



# International Journal of Obstetrics and Gynaecological Nursing

E-ISSN: 2664-2301  
P-ISSN: 2664-2298  
[www.gynaecologicalnursing.com](http://www.gynaecologicalnursing.com)  
IJOGN 2025; 7(1): 95-98  
Received: 03-01-2025  
Accepted: 05-02-2025

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## Prevalence of postnatal depression among mothers of infants admitted in NICU: A cross-sectional study

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**DOI:** <https://www.doi.org/10.33545/26642298.2025.v7.i1b.189>

### Abstract

**Objectives:** To assess the prevalence of postnatal depression among mothers of infants admitted in NICU.

**Method:** A cross-sectional survey carried out on 120 mother's Non-probability convenient sampling was adopted. Mothers were interviewed according to the, Edinburg Postnatal Depression Scale (EPDS) on day 6 to day 8 of admission of the newborn to assess the prevalence of postnatal depression among Mothers of preterm babies who were admitted in the NICU

**Results:** Sixty-two mother's demonstrated depressive symptoms with score more than 13 on the EPDS Scale which accounts for the prevalence of 51.66% of possible postnatal depression while fifty-eight (48.33%) mothers had no postnatal depression.

**Conclusion:** The experience of mothers with infants at the NICU is a complex event. Every woman has different resilience parameters women suffering from depression should seek medical attention.

**Keywords:** Prevalence, postnatal depression, neonatal intensive care unit

### Introduction

Mothers who have a newborn admitted to the intensive care unit (NICU) before 37 weeks of pregnancy develop anxiety and depression are concerned about their child's well-being and survival<sup>[1]</sup>. Family members may be worried regarding the baby's health, as well as the neonatal unit may additionally be an overwhelming environment for them. Parents can feel upset about their sick child's looks, having to deal with obtrusive diagnostic devices, and possibly not being able to interact effectively with personnel. There are a number of negative outcomes that families and mothers experience as a result of PPD. Preterm births are linked to a number of adverse consequences for both the mother and the child, including more psychological anguish for the mothers of newborn. Postpartum depression (PPD) is an unnoticed infrequently tackled, and underappreciated issue which impacts 10-30% of women during the postnatal period<sup>[2]</sup>. Approximately 17.22% of the world's population is thought to suffer from PPD. The prevalence of postnatal depression among mothers of newborns hospitalized to NICU varies between 28 to 70%. Even so, current information about the frequency of concomitant psychological issues in mother's newborns hospitalized is insufficient. The World Health Organization places a strong emphasis on enhancing postnatal mothers' emotional wellness.

### Methodology

A cross-sectional survey carried out on 120 mothers whose babies admitted in NICU. Non-probability convenient sampling was adopted. Participants who were willing to be part of the study and fulfilling the criteria of preterm or term births who were isolated from their newborn and babies were in the NICU for more than 5 days were enrolled in the study were asked to sign an informed consent sheet. Mothers were interviewed according to the, Edinburg Postnatal Depression Scale (EPDS) on day 6 to day 8 of admission of the newborn to assess the prevalence of postnatal depression among Mothers of newborn who were admitted in the NICU. Mothers with pre-existing psychiatric illness and duration of NICU stay <5 days were excluded. Descriptive and inferential statistics was computed according to the study objective. Mean and standard deviation were computed for continuous variables.

### Participants

Mothers of newborn who were admitted in the NICU and fulfilling the criteria of preterm or term births who were isolated from their newborn and babies were in the NICU for more than 5 days were enrolled in the study. The selected mothers were interviewed according to the Edinburg Postnatal Depression Scale (EPDS) questionnaire, on day 6 to day 8 of admission of the newborn. Exclusion criteria: Mothers with pre-existing psychiatric illness and duration of NICU stay <5 days were excluded.

Mother's demographic details were collected using questionnaire which were translated into Kanada, Marathi and Hindi. The interview was taken of the mothers in their own vernacular language.

**Measures:** The EPDS is a reliable, internationally applied, and well-validated screening device to detect postnatal depression. The English translation of the EPDS showed internal consistency reliability (Cronbach's alpha = 0.82).

Responses were scored 0,1,2 and 3 based on the seriousness of the symptoms. Items 3,5 to 10 are reverse scored (i.e.,3,2,1 and 0). Mothers scoring above 12 or 13 are likely to be suffering from depression and should seek medical attention.

A demographic and medical data sheet completed the questionnaire with maternal characteristic: age, parity, educational status, religion, type of family, occupation, income and diet.

### Statistical Analysis

The data was analyzed using SPSS Version 29 and excel software. Descriptive and inferential statistics was computed according to the study objective. Mean and standard deviation were computed for continuous variables. Frequency and percentage were computed for categorical variables.

### Results

**Table 1:** Frequency and percentage distribution of postnatal mothers according to the demographic variables. n = 120

Sr. No	Variable	Frequency	Percentage
01	Age in years		
	18-20 years	13	11%
	21-23 years	57	47%
	24-26 years	38	32%
	27-30 years	12	10%
02	Parity		
	Primi	59	49%
	Multi	61	51%
03	<b>Education status</b>		
	No formal education	0	0%
	Primary education	27	23%
	Secondary education	64	53%
	Higher secondary	28	23%
	Graduate	1	1%
04	<b>Religion</b>		
	Hindu	96	80%
	Muslim	13	11%
	Christian	11	9%
05	<b>Type of Family</b>		
	Nuclear	57	48%
	Joint	63	52%
06	<b>Occupation</b>		
	Housewife	100	91%
	Self-employed	0	0%
	Others	10	9%
07	<b>Income</b>		
	Below 5,000/-	10	0.8%
	5,000-10,000/-	101	84%
	11,000-15,000/-	9	8%
	15,000-20,000/-	0	0%
08	<b>Diet</b>		
	Vegetarian	87	73%
	Non-vegetarian	33	27%

Table 1 Depicts that majority of 57% mothers belonged to 21-23 years. Moreover 51% mothers were multigravida. Almost 53% mothers had completed secondary education. Most of the 80% mothers belonged to Hindu religion and

52% were living in joint family. Almost 91% of the mothers were housewife. Greater part 84% women had a family income of 5000-10,000. Majority of 73% mothers were vegetarian.

**Table 2:** Frequency and Percentage Distribution of EPDS scores among postnatal mothers. n = 120

Sr. No	Items	Score Obtained	Frequency	Percentage (%)
1	In the past 7 days: I have been able to laugh and see the funny side of things:	0	22	18.3%
	- As much as I always could	21	17.5%	
	- Not quite so much now	70	29.1%	
	- Definitely not so much now	126	35.1%	
	- Not at all			
2	I have looked forward with enjoyment to things:	0	19	15.8%
	- As much as I ever did	28	23.3%	
	- Rather less than I used to	72	30%	
	- Definitely less than I used to	111	30.9%	
	- Hardly at all			
3	I have blamed myself unnecessarily when things went wrong:	30	8.3%	
	- Yes, most of the time	60	25%	
	- Yes, some of the time	50	41.7%	
	- Not very often	0	25%	
	- No, never			
4	I have been anxious or worried for no good reason:	0	26.6%	
	- No, not at all	35	35%	
	- Hardly ever	46	19.2%	
	- Yes, sometimes	69	19.2%	
	- Yes, very often			
5	I have felt scared or panicky for no good reason:	45	12.5%	
	- Yes, quite a lot	90	37.6%	
	- Yes, sometimes	40	33.3%	
	- No, not much	0	16.6%	
	- No, not at all			
6	Things have been getting to me:	54	15%	
	- Yes, most of the time I haven't been able to cope at all	66	27.5%	
	- Yes, sometimes I haven't been coping as well as usual	52	43.4%	
	- No, most of the time I have coped quite well	0	14.1%	
	- No, I have been coping as well as ever			
7	I have been so unhappy that I have had difficulty sleeping:	66	18.4%	
	- Yes, most of the time	120	50%	
	- Yes, sometimes	30	25%	
	- No, not very often	0	6.6%	
	- No, not at all			
8	I have felt sad or miserable:	54	15.1%	
	- Yes, most of the time	94	39.1%	
	- Yes, quite often	49	40.8%	
	- Not very often	0	5%	
	- No, not at all			
9	I have been so unhappy that I have been crying:	42	11.6%	
	- Yes, most of the time	72	30%	
	- Yes, quite often	35	29.2%	
	- Only occasionally	0	29.2%	
	- No, never			
10	The thought of harming myself has occurred to me:	39	10.8%	
	- Yes, quite often	36	15%	
	- Sometimes	30	25%	
	- Hardly ever	0	49.2%	
	- Never			

Table 2 shows that majority of mothers 42 (35.1%) were not been able to laugh and see the funny side of things. Most of 37 (30.9%) mothers hardly looked forward with enjoyment to things. Moreover 50 (41.7%) mothers not very often blamed themselves unnecessarily when things went wrong. Almost 42 (35%) mothers hardly ever were anxious or worried for no good reason. Around 45 (37.6%) mothers sometimes felt scared or panicky for no good reason. Majority of 52 (43.4%) mothers had coped quite well most of the time. Around 60 (50%) mothers were sometimes so unhappy that they had difficulty in sleeping. Most of 49 (40.8%) of the mothers not felt sad or miserable. Almost 36 (30%) mothers quite often had been unhappy that they had

been crying. Around 59 (49.2%) mothers never thought of harming themselves.

**Table 3:** Prevalence of depression in postnatal mothers using EPDS scale n = 120

Level of Depression	Frequency	Percentage (%)
No Depression (0-13)	58	48.33%
Possible Depression (>13)	62	51.66%

Table no 3 revealed that 62 mothers had score of more than 13 on the EPDS Scale that account for the prevalence of 51.66% of possible postnatal depression while 58 (48.33%) mothers had no postnatal depression.

## Discussion

Half of the whole study population showed depressive score measured with EPDS. Several studies found higher prevalence of postpartum depression among women with hospitalized newborns at the NICU, especially in preterm infants. 57% of women were between the ages of 21 and 23. Additionally, 51% of mothers had multiple pregnancies. Nearly 53% of women had finished their high school education. Of the 80% of mothers, 52% lived in a combined family and the majority 80% were Hindu. Nearly ninety-one percent of the mothers were homemakers. Eighty-four percent of women reported a family income between \$5,000 and \$10,000. Seventy-three percent of mothers were vegetarians.

Forty-two mothers (35.1%) were unable to laugh or find the humorous side of things. The majority of the 37 mothers (30.9%) scarcely enjoyed looking forward to things. Additionally, 50 mothers (41.7%) did not frequently place unnecessary blame on themselves when things went wrong. It was rare for nearly 42 (35%) mothers to have unwarranted anxiety or concern. Approximately 45 (37.6%) mothers experienced unjustified terror or fear. The majority of 52 mothers (43.4%) have generally handled things fairly well. About 60 (50%) of the mothers had such unhappiness that they occasionally had trouble falling asleep. Forty-nine (40.8%) of the mothers did not feel depressed or unhappy. Nearly 36 (30%) mothers frequently expressed their dissatisfaction by sobbing. Of the mothers, almost 59 (49.2%) never considered hurting themselves.

In present study, 62 mothers scored higher than 13 on the EPDS Scale, which indicates that 51.66% of mothers may have postpartum depression, while 58 mothers (48.33%) did not have postpartum depression. Approximately 1 in 10 mothers will experience PPD after delivery, other studies reported 1 in 7 women<sup>[9]</sup>. Additional studies found that postpartum depression was prevalent among 7% (18) of 257 mother's selected<sup>10</sup>. The overall prevalence of depression and anxiety disorder in other study population was 38/680 [5.59%; 95% 4-7.6%] with the specific prevalence of 2.2 per cent of PPD, 0.74 per cent of PPA and 2.79 percent of both disorders<sup>[11]</sup>.

## Conclusion

The study's findings show that mothers whose babies were admitted to the NICU had a consistently higher prevalence of postpartum depression. Women with enhanced social support and elevated fulfilment with labor and childbirth exhibited a diminished risk of postnatal mental health issues. It is important to evaluate mothers for mental health during their stay in the neonatal intensive care unit (NICU), but it is even more essential to identify women who are vulnerable earlier and to provide them with adequate care and monitoring.

## References

1. Haribalakrishna A, Utture A, Nanavati R. Assessment of stress in mothers of babies admitted to neonatal intensive care unit and the influence of maternal and infant characteristics on the stress levels. *J Neonatal-Perinatal Med.* 2024;0(0). DOI:10.1177/19345798241290904.
2. Lasheras G, Farré-Sender B, Porta R, Mestre-Bach G. Risk factors for postpartum depression in mothers of newborns admitted to neonatal intensive care unit. *J*

3. Segre LS, McCabe JE, Chuffo-Siewert R, O'Hara MW. Depression and anxiety symptoms in mothers of newborns hospitalized on the neonatal intensive care unit. *Nurs Res.* 2014;63(5):320-332. DOI:10.1097/NNR.0000000000000039.
4. Alici-Evcimen Y, Sudak DM. Postpartum depression. *Prim Care Update Ob Gyns.* 2003;10(5):210-216.
5. Carson C, Redshaw M, Gray R, Quigley MA. Risk of psychological distress in parents of preterm children in the first year: evidence from the UK millennium cohort study. *BMJ Open.* 2015;5:e007942. DOI:10.1136/bmjopen-2015-007942.
6. Bhutta AT, Cleves MA, Casey PH, Cradock MM, Anand KJS. Cognitive and behavioral outcomes of school-aged children who were born preterm: a meta-analysis. *JAMA.* 2002;288(6):728-737.
7. 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. DOI:10.1038/s41398-021-01663-6. Erratum in: *Transl Psychiatry.* 2021;11(1):640.
8. Sultan P, Ando K, Elkhateb R, George RB, Lim G, Carvalho B, *et al.* Assessment of Patient-Reported Outcome Measures for Maternal Postpartum Depression Using the Consensus-Based Standards for the Selection of Health Measurement Instruments Guideline: A Systematic Review. *JAMA Netw Open.* 2022;5(6):e2222494.
9. Gaynes BN, Gavin N, Meltzer-Brody S, Lohr KN, Swinson T, Gartlehner G, *et al.* Perinatal depression: prevalence, screening accuracy, and screening outcomes: Summary. *AHRQ Evid Rep Summ.* 2005;71-79.
10. Anokye R, Acheampong E, Budu-Ainooson A, Obeng EI, Akwasi AG. Prevalence of postpartum depression and interventions utilized for its management. *Ann Gen Psychiatry.* 2018;17:18. doi:10.1186/s12991-018-0188-0.
11. Dadhwal V, Sagar R, Bhattacharya D, Kant S, Misra P, Choudhary V, Vanamail P. Prevalence of postpartum depression & anxiety among women in rural India: Risk factors & psychosocial correlates. *Indian J Med Res.* 2023;158(4):407-416. DOI:10.4103/ijmr.IJMR\_3489\_20.

### How to Cite This Article

Dias D, D'souza N, Dandagi S. Prevalence of postnatal depression among mothers of infants admitted in NICU: A cross-sectional study. *International Journal of Obstetrics and Gynaecological Nursing.* 2025;7(1):95-98

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