregiving of infants and to find out its correlates among postnatal mothers who have passed six week since their last delivery but are less than six months of delivery attending immunisation clinic of Bhatar rural developmental block of Purba Bardhaman district, West Bengal, India.

MATERIALS AND METHODS

The present study was a cross-sectional type of study, conducted among the postnatal mothers who visited immunisation clinic of Bhatar rural developmental block of Purba Bardhaman district, West Bengal, India, between January 2024 to July 2024. Ethical clearance was obtained from the Institutional Ethics Committee of Burdwan Medical College and Hospital (Memo no: BMC/ IEC/ 082). Prior to data collection, informed written consent and assent was taken from the respondents according to age group. All participants were assured about the confidentiality and anonymity of the information. This block was selected as it was the rural field area of the Medical College, which facilitated accessibility to the study population and feasibility of data collection.

Sample size calculation: In a study by Aslam M et al., prevalence of PPD was 9.5% [9]. Considering this prevalence (P) with a confidence interval of 95%, absolute error d=5%, and using the formula:

$n= \{(Z_{1-\alpha/2})^2 \times P (1-P)\}/d^2$

$n=\{(1.96)^2 \times (0.095) (1-.095)\}/0.0025$, $n=(3.84 \times 0.086)/0.0025$, $n=132$.

Further adding dropouts as 10%, the final calculated sample size was found to be (132+13)=145. A simple random sampling was adopted for the selection of study participants. Sampling frame consisted of all eligible postnatal mothers who met inclusion criteria and came for their children's vaccination at the immunisation clinic of Bhatar rural developmental block, each assigned unique identification number. Using lottery method, numbers were drawn randomly without replacement until the required sample size of 145 was achieved.

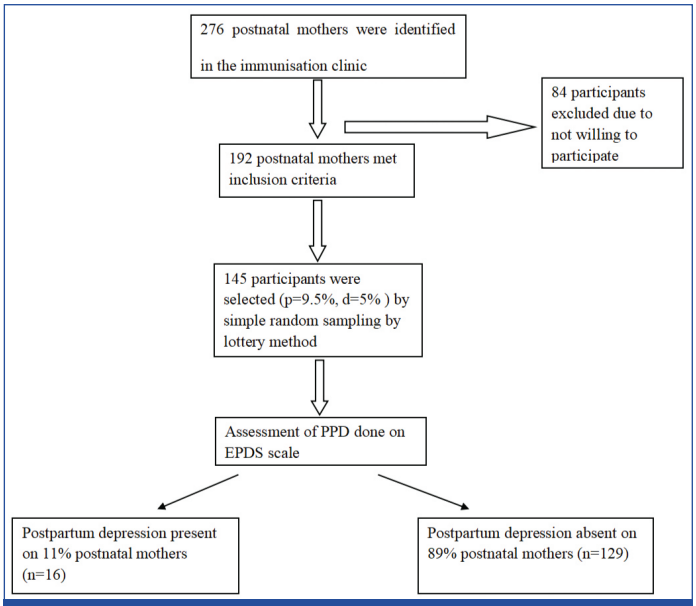
Inclusion criteria: The postnatal mothers who had passed six week since their last delivery but are less than six months of delivery irrespective of outcome of delivery were included in the study.

Exclusion criteria: Those who were not willing to give consent were excluded from the study. 276 mothers were selected in the immunisation clinic. A total of 192 mothers met inclusion criteria and 84 mothers were excluded in the study. This has been depicted in the Strengthening the Reporting of Observational studies in Epidemiology (STROBE) figure [Table/Fig-1].

Study Procedure

A predesigned, pre-tested schedule was used to interview the selected postnatal mothers. This contained the following sections:

12 questions on socio-demographic characteristics (age of marriage, age of pregnancy, caste, religion, education of mother, type of family, occupation of mother, education of husband, husband's occupation, income of the family, number of family members, socioeconomic status), 11 questions on obstetric factors {parity, history of (h/o) abortion, h/o still birth, h/o child death, complication in mother, complication in baby, mode of delivery, place of delivery,



[Table/Fig-1]: A STROBE figure depicting the recruitment and flow of study participants.
EPDS: Edinburgh postnatal depression scale; PPD: Postpartum depression

sex of baby, sex of baby as desired, planning of pregnancy}, seven questions on clinico-social factors (family h/o psychiatric illness, h/o substance abuse by husband, substance abuse by mother, h/o domestic violence, h/o conflict, h/o stressful life events, financial dependence on husband) and factors associated with baby (initiation of breastfeeding, birth weight, EBF status on the day of survey) [10]. Few of them were developed by the researchers considering the context and setting of the study. The entire schedule was pre-tested before administration to the study subjects.

EPDS had been previously used to identify postpartum depression among women in rural India [11]. Hence, it was found to be effective for screening the presence of postpartum depression among postnatal mothers. There were a total of 10 questions, some questions are scored 0, 1, 2 or 3 with top box scored as 0 and the bottom box scored as 3 whereas some are reverse-scored. Maximum score is 30 and the score for possible depression is 10 [12].

Study techniques: Interviewing the study participants using pre-designed and pre-tested schedule. Reviewing the medical records/ Mother and Child Protection Card (MCPC).

Study variables: Age of marriage, age of pregnancy, caste, type of family, occupation of mother, education of mother, occupation of husband, socioeconomic status, parity, history of abortion, birth weight etc., were included as input variables. Proportion of study subjects postpartum depression being the main outcome variable.

STATISTICAL ANALYSIS

Collected data was checked for completeness and consistency and then the data were entered in the computer on Excel Data Sheets. The principles of descriptive statistics were applied to organise and present the data in tables and diagrams. The categorical variables were expressed as frequency and percent values. Frequency data were compared using Chi-square test (where $p < 0.05$ was considered as statistically significant). Considering the prevalence of Postpartum Depression (PPD) as the primary outcome variable (dependent variable), binary logistic regression was applied to identify the predictor variables. Data were analysed using Statistical Package for Social Sciences (SPSS) software (version 23).

RESULTS

The study population consisted of the postnatal mothers within six weeks to six months of last delivery irrespective of outcome of delivery. The prevalence of postpartum depression was 11%. More

than half of postnatal mothers were less than 18 years and Schedule Tribe. Most of them were Hindu, homemaker and had joint family who came under lower middle socioeconomic status [Table/Fig-2]. History of abortion and sex of the baby as desired had statistically significant association with postpartum depression [Table/Fig-3]. Family history of psychiatric illness was found statistically significant with postpartum depression [Table/Fig-4]. EBF status

Variables	Mothers without PPD N (%)	Mothers with PPD N (%)	Total N (%)	Statistical test (Chi-square) (df)	p-value
Age of marriage					
<18 years	69 (53.49)	12 (75)	81 (55.86)	2.672 (1)	0.117
>18 years	60 (46.51)	4 (25)	64 (44.14)		
Total	129 (100)	16 (100)	145 (100)		
Religion					
Hindu	124 (96.1)	16 (100)	140 (96.55)	0.642 (1)	1.000
Muslim	5 (3.9)	0	5 (3.9)		
Total	129 (100)	16 (100)	145 (100)		
Caste					
SC	32 (24.8)	3 (18.8)	35 (24.1)	0.724 (2)	0.696
ST	94 (72.9)	13 (81.3)	107 (73.8)		
OBC	3 (2.3)	0	3 (2.1)		
Total	129 (100)	16 (100)	145 (100)		
Type of family					
Joint	99 (76.7)	14 (87.5)	113 (77.9)	0.957 (1)	0.524
Nuclear	30 (23.3)	2 (12.5)	32 (22.1)		
Total	129 (100)	16 (100)	145 (100)		
Age of pregnancy					
<19 years	70 (54.26)	11 (68.75)	81 (55.86)	1.212 (1)	0.300
>19 years	59 (45.74)	5 (31.25)	64 (44.14)		
Total	129 (100)	16 (100)	145 (100)		
Education of mother					
Illiterate	4 (3.1)	0	4 (2.76)	3.937(4)	0.415
Primary	5 (3.88)	2 (12.5)	7 (4.83)		
Middle	46 (35.66)	5 (31.25)	51 (35.17)		
Secondary	54 (41.86)	5 (31.25)	59 (40.69)		
Higher secondary	20 (15.5)	4 (25)	24 (16.55)		
Total	129 (100)	16 (100)	145 (100)		
Education of husband					
Just literate	4 (3.1)	0	4 (2.76)	1.497 (3)	0.683
Primary	35 (27.13)	3 (18.75)	38 (26.21)		
Middle	70 (54.26)	11 (68.75)	81 (55.86)		
Secondary	20 (15.5)	2 (12.5)	22 (15.17)		
Total	129 (100)	16 (100)	145 (100)		
Occupation of mother					
Working	5 (3.88)	0	5 (3.45)	0.642	1.000
Homemaker	124 (96.12)	16 (100)	140 (96.55)		
Total	129 (100)	16 (100)	145 (100)		
Husband's occupation					
Unemployed	18 (13.95)	4 (25)	22 (15.17)	1.389 (2)	0.499
Unskilled	95 (73.64)	10 (62.5)	105 (72.41)		
Semi-skilled	16 (12.5)	2 (12.5)	18 (12.42)		
Total	129 (100)	16 (100)	145 (100)		
Socio-economic status					
Class IV	112 (86.82)	13 (81.25)	125 (86.21)	0.372 (1)	0.465
Class V	17 (13.18)	3 (18.75)	20 (13.79)		
Total	129 (100)	16 (100)	145 (100)		

[Table/Fig-2]: Association between socio-demographic characteristics and postpartum depression (n=145).
No significant association was found between socio-demographic variables and Postpartum Depression (PPD)

Variables	Mothers without PPD N (%)	Mothers with PPD N (%)	Total (%)	Statistical test (Chi-square) (df)	p-value
Parity					
Primipara	39 (30.23)	1 (6.25)	40 (27.59)	4.098 (1)	0.071
Multipara	90 (69.77)	15 (93.75)	105 (72.41)		
Total	129 (100)	16 (100)	145 (100)		
H/O abortion					
Present	12 (9.3)	5 (31.25)	17 (11.72)	6.625 (1)	0.024
Absent	117 (90.7)	11 (68.75)	128 (88.28)		
Total	129 (100)	16 (100)	145 (100)		
H/O still birth					
Present	8 (6.2)	3 (18.75)	11 (7.59)	3.197 (1)	0.105
Absent	121 (93.8)	13 (81.25)	134 (92.41)		
Total	129 (100)	16 (100)	145 (100)		
H/O child death					
Present	6 (4.65)	1 (6.25)	7 (4.83)	0.079 (1)	0.567
Absent	123 (95.35)	15 (93.75)	138 (95.17)		
Total	129 (100)	16 (100)	145 (100)		
Complication in mother					
Present	4 (3.1)	0	4 (2.76)	0.510 (1)	1.000
Absent	125 (96.9)	16 (100)	141 (97.24)		
Total	129 (100)	16 (100)	145 (100)		
Complication in baby					
Present	5 (3.88)	1 (6.25)	6 (4.14)	0.202 (1)	0.511
Absent	124 (96.12)	15 (93.75)	139 (95.86)		
Total	129 (100)	16 (100)	145 (100)		
Mode of delivery					
Vaginal	125 (96.9)	14 (87.5)	139 (95.86)	3.170 (1)	0.132
LUCS	4 (3.1)	2 (12.5)	6 (4.14)		
Total	129 (100)	16 (100)	145 (100)		
Sex of baby					
Male	61 (47.29)	4 (25)	65 (44.83)	2.859 (1)	0.113
Female	68 (52.71)	12 (75)	80 (55.17)		
Total	129 (100)	16 (100)	145 (100)		
Sex of the baby as desired					
Yes	87 (67.44)	5 (31.25)	92 (63.45)	8.040 (1)	0.011
No	42 (32.56)	11 (68.75)	53 (36.55)		
Total	129 (100)	16 (100)	145 (100)		
Planning of pregnancy					
Planned	30 (23.26)	2 (12.5)	32 (22.07)	0.957 (1)	0.524
Unplanned	99 (76.74)	14 (87.5)	113 (77.93)		
Total	129 (100)	16 (100)	145 (100		

[Table/Fig-3]: Association between obstetrics factors and postpartum depression (n=145).
All institution-based delivery; Hence, no statistics done; History of abortion (p-value 0.024) and sex of the baby as desired (p-value 0.011) had statistically significant association with Postpartum Depression (PPD)

Variables	Mothers without PPD N (%)	Mothers with PPD N (%)	Chi-square (df)	p-value
Family h/o psychiatric illness				
Present	5 (55.6)	4 (44.4)	10.911 (1)	0.009
Absent	124 (91.2)	12 (8.8)		
History of substance abuse by husband				
Present	110 (90.2)	12 (9.8)	1.125 (1)	0.286
Absent	19 (82.6)	4 (17.4)		

H/o domestic violence				
Present	17 (89.5)	2 (10.5)	0.006 (1)	1.000
Absent	112 (88.9)	14 (11.1)		
H/o conflict				
Present	13 (86.7)	2 (13.3)	0.090 (1)	0.672
Absent	116 (89.2)	14 (10.8)		
H/O stressful life events				
Present	26 (92.8)	2 (7.2)	0.535 (1)	0.738
Absent	103 (88)	14 (12)		

[Table/Fig-4]: Association between clinico-social factors and postpartum depression (n=145).
No female had history of substance abuse. Hence, no statistics done; Every woman was financially dependent on husband. Hence, no statistics done; Family history of psychiatric illness (p-value 0.009) had statistically significant association with Postpartum Depression (PPD)

on the day of survey, initiation of breastfeeding and birth weight of baby had significant association with post-partum depression [Table/Fig-5]. On binary logistic regression, family history of psychiatric illness had higher odds of postpartum depression [Table/Fig-6].

Variables	Mothers without PPD N (%)	Mothers with PPD N (%)	Chi-square (df)	p-value
EBF Breastfeeding continuing				
Yes	118 (92.2)	10 (7.8)	11.545 (1)	0.004
No	11 (64.7)	6 (35.3)		
Initiation of breastfeeding				
Within 1 hour	84 (95.5)	4 (4.5)	9.602 (1)	0.003
>1 hour	45 (78.9)	12 (21.1)		
Birth weight of the baby				
<2.5 kg	91 (93.8)	6 (6.2)	7.018 (1)	0.012
>2.5 kg	38 (79.2)	10 (20.8)		

[Table/Fig-5]: Association between factors associated with baby and postpartum depression (n=145).
EBF status on the day of survey (p-value 0.004), initiation of breastfeeding (p-value 0.003) and birth weight of baby (p-value 0.012) had statistically significant association with PPD

Variables	Total N (%)	PPD N (%)	No PPD N (%)	p-value	AOR (CI)
Family h/o psychiatric illness					
Present	9 (6.2)	4 (44.4)	5 (55.6)	0.012	11.792 (1.731-80.342)
Absent	136 (93.8)	12 (8.8)	124(91.2)		Ref
H/o abortion					
Present	17 (11.7)	5 (29.4)	12 (70.6)	0.230	2.514 (0.559-11.306)
Absent	128 (88.3)	11 (8.6)	117 (91.4)		Ref
Sex of the baby as desired					
Yes	92 (63.4)	5 (5.4)	87 (94.6)	0.299	0.485 (0.124-1.900)
No	53 (36.6)	11 (20.8)	42 (79.2)		Ref
EBF as on the day of survey					
Yes	128 (88.3)	10(7.8)	118 (92.2)	0.086	0.274 (0.062-1.200)
No	17 (11.7)	6 (35.3)	11 (64.7)		Ref
Initiation of breastfeeding					
<1 hour	88 (60.7)	4 (4.5)	84 (95.5)	0.169	0.400 (0.108-1.479)
>1 hour	57 (39.3)	12 (21.1)	45 (78.9)		Ref
Birth weight of the baby					
<2.5 kg	97 (66.9)	6 (6.2)	91(93.8)	0.064	0.244 (0.062-0.961)
>2.5 kg	48 (33.1)	10 (20.8)	38 (79.2)		Ref

[Table/Fig-6]: Binary logistic regression of socio-demographic, obstetric and clinico-social factors with development of postpartum depression among postnatal mothers (n=145).
Family history of psychiatric illness had statistically significant (p-value 0.012) positive association with postpartum depression

DISCUSSION

The prevalence of postpartum depression among postnatal mothers was found to be 11% in our study. In the year 2022, systematic review and meta-analysis study conducted by Liu X et al., found that the pooled prevalence in all studies was 14% [13]. Another study by Wang Z et al., postpartum depression was found to be 17.22% of the world's population [14]. A study by Liu Y et al., revealed the prevalence of PPD to be 23.5% [15]. In 2023, rural community of Northern India showed prevalence of PPD to be 2.2% [11]. A very recent (in the year 2024) comprehensive review study in India revealed that the overall prevalence of PPD was 22%.

However, the greatest prevalence was found in the southern regions (26%) and the lowest in the northern regions (15%) [16]. In a study conducted in sub-Himalayan region, prevalence of PPD was 17.4% [17]. Thus, there is varying prevalence of postpartum depression across the globe as well as the country. Hence, it is very much important to introspect the determining factors that are responsible for causing postpartum depression.

The above findings were derived from urban as well as rural population of West Bengal. Very limited recent studies had been done to estimate the prevalence of postpartum depression in rural West Bengal [Table/Fig-7] [18-20].

Author and year of study	Prevalence of PPD	Sample size	Study place	Scale used
Maity C et al., [18] 2021	22.4%	500	OPD and IPD, of a Medical college in Kolkata	EPDS scale
Das S et al., [19] 2021	28.9%	83	Rural community in Hooghly district, West Bengal	EPDS scale
Roy SK et al., [20] 2024	29%	189	Urban field practice of a Medical College in Kolkata	EPDS scale

[Table/Fig-7]: Tabulation of different studies on the basis of prevalence, sample size, study place and the scale used [18-20].
OPD: Outpatient department; IPD: Inpatient department

In the present study, the family history of psychiatric illness, history of abortion, sex of the baby as desired, initiation of breastfeeding, EBF on the day of survey and birth weight of the baby had found to be significant (p-value <0.05). Similar finding was found in another study where gender of newborns had found to be significant (p-value <0.001). Other determining factors were found to be nuclear family, domestic abuse, total number of previous living children, gender of previous living children and unwanted pregnancy [17]. In another study, the risk factors are mainly concentrated in the following aspects: violence and abuse, immigration status, gestational diabetes, cesarean section, history of depression, vitamin D deficiency, obese and overweight, postpartum sleep disruption and poor postpartum sleep, lack of social support, traditional dietary pattern (Japanese, Indian, United Kingdom, and Brazilian dietary pattern), multiple births, preterm and low-birth-weight infants, postpartum anemia, negative birth experience [21]. In a study conducted in rural India, comparative analysis indicated that women with postpartum depression experienced significantly higher levels of parenting stress, poor lifestyle (prior two weeks), less support from their partner, parents-in-law and parents, less marital satisfaction, high intimate partner violence, poor bonding with infants and higher infant-focused anxiety [11]. In the year 2020, another study conducted by Aslam M et al., revealed that history of abortion, poor relationship with in-laws, marital conflict, and substance abuse in husband were found to be significant correlates for postpartum depression [9]. A study by Dubey A et al., showed that the factors that had a statistically significant association with postpartum depression included lower educational status of mother, lower family income, rural place of residence, higher parity, preterm delivery, and adverse events in newborn [22]. A study by Roy SK et al., stated that factors associated with depression included low birth weight and primiparity, while financial independence served as a protective factor [20]. Thus, many factors like history of abortion,

family history of psychiatric illness and low birth weight babies that have significant association with PPD in other studies have similarity to this study.

On binary logistic regression, our study revealed that family history of psychiatric illness was associated with increasing risk of PPD. In a study by Dadhwal V et al., they showed that on multivariable logistic regression analysis, higher education, marital satisfaction, support from partners and in-laws were associated with reducing the risk of PPD [11]. Another study by Roy SK et al., revealed that on multinomial regression analysis low-birth-weight babies, marital conflict, lack of support at home, and primiparity had higher odds of depression, whereas financial independence was a protective factor [20].

Postpartum depression plays a pivotal role in causing harmful effect on both the mother and the newborn. It has ill-effect on the mental health of the mother which thereby affects the bonding between mother and baby. PPD also takes an indirect toll on the development of the infant. Thus, in order to reduce the prevalence of PPD, factors that have significant associations are to be checked thoroughly and act accordingly. However, regular and thorough prenatal check-ups, screening all mothers for PPD, providing access to medical care and counseling, reducing stigma and generating awareness are of major concern.

Limitation(s)

These findings of the current study should be interpreted considering its limited generalisability as it was performed in only one block and a clinic-based study. The cross-sectional design limits the ability to establish temporal or causal relationships between associated factors and postpartum depression. The use of screening tool rather than a diagnostic one may have led to over/under estimation of prevalence of postpartum depression.

CONCLUSION(S)

Postpartum depression has been a crucial public health concern as it affects both the mother and her child. Socio-cultural stigma, limited awareness and poor mental health literacy often delay recognition of postpartum depression among postnatal women. Untreated postpartum depression can adversely influence maternal functioning, infant care, growth and development of children. Hence, strengthening research on screening tool is the need of the hour as it will help in early identification and timely intervention of postpartum depression. Prioritising the integration of maternal mental health care into routine maternal health services during postpartum period is essential for better maternal mental health outcomes globally. Thus, routine screening with maternal health services is of utmost importance.

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REFERENCES

[1] Depressive disorder (depression). Available at https://www.who.int/news-room/fact-sheets/detail/depression. Last accessed on 20/02/2024.
[2] Zauderer C. Postpartum depression: How childbirth educators can help break the silence. J Perinat Educ. 2009;18(2):23-31.
[3] Depression during pregnancy and after. Available at https://www.health.harvard.edu/womens-health/depression-during-pregnancy-and-after. Last accessed on 21/02/2024.
[4] Postpartum depression. Available at https://en.wikipedia.org/wiki/Postpartum_depression. Last accessed on 28/04/2024.
[5] Rajeev SP, Nair GM, Krishna KK, Maria C. India's silent struggle: A scoping review on postpartum depression in the land of a billion mothers. Indian J Psychol Med. 2025;47(3):207-13.
[6] Vilarim M, Rebelo F, Vieira I, Mazzoli F, Carta MG, Nardi AE, et al. Prevalence of postpartum depression symptoms in high-income, and low- and middle-income countries in the Covid-19 pandemic: A systematic review with meta-analysis. Braz J Psychiatry. 2024;46:e20233453.
[7] Carlson K, Mughal S, Azhar Y, Siddiqui W. Perinatal Depression. 2025 Jan 22. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2026 Jan–.
[8] Shelke A, Chakole S. A review on risk factors of postpartum depression in India and its management. Cureus. 2022;14(9):e29150.
[9] Aslam M, Nawab T, Ahmad A, Abedi AJ, Azmi SA. Postpartum depression and its clinico-social correlates - A community-based study in Aligarh. Indian J Public Health. 2022;66(4):473-79.
[10] Alloghani MM, Baig MR, Alawadhi SMS. Sociodemographic correlates of postpartum depression: A survey-based study. Iran J Psychiatry. 2024;19(2):174-84. Doi: 10.18502/ijps.v19i2.15103.
[11] Dadhwal V, Sagar R, Bhattacharya D, Kant S, Misra P, Choudhary V, et al. Prevalence of postpartum depression & anxiety among women in rural India: Risk factors & psychosocial correlates. Indian J Med Res. 2023;158(4):407-16.
[12] Cox JL, Holden JM, Sagovsky R. Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. Br J Psychiatry. 1987;150:782-86.
[13] Liu X, Wang S, Wang G. Prevalence and risk factors of postpartum depression in women: A systematic review and meta-analysis. J Clin Nurs. 2022;31(19-20):2665-77.
[14] Wang Z, Liu J, Shuai H, Cai Z, Fu X, Liu Y, et al. Mapping global prevalence of depression among postpartum women. Transl Psychiatry. 2021;11(1):543.
[15] Liu Y, Zhang L, Guo N, Jiang H. Postpartum depression and postpartum post-traumatic stress disorder: Prevalence and associated factors. BMC Psychiatry. 2021;21(1):487.
[16] Panolan S, Thomas MB. Prevalence and associated risk factors of postpartum depression in India: A comprehensive review. J Neurosci Rural Pract. 2024;15(1):01-07.
[17] Priya T, Kaushal S, Dogra P, Dogra V. Prevalence and risk factors of postpartum depression in sub-Himalayan region. Med J Armed Forces India. 2024;80(2):161-65.
[18] Maity C, Sanyal D, Biswas A, Saha S. A study on prevalence of postpartum depression at tertiary hospital, West Bengal. Indian J Appl Res. 2021;11(4):33-36.
[19] Das S, Pal D, Sadhukhan SK, Haque HZ, Datta M. A cross-sectional study on prevalence of post-natal depression and its associates among women in a rural community in Hooghly District, West Bengal. J Comp Health. 2021;09(1):32-37.
[20] Roy SK, Majumdar S, Singh R, Paul A. Prevalence and risk factors of depressive symptoms in the postpartum period: An experience from urban West Bengal, India. J Family Med Prim Care. 2024;13(8):2880-85.
[21] Zhao XH, Zhang ZH. Risk factors for postpartum depression: An evidence-based systematic review of systematic reviews and meta-analyses. Asian J Psychiatr. 2020;53:102353.
[22] Dubey A, Chatterjee K, Chauhan VS, Sharma R, Dangi A, Adhvaryu A. Risk factors of postpartum depression. Ind Psychiatry J. 2021;30(Suppl 1):S127-S131.

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