

A Prospective Observational Study of Postnatal Depression at a Tertiary Care Centre

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Abstract:

Background and Aim: Postnatal depression refers to depressive episodes, ranging from moderate to severe, that occur during pregnancy or after childbirth, but do not involve psychosis. This condition is a frequently occurring non-obstetric illness that results in considerable harm to women throughout the perinatal period. The current study aimed to ascertain the prevalence of postpartum depression during the puerperium period and provide appropriate referrals to counsellors or mental health practitioners for people at risk.

Material and Methods: The study included a sample size of 150 participants and lasted for a length of 1 year. On the 7th and 42nd day after birth, the women were contacted via phone and administered the Edinburgh Postnatal Depression Scale, a validated questionnaire. The interpretation utilised was based on a threshold of EPDS ≥ 13 or affirming a positive response to question number 10, indicating the presence of depression and EPDS.

Results: Among the 150 individuals who took part in the study, 24 individuals (16 percent) were diagnosed with post-partum depression. There was a significant variation in the occurrence of depression depending on the method of birth. Patients who were diagnosed with depression were more prone to experiencing perceived complications during delivery ($p \leq 0.05$), difficulties with breastfeeding ($p \leq 0.05$), and a hospital stay lasting more than four days ($p \leq 0.05$). There was no significant correlation between the availability of assistance and the location where the mother resided after being discharged.

Conclusion: Among the 150 participants in the study, 24 individuals (16 percent) were found to have post-partum depression. The study participants who perceived their delivery as difficult were found to have a correlation with depression. It is crucial to have dedicated maternity and breastfeeding support nurses and lactation consultants to ensure the establishment of optimal feeding.

Keywords: Postnatal Depression, Post-Partum Depression, Pregnancy, Women.

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Introduction

Pregnancy and the postpartum period are recognized as periods of increased vulnerability for the onset of mental problems. [1] Postpartum depression is a significant health concern affecting women from diverse cultural backgrounds. [2] As to the Diagnostic and Statistical Manual of Mental Disorders (DSM) by The American Psychiatric Association, Postpartum Depression (PPD) is characterized by a significant episode of depression that occurs after childbirth. It specifies that if the symptoms of mood disturbance begin during pregnancy or within four weeks after giving birth, it is considered as PPD.

Nevertheless, in the context of clinical practice and clinical research, Postpartum Depression (PPD) is specifically characterized as the manifestation of

symptoms occurring within the timeframe of 4 weeks to 1 year following childbirth. [3] The worldwide incidence rate of postpartum depression (PPD) is 17%. [4] The incidence of this condition in Western countries is approximately 10-15%, although higher rates have been documented in poorer nations such as India. [5] Postpartum depression (PPD) has detrimental effects on both the mother and the child's cognitive, behavioural, social-emotional, and physical development.

Maternal healthcare in underdeveloped nations is often overlooked, despite its significant impact on outcomes. [6] The symptoms of postpartum depression (PPD) include feelings of melancholy, reduced energy levels, changes in sleep and food habits, decreased libido, frequent sobbing, and

heightened anxiety. [7] Of all the potential risk factors for postnatal depressive syndromes, the one that has the most impact and is consistently linked to postpartum depression is a previous occurrence of either perinatal or non-perinatal depression.

Risk factors for postnatal major depression

Factors such as being young, having multiple children, experiencing domestic violence within the family, having an unintended or unwanted pregnancy, having poor physical health during pregnancy, having certain personality traits like neuroticism (characterized by a tendency to worry and feel anxious, angry, sad, and guilty), having a history of premenstrual syndrome or premenstrual dysphoric disorder, experiencing anxiety symptoms and disorders during pregnancy, and facing adverse pregnancy and neonatal outcomes (such as stillbirth, preterm birth, very low birth weight, and neonatal death) can lead to the development of postpartum depression.

Other factors that can contribute to postpartum depression include experiencing subsyndromal depressive symptoms (postpartum blues), facing difficulties with breastfeeding (such as shorter duration or cessation), and experiencing stress related to childcare, such as dealing with inconsolable infant crying, difficult infant temperament, or untreated postpartum depression. These factors may either resolve on their own or with treatment, or they may develop into a persistent (chronic) depressive disorder. [8] It is estimated that around 40 to 50 percent of women with postnatal depression experience a relapse of depression, whether it is postpartum or non-postpartum. [9] The self-report, 10-item Edinburgh Postnatal Depression Scale (Appendix) is the most often employed tool for assessing severe depression in postpartum women. It may be filled out in about five minutes.

The scale is widely accepted by the majority of women and professionals, and it is straightforward to assess. The scale's specificity is improved by excluding items that inquire about somatic depressive symptoms, such as alterations in sleep and appetite, which are frequently experienced by non-depressed postpartum women. The scoring system assigns values of 0, 1, 2, or 3 to each response, with a total possible score of 30. We have employed a threshold score of ≥ 13 , which seems to optimize both sensitivity and specificity, resulting in overall high-quality test performance.

We propose conducting at least one screening for postpartum patients, in line with the American College of Obstetricians and Gynaecologists' guideline that practitioners should screen perinatal patients at least once. [10] An appropriate timeframe for screening is between four to eight weeks following childbirth. Postpartum unipolar

depression typically goes unnoticed by both patients and clinicians due to the fact that the physical symptoms of depression are similar to the common discomforts experienced during the early postpartum period, such as tiredness, sleep difficulties, reduced appetite, and decreased sexual desire. It is important to assess these physical symptoms considering what is often expected during the postpartum period.

Material and Methods

The study included a sample size of 150 participants and lasted for a length of 1 year. The exclusion criteria were women with pre-existing mental health disorders or neurological conditions being treated with drugs, as well as those who refused to take part in the study. The main objective was to examine the frequency of postpartum depression during the puerperium era. The patients were provided with informational pamphlets regarding the study's nature in English, Hindi, and Gujarati. If they agreed to participate, they would sign an informed consent form in their preferred language. The study was conducted as a prospective observational cross-sectional study.

On the seventh day after birth, the co-investigator contacted the woman by telephone and administered a series of questions from a validated questionnaire called the Edinburgh Postnatal Depression Scale (EPDS). If the individuals were determined to satisfy the criteria for postpartum depression, they were given the option to be referred either to the rehabilitation department at HN Reliance Foundation Hospital or to a mental health practitioner of their choosing. On day 42 after delivery, all the patients were summoned once more and subjected to screening. Participants who satisfied the criteria for depression on day 7 was then administered the same questionnaire to determine if they had experienced any improvement as a result of the referral. Interpretation; EPDS ≥ 13 or replying yes to question no 10, with depression and EPDS < 13 without depression. The entirety of the acquired data was inputted into the Excel spread sheet. Only the principal investigator/co-investigator had exclusive access to the Excel sheet and any paper documentation.

Statistical analysis

The collected data was consolidated and inputted into a spread sheet software (Microsoft Excel 2007) and subsequently transferred to the data editor page of SPSS version 15 (SPSS Inc., Chicago, Illinois, USA). Quantitative variables were characterised by their distribution using either means or standard deviations or median and interquartile range. The qualitative factors were displayed as counts and percentages. The confidence level and level of

significance for all tests were set at 95% and 5% accordingly.

Results

The prevalence of depression among the mothers and its correlation with several variables is illustrated in (Table 1). Among the 150 study participants, 24 individuals (16%) experienced post-partum depression. With regards to the socioeconomic status of the moms, almost 8% of them fall into the lower category, whereas over 17% of women in the higher category experienced depression.

The prevalence of depression was higher among moms residing in a mixed family (16.07%) compared to mothers living in a nuclear family (10.52%). The mother's parity also exhibited variations in the prevalence of depression among moms. Nulliparous women exhibited the highest incidence of depression, specifically around 17%, whereas mothers with one child had an incidence of approximately 9 percent. Approximately 20 percent of women who have experienced a miscarriage exhibited symptoms of depression. The prevalence of depression varied depending on the method of delivery. The prevalence of depression was highest

among women receiving LSCS (17.14%), followed by those undergoing a normal delivery (16.00%), and the lowest prevalence was observed in women undergoing the instrumental approach (10.90%). The frequency of depression was greater among women who gave birth to a male child (10.97 %) compared to moms who gave birth to a female child (10.29%). Nevertheless, there was no significant correlation between the chosen variables and depression. The study participants who perceived a complex delivery were shown to have a higher likelihood of experiencing depression ($p \leq 0.05$). Over 30 percent of moms who perceived their delivery as challenging experienced depression. Moms who experienced post-partum problems had a significantly greater incidence of depression (28.57%) compared to moms who did not feel any complications (14.00 %). Close to 40 percent of the mothers who were hospitalized for more than four days experienced depression.

The duration of hospitalization was found to have a statistically significant correlation with depression ($p \leq 0.05$). There was no significant correlation between depression and the availability of assistance at home or the location where the mother lives after being discharged.

Table 1: Association of depression among mothers with selected covariates

Variables	Number	Percentage (%)	Total	P value
Socioeconomic status				
Low	1	7.14	14	0.23
High	23	16.91	136	
Type of family				
Nuclear	4	10.52	38	0.09
Joint	18	16.07	112	
Parity				
0	17	16.83	101	0.36
1	4	8.51	47	
2	0	0	2	
Previous miscarriage				
No	23	17.03	135	0.1
Yes	3	20	15	
Mode of delivery				
Normal	4	16	25	0.09
Instrumental	6	10.90	55	
LSCS	12	17.14	70	
Gender of the baby				
Female	7	10.29	68	0.1
Male	9	10.97	82	
Patient perceived complications at delivery				
No	19	13.97	136	0.05*
Yes	5	35.71	14	
Patient perceived complications at post-partum				
No	20	13.98	143	0.09
Yes	2	28.57	7	
Problem at lactation				
No	15	12.09	124	0.01*
Yes	11	42.30	26	

Length of stay in hospital				
1 to 4 days	16	12.21	131	0.02*
More than 4 days	9	47.36	19	

* indicate statistically significance at $p \leq 0.05$

Discussion

Because the bodily symptoms of depression overlap with some of the common discomforts of the acute puerperium, such as exhaustion, difficulty sleeping, poor eating, and decreased libido, postpartum unipolar depression is frequently misdiagnosed by patients and physicians. [11] It is important to assess these physical symptoms in light of typical postpartum expectations. One of the unfavorable outcomes was difficulty nursing; postpartum depression seems to be linked to a higher chance of not nursing. Maternal-infant attachment may be hampered by postpartum depression in mothers. The marriage connection may suffer from postpartum depression.

Suicide is a major cause of mortality among women who have recently given birth, yet the absolute number of suicides at this time is extremely low—between one and five per 100,000 live births. According to our research, 16% of patients in population studies reported having depression. Patients who were found to be depressed also had higher odds of perceived complications during delivery ($p \leq 0.05$), breastfeeding issues ($p \leq 0.05$), and hospital stays longer than four days ($p \leq 0.05$).

Our study revealed that a lower level of schooling was a significant risk factor for PPD. This is due to the fact that education increases one's capacity for making life decisions and shapes one's goals, sense of self, and opportunities for learning. These factors can inspire attitudes and behaviours about one's lifestyle and health, and research findings supported this theory. [12]

There was no statistical correlation found between the mother's post-discharge residence and the assistance that was available. This is consistent with research by Mathisen et al. who discovered a prevalence of 18.6% and a higher prevalence among patients experiencing nursing issues, pregnancy and labour complications. [13] Women who experienced difficulties throughout their pregnancy and labour were also found to have a higher frequency of postpartum depression by Youn et al. in a state-wide study conducted in South Korea. Additionally, they discovered a higher prevalence among mothers who were over 35 and under 20, which our study did not identify. [12]

More extensive research on postpartum women may reveal a relationship between postnatal depression and other factors that were examined,

like socioeconomic status, delivery style, and past pregnancy losses.

Conclusion

Twenty-four (16%) of the 150 study participants experienced postpartum depression. Among study participants, patients who thought their delivery was difficult also had higher rates of depression. Depression among the women was linked to the lactation issue. Depression affected nearly 40% of the moms who spent more than four days in the hospital.

The Edinburgh Post-Natal Depression Questionnaire is a common tool used to assess mental health in new mothers, as the frequency of postnatal depression in an urban population at a renowned hospital is high enough to warrant routine inquiries. Specialised lactation consultants and maternity and breast feeding support nurses should be available to assist with the importance of establishing optimal feeding. To lower the risk of depression brought on by these experiences, moms who remain longer than usual because of pregnancy difficulties or who believe their delivery was complicated should receive appropriate debriefing. A simplified and efficient support and referral system is required for women experiencing depression.

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