PREVALENCE OF POSTPARTUM DEPRESSION IN A TERTIARY CARE CENTRE USING EDINBURGH POSTNATAL DEPRESSION SCALE (EPDS)

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INTRODUCTION

According to the World Health Organization (WHO), depression is a widespread mental disorder characterized by persistent sadness and a lack of interest or pleasure in previously rewarding or enjoyable activities that can affect all aspects of life. One of the most common types of depression in women worldwide is postpartum depression (PPD) [1].

The reported worldwide prevalence of postpartum depression varied widelybut with an overall prevalence of 17.7% [2].

The Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5) [3] defines postpartum depression as a depressive episode with moderate to severe intensity that usually begins four weeks after delivery and can last up to 12 months after childbirth.

Postpartum depression is a painful condition in which the mothers may experience feelings of loneliness, anxiety, hopelessness and loss of control eventually leading to improper breast feeding, poor mother infant bonding, lower weight gain of infants leading to higher rates of underweight at 6 months of age, poor long-term cognitive development, higher rates of antisocial behavior and more frequent emotional problems among their children [4].

Maternal anxiety, domestic violence, traumatic birth experience,breast feeding problems,smoking,singlemothers,unwanted pregnancies, poor income have been studied as risk factors for postpartum depression[5].

Several screening instruments have been validated for use during pregnancy and the postpartum period to assist with systematically identifying patients with perinatal depression such as Edinburgh Postnatal Depression Scale (EPDS),Patient Health Questionnaire 9, the Beck Depression Inventory, and the Center for Epidemiologic Studies Depression Scale,Postpartum Depression screening scale.Of these, most effective tools for assessing PPD is the Edinburgh Postnatal Depression Scale (EPDS), which has been used in most researches on PPD [6].

Treatment for depression has been found to be effective and considered safe during breastfeeding.

MATERIALS AND METHODS

The study was designed as a cross-sectional study at Gandhi Hospital, a , tertiary care center in Telangana. The study was conducted over a period of six months.

SAMPLE SIZE : 500

STUDY DESIGN : Cross sectional study

INCLUSION CRITERIA:

1. Women in postpartum period attending OPD for follow-up at 6 weeks.
2. Postpartum women willing to participate on voluntary basis after giving informed consent.

EXCLUSION CRITERIA:

1) Women with previously known psychiatric disorder.
2) Uncooperative women or family.

All mothers attending out-patient were randomly given a questionnaire comprising of two parts and explained in their own language. The first part included questions regarding demographic data, including age, marital status, socioeconomic status, mode of delivery,parity,sex of the child. The second part consisted of EPDS questionnaire which was used to screen and identify patients at risk for PPD. The EPDS[6] contains 10 questions that assess a new mother's emotions over the past seven days before the interview. Every question scored emotions from 0-3. Questions 1, 2, and 4 were scored as 0, 1, 2, and 3, respectively, with the top box scored as 0 and the bottom box scored as 3. Questions 3 and 5-10 were reverse-scored, with the top box scored as 3

and the bottom box scored as 0. The maximum score was 30[6]. In this study, a score less than 9 points was considered normal. Mothers who scored 13 points or above were defined as having possible PPD. These mothers were then referred for further evaluation and intervention by the mental health physicians at Gandhi Hospital. Mothers who scored from 9 to 12 had indication of minor signs of depression and were offered supporting follow-up visits.

STATISTICAL ANALYSIS

The data obtained was entered into the Microsoft Excel Sheet and analyzed.Pearson's Chi square test was applied and p value was calculated using the OpenEpi version 7.

RESULTS

A total of 500 delivered mothers were included in the study. They were screened using EPDS.Out of 500 patients,415 (83%) scored less than 9 points indicating mild/no signs of PPD, 55 (11%) mothers scored from 9 to 12 points indicating moderate signs of PPD and 30 (6%) mothers scored 13 or more points indicating signs of severe depression.These mothers were followed with extra supporting visits.

TABLE-1 depicts out of 500 mothers most of the respondents ,435 were in the age group 19-28 years out of which 6 mothers showing EPDS >13. 65 mothers were in the age group of 29-38 years out of which 24 mothers were having severe depression with EPDS>13.

TABLE -2shows,out of the 500 mothers, five among the 7 single mothers, three cases among the 6 abandoned mothers ,six cases among the 18 divorced women and sixteen women among the 470 who were currently married had EPDS score more then 13 suggesting possible depression.

TABLE -3 shows that 24 cases out of 310 cases with lower socioeconomic status & 6 cases out of 188 cases belonging to middle socioeconomic status were with EPDS>13.

TABLE-4 depicts 273 mothers who underwent caesarean section 24 mothers & out of 227 cases who were delivered vaginally 6 mothers had severe depression with EPDS>13.

TABLE-5 shows that amongthe 310 multiparous women ,27 mothers were with severe depression as compared to 2 out of 190 para-1 mothers in our study.

TABLE-6 depicts that the birth of a female child contributed to severe depression in 22 mothers out of 180 mothers with one mother having female twin delivery and 8 mothers having male child with severe depression out of 320 mothers with male child.

DISCUSSION

Postpartum period is a critical period in women's life during which she undergoes wide range of emotional changes. Postpartum depression if left undiagnosed and untreated, can have serious consequences on mother and the infant. As shown by many studies, the mother–infant bonding as well as the infant development is ruined by the postpartum depression[7]

This study has shown the factors like increased maternal age, low socioeconomic status and disrupted marital status/ family support have high probability of postpartum depression.

In a study by IbenMotzfeldt et al,done in Greenland, the prevalence of post postpartum depression was reported to be 8.6% using EPDS, which is close to the prevalence of our study at 6% indicating that PPD is also a common problem[8].

In our study there is a significant association of age with post partum depression (p value <0.01) with severe depression among the women of 29-38 years old similar to a study by IbenMotzfeldt et al [8].

Family support and care is vital for the well being of patients having psychological trauma, chronic illness in life [9]. Our study had reported high incidence of postpartum depression among the women who are single mothers, abandoned mothers, divorced mothers who lack proper family support same as reported by Al Nasr et,al[9].

This study highlights the need for developing a good social and family support may be helpful for the emotional well-being of mothers, also to provide comfort to mothers in the intranatal period and smoothening her personal experience of labor as the key element which needs to be further studied in detail[9].

There was no significant association between the socioeconomic status and postpartum depression, however our study has reported majority of patients belonging to lower socioeconomic status similar to study by Alkhish et al[10].

Lack of proper financial stability, quality of living, awareness of proper physical and mental care can lead to PPD.

In this study, we found that mode of delivery was a key associative factor for increasing the depressions scores. High incidence of depression were noted in mothers who had C-section deliveries which was similar to a study by Nasr et al [9]. Postpartum women with normal deliveries might have minor-to-moderate pelvic or perineal pain. However, women who undergo C-section may have severe pain restricting their normal physical activity. C-section can be associated with complications such as infections and chronic pelvic pain that will enhance the risk of PPD [11].

In this study we have found that there was a significant association between parity and postpartum depression with higher number of cases being multiparous women contrary to a study by Motegi et al [12]. This could be due to the physical and mental overload to the mothers.

Contrary to a study conducted in Newyork by Cowell et al [13] ,our study has found to have higher incidence of depression among women with a female child.

The limitations of this study includes its small sample size and so the interpretation of the actual burden of the problem of postpartum depression needs to be studied further.

CONCLUSION

We conclude that post postpartum depression is a common health care problem which can be addressed by using EPDS as a screening tool in combination with early diagnosis and proper treatment. However, PPD continues to be under diagnosed and under treated despite the mother's regular contact with the health care system during pregnancy and early motherhood. Increasing awareness and need for routine screening is necessaryin order to improve the quality of maternal health and maintain a healthy bond between mother and the child.

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TABLE -1: DISTRIBUTION OF AGE AND EDINBURGH POSTNATAL DEPRESSION SCALE SCORE(*N*=500)

AGE	MILD/NO DEPRESSION (EPDS <9)	MODERATE DEPRESSION (EPDS 9-12)	SEVERE DEPRESSION (EPDS >13)

19-28 years (435)	408 (81.6%)	21 (4.2%)	6 (1.2%)
29-38 years (65)	7 (1.4%)	34 (6.8%)	24 (4.8%)
Chi Square value -281.9, p value <0.01,Significant			

TABLE -2: DISTRIBUTION OF MARITAL STATUS AND EDINBURGH POSTNATAL DEPRESSION SCALE SCORE(*N*=500)

MARITAL STATUS	MILD /NO DEPRESSION(EPDS <9)	MODERATE DEPRESSION(EPDS 9-12)	SEVERE DEPRESSION(EPDS >13)
SINGLE MOTHERS (7)	1 (0.2%)	1 (0.2%)	5 (1%)
ABANDONED MOTHERS (5)	0	2 (0.4%)	3 (0.6%)
DIVORCED MOTHERS (18)	5(1%)	7 (1.4%)	6 (1.2%)
CURRENTLY MARRIED MOTHERS (470)	402 (80.4%)	52 (10.4%)	16 (3.2%)
Chi Square value -131.1,p value <0.01,Significant			

TABLE -3: DISTRIBUTION OF SOCIO ECONOMIC STATUS AND EDINBURGH POSTNATAL DEPRESSION SCALE SCORE(*N*=500)

SOCIO ECONOMIC STATUS (S-E STATUS)	MILD /NO DEPRESSION(EPDS <9)	MODERATE DEPRESSION(EPDS 9-12)	SEVERE DEPRESSION(EPDS >13)
LOWER S-E STATUS(310)	250 (50%)	36 (7.2%)	24 (4.8%)
MIDDLE S-E STATUS (188)	164 (32.8%)	18 (3.6%)	6 (1.2%)

UPPER S-E STATUS(2)	1 (0.2%)	1(0.2%)	0
Chi Square value -8.253,p value 0.08,Not significant			

TABLE -4: DISTRIBUTION OF MODE OF DELIVERY AND EDINBURGH POSTNATAL DEPRESSION SCALE SCORE(*N*=500)

MODE OF DELIVERY	MILD /NO DEPRESSION(EPS <9)	MODERATE DEPRESSION(EPDS 9-12)	SEVERE DEPRESSION(EPDS >13)
CAESAREAN SECTION	212(42.4%)	37(7.4%)	24(4.8%)
VAGINAL DELIVERY(227)	203 (40.6%)	18 (3.6%)	6 (1.2%)
Chi Square value -13.4,p value<0.01,Significant			

TABLE -5: DISTRIBUTION OF PARITY AND EDINBURGH POSTNATAL DEPRESSION SCALE SCORE(*N*=500)

PARITY	MILD /NO DEPRESSION(EPS <9)	MODERATE DEPRESSION(EPDS 9-12)	SEVERE DEPRESSION(EPDS >13)
Para-1 (190)	133 (26.6%)	55 (11%)	2 (0.4%)
Multiparous (310)	198 (39.6%)	85 (17%)	27 (5.4%)
Chi Square value -12.6,p value-<0.01,Significant			

TABLE -6: DISTRIBUTION OF SEX OF THE CHILD AND EDINBURGH POSTNATAL DEPRESSION SCALE SCORE(*N*=500)

SEX OF THE CHILD:	MILD /NO DEPRESSION(EPS <9)	MODERATE DEPRESSION(EPDS 9-12)	SEVERE DEPRESSION(EPDS >13)

FEMALE CHILD (181)*	73 (14.6%)	85 (17%)	22 (4.4%)
MALE CHILD(320)	275 (55%)	37 (7.4%)	8 (1.6%)
Chi Square value -112.3,p value <0.01,Significant			

*****One primigravida had twin caesarean delivery with both twins being females.