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ASSESSMENT OF POSTPARTUM DEPRESSION WITHIN THE FIRST TWO WEEKS OF DELIVERY IN A TERTIARY CARE CENTER USING THE MARATHI VERSION OF EDINBURGH POSTNATAL DEPRESSION SCALE

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2. Dr. Jeet Prakashkumar Shah: Validation, Methodology, data curation.
3. Dr. Gaurav Murambikar: Writing original Draft, Data curation, Methodology, resources, Writing – Review

ABSTRACT:
Background: Postpartum depression (PPD) is a serious health issue with several risk factors. It can have significant worse effects on both the mother and the infant. Early detection and intervention are essential for improving outcomes. Therefore, the present study aims to assess PPD within the first two weeks of delivery in a tertiary care center using the Marathi version of the EPDS.
Methodology: This cross-sectional study was conducted at MGM Hospital, Aurangabad. Ethics committee approval was obtained before the initiation of the study. In this study; we included 141 participants within 2 weeks of their deliveries. They were interviewed using a semi-structured questionnaire and were screened using EPDS.
Results: The results of this study show that among the 141 participants, 82 were male newborns and 56 were female newborns. Age, days post-delivery, term classification (pre-term vs. full-term), mode

of delivery (LSCS vs. ND), and gender did not show statistically significant differences between groups with EPDS scores <13 and >13 ($p > 0.05$ for all comparisons).
Conclusion: Our study highlighted the risk factors for postpartum depression, which can affect the emotional well-being and overall quality of life of patients. EPDS is a useful tool for the diagnosis of PPD among mothers. This study shed light on EPDS scores analysis and revealed no significant differences in gender, age, delivery timing, mode, or post-delivery duration between groups with EPDS scores <13 and >13, suggesting these factors may not predict postpartum depression in our population. Further research is needed to confirm their role as risk factors.

KEYWORDS: Postpartum depression, Risk factors, EPDS scale, Motherhood, Child Birth.

INTRODUCTION:

The postpartum period, from right after delivery to 42 days later, is an important time for all mothers.[1] This period brings physical, emotional, and psychological changes. The tiredness from labor and delivery, along with the excitement and demands of caring for a new baby, affects the mental health of all mothers.[2]

Caring for an infant is a demanding yet profoundly rewarding responsibility, and the dedication of new mothers to their babies often stems from a sense of fulfillment in their maternal role [1]. The bond between mother and infant is established immediately after birth and continues to strengthen over time, playing a crucial role in the baby's overall growth [3].

Mental health issues, such as depression, can manifest in various ways, with postpartum depression (PPD) being a prevalent concern. PPD is a kind of serious depressive illness that usually appears between two to four weeks after giving birth. [2,4]. Its symptoms encompass a range of emotional and physical manifestations, including feelings of sadness, loss of interest in activities, an inability to experience joy, disruptions in sleep and appetite patterns, difficulties in concentration, fatigue, overwhelming guilt or feelings of worthlessness, and even thoughts of self-harm [4].

In India, the prevalence of PPD is estimated to be around 22%, making it a major public health concern. However, the diagnosis and management of PPD in India are often hindered by cultural beliefs, stigma surrounding mental health, and limited access to mental health services, particularly in rural areas.[5]

The Edinburgh Postnatal Depression Scale (EPDS) is a widely used screening tool for PPD. It consists of 10 questions related to mood, anxiety, and self-esteem experienced in the past seven days. [6] The Marathi version of the EPDS has been validated and used in various studies to assess PPD among Marathi-speaking women in India.[7]It has been very widely used and found to be an acceptable screening tool in different cultures

Therefore, this study aims to assess the prevalence of PPD within the first two weeks of delivery in a tertiary care center in India using the Marathi version of the EPDS. By identifying women at risk of PPD early, healthcare providers can offer timely interventions and support, thereby improving maternal and child outcomes.

Materials and methods:

This was a cross-sectional study conducted at the MGM Hospital Aurangabad. In this study, we included the women who had given birth within the past two weeks and were seeking postnatal care at the tertiary care center.Ethical approval for this study was obtained by the institutional ethics committee.

This study assessed the PPD within the first two weeks of delivery using the Marathi version of the EPDS. The EPDS is a commonly used screening tool for determining the prevalence of PPD. It consists of ten questions, each scored from 0 to 3 based on the severity of the response, with a total score range of 0 to 30. It displays each symptom's presence throughout the last seven days. In this investigation, an EPDS cut-off of 10 or above was employed as research has indicated that this cutoff had the highest sensitivity (76%) and specificity (100%). Subject matter experts who were fluent in

the local language approved the Marathi version of the EPDS scale, which was then used to assess PPD in women.

Statistical analysis: The data were input into Excel sheets and examined using IBM SPSS software (version 25.0) following the completion of the interviews and recommendations for suitable individuals. The EPDS score was cross-tabulated with the clinical and demographic data.

RESULTS:

Table 1: Gender of the delivered child in the study group

Gender	Count	Percentage
Female	59	41.84%
Male	82	58.16%
Total	141	100.00%

In this cross-sectional study, we included a total of 141 participants, of whom they give birth to 59 female and 82 male babies. Females constituted 41.84% of the total sample, while males comprised the remaining 58.16%. (Table 1)

Table-2: Education of the participant in the study group.

Qualification	Count	Percentage
Graduate	40	28.37%
HigherSecondary	50	35.46%
Postgraduate	5	3.55%
Primary	4	2.84%
Secondary	42	29.79%
Total	141	100.00%

The table reflects the educational diversity of a group of 141 participants. The majority have completed higher secondary education (35.46%), followed by graduates (28.37%) and those with secondary education (29.79%). Postgraduates constitute a smaller percentage (3.55%), and a few participants have completed primary education (2.84%). (Table 2)

Table: 3 Religion of the participants

Religion	CountofReligion	Percentage
Hindu	84	59.57%
Muslim	57	40.43%
Total	141	100.00%

Table 3 shows the religious distribution of the 141 study participants. Among them, 84 were Hindu, making up 59.57% of the total, while 57 were Muslim, accounting for 40.43%. This distribution highlights the religious diversity within the study population. (Table 3)

Table-4: Mode of the delivery of the participant

Modeofdelivery	Count	Percentage
LSCS	107	75.89%
ND	34	24.11%
Total	141	100.00%

The information above provides details on the mode of delivery for a total of 141 cases. The majority of deliveries were through Lower Segment Cesarean Section (LSCS), accounting for 75.89% of the total. Normal Delivery (ND) represented 24.11% of the cases. (Table 4)

Table-5: Mode of delivery

Term	Count of Term	Percentage
Full term	122	86.52%
Preterm	19	13.48%
Total	141	100.00%

The dataset presents information on the term of deliveries for a total of 141 cases. Within the "Term"category, there were 122 cases (86.52%) classified specifically as "Full term." Additionally, there were19 cases (13.48%) categorized as"Preterm." (Table 5)

Table-6: Distribution of clinical and demographic variables.

Variable	EPNDS <13	more than 13	p value
Age (years)	25.08 ± 4.21	26.66 ± 3.19	0.22
Days post delivery	4.09 ± 2.29	3.04 ± 1.91	0.37
Term	**No of cases**		
Pre term	18	1	0.66
Full term	112	10	
Mode of delivery	**No of cases**		
LSCS	97	10	0.22
ND	33	1	
Gender	**No of cases**		
Female	55	4	0.7
Male	75	7	

In the analysis of EPNDS scores, age differences between groups (EPNDS < 13 and EPNDS > 13) were not statistically significant ($p = 0.22$). Likewise, the variation in days post-delivery showed no statistical significance between the two groups ($p = 0.37$). The Term variable, categorized as Pre-term and Full-term, did not exhibit a significant difference ($p = 0.66$). Similarly, the Mode of delivery, whether LSCS or ND, showed no significant difference in EPNDS scores ($p = 0.22$). Lastly, in terms of Gender, no significant difference was observed between males and females in both EPNDS < 13 and EPNDS > 13 groups ($p = 0.7$). (Table 6)

DISCUSSION:

The EPDS scale is a widely validated tool used to detect postnatal depression in many countries. While it can be applied at any time during the antenatal or postnatal period, it is more reliable and sensitive when used after 6 weeks postnatally. [7] For the purpose of identifying PPD in women in urban and peri-urban primary care settings, the EPDS is a simple, reliable, and efficient screening tool. This is particularly relevant in areas serving rural communities with a high prevalence of postpartum depression.

In this study, a total of 141 babies were included, with females accounting for 41.84% of the total and males comprising the remaining 58.16%. Most participants had completed their secondary education (35.46%), followed by graduates (28.37%). A small percentage had completed their post-graduation (29.79%), and only 2.84% had completed their primary education. The majority of deliveries were through lower segment cesarean section, accounting for 75.89% of the total, while normal deliveries accounted for 24.11% of the cases.

Out of 141 deliveries analyzed, the majority, accounting for 55.32%, were categorized as "Term." Among these, 44 cases (31.21%) were classified as "Full term." Additionally, there were 19 cases (13.48%) categorized as "Preterm."

According to the study done by **Gaikwad S et al.,[8]**the prevalence of PPD was significantly higher among women residing in rural areas compared to those in urban areas ($p < 0.05$). The impact of PPD is significant not only for the mother but also for the baby. The study found a high prevalence of EPDS scores >13.

In this study, the analysis of EPDS scores showed no statistically significant differences in age ($p = 0.22$), days post-delivery ($p = 0.37$), preterm vs. full-term deliveries ($p = 0.7$), mode of delivery (LSCS vs. ND, $p = 0.22$), or gender ($p = 0.7$) between groups with EPDS scores <13 and >13. These factors may not significantly influence PPD.

In their study, **Khapre et al. [7]** observed that the total mean score was 10.3 ± 4.1, with no floor or ceiling effects detected. Three factors were extracted from the analysis. The optimal cutoff point was determined to be 12, with a sensitivity and specificity of 95%. Depression was found to be associated with the birth of a female child, pregnancy complications, and the health of the newborn.

A study by **Khare et al. [9]** shows that the Marathi version of EPDS is a well-validated and simple screening tool with a sensitivity of 92% and a specificity of 96%. Also, a study done by **Kale DP et al. [10]** suggest that using scales like EPDS are feasible and standard for all patients for better physical and mental health of both mother and child.

Despite the lack of significant differences in age, post-delivery duration, mode of delivery, or gender in EPDS scores, comprehensive screening remains crucial. Integrating the EPDS into routine postpartum care is essential for addressing the high prevalence of postpartum depression, particularly in rural areas. This will enable timely interventions and improve health outcomes for mothers and their newborns.

LIMITATIONS:

1. The study's sample size was not large enough to generalize the findings to the broader population.
2. Other factors, such as pre-existing mental health conditions, support systems, and stressors, were not controlled for, which may influence the results.
3. Cultural attitudes towards mental health and postpartum depression may influence the willingness of participants to report symptoms accurately.

CONCLUSION:

During the postpartum period, women are vulnerable to depression. EPDS is a useful tool for diagnosis of PPD among mothers. Based on the examination of the EPDS scores in this research, it seems that variables like gender, age, length of time after delivery, pre-term or full-term delivery classification, mode of delivery (LSCS or ND), and duration post-delivery did not exhibit statistically significant differences between the groups with EPDS scores <13 and >13. This implies that in the research population, these characteristics could not be important predictors of PPD. Further research is needed to investigate the role of this factor as a potential risk factor for PPD.

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