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EVALUATION OF MENTAL HEALTH IN POSTPARTUM INDIAN WOMEN-A PROSPECTIVE HOSPITAL BASED OBSERVATIONAL STUDY

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Abstract
Introduction: Researchers, doctors, and public health experts are paying more and more attention to postpartum mental illness. Early discovery can result in early treatment and less harmful implications for the patient, her newborn, other children, and spouse, according to researchers and physicians.
Aims: To estimate prevalence of psychiatric disorder in postpartum Indian women.
Materials and method: The present study was a prospective hospital based observational study. This Study was conducted from January 2019 to December 2019 at Tata Main Hospital Jamshedpur. Total 174 patients were included in this study.
Result: Prevalence of PPD was higher among women who had given birth to a girl baby. A higher proportion of women with multiple birth had depression postpartum compared to women who had single birth and women who had delivered by vaginal route had a higher prevalence of depression compared to women delivered by caesarian section(p<.05). In EPDS score, 3 patients had Depressed out of 28 total patients in >/= 1 Still/ neonatal death. Association of postpartum depression with number of children dead (still birth+ neonatal death) prior to present delivery was not statistically significant (p=0.570). In GHQ 12 score, 3 patients had Depressed out of 28 total patients in >/= 1 Still/ neonatal death. Association of postpartum depression with number of children dead (still birth+ neonatal death) prior to present delivery was not statistically significant (p=0.761).
Conclusion: This prospective study was undertaken to find out the prevalence of depression among women during postpartum period and factors leading to it. Considering the adverse fetal outcome and poor maternal well-being of pregnant women with mental morbidity, it is important to include screening and treatment of mental morbidity as a part of routine antenatal care. Majority of women in postpartum period just need reassurance.

Keyword: Maternal Mental Health, Postpartum Anxiety, Maternal Wellbeing and Risk Factors

INTRODUCTION

Women's environments undergo several changes throughout pregnancy and childbirth on a biological, psychological, and sociocultural level. Many women find that being pregnant and the first few years of parenting are stressful. Numerous changes in the environment of hormones and neurotransmitters affect an individual's mood. Postpartum blues, postpartum depression, and postpartum psychosis are the three main categories into which postpartum illnesses fall on a continuum that spans from mild to severe disturbance[1].

Postpartum psychological disorders lead to maternal disability and disturbed mother-infant relationships. Approximately 10%-15% of all new mothers get postpartum depression, which most frequently occurs within the first year after the birth of a child. The most significant predictors for postpartum mental illness are prenatal depression, self-esteem, childcare stress, prenatal anxiety, life stress, social support, and marital relationship, history of previous depression, infant temperament, maternity blues, marital status, socioeconomic status and unplanned/unwanted pregnancy. [2]

Rating tools like the Edinburgh Postnatal Depression Rating Scale (EPDS) and the General Health Questionnaire (GHQ), which are frequently used to diagnose depression, are useful for screening for signs of the illness. Mothers who give birth are regularly checked at prearranged appointments 0, 2, and 6 weeks following the delivery. [3] Stresses of modern life may trigger mental illness in women, but what is essential that is awareness about when to seek help. The prevalence of psychological problem is more in rural area. Indian society is conservative and hence even conditions that can be cured during the early stages are often neglected till it become too late. [4]

According to the National Mental Health Survey 2016, one in every 10 persons in India suffer from depression and anxiety, and 20% of these depressed Indians are pregnant women and new mothers. This systemic review was conducted to assess the burden of depression with it risk factors associated with it among the Indian pregnant women.[5]

Both GHQ-12 and EPDS are valid instruments to detect postnatal depression as well as postnatal anxiety and adjustment disorders. Receiver operating characteristic (ROC) analysis was used to assess the validityof GHQ12 and EPDS in screening of

postnatal psychiatric disorders. The concurrent validity was satisfactory (0.80), At optimum cutoff scores, both GHQ-12 and EPDS yielded very good sensitivity (80; 85.5) and specificity (80.4; 85.3), respectively.ROC curve show that the performance of EPDS (AUC=0.933) is slightly superior to that of GHQ12. [6]

MATERIALS AND METHODS

Study Area: This study was conducted at Tata Main Hospital, Jamshedpur. TMH is a tertiary care centre and surrounded by rural and urban areas. This study was approved by the Institutional Ethics Committee of the hospital.

Study population: Any married woman delivering in TMH and belonging to the reproductive age group & attending outpatient clinic in TMH and willing to be a part of this study who fulfill our inclusion and exclusion criteria after obtaining informed consent.

Inclusion criteria:

a) Any married woman delivering in TMH and belonging to the reproductive age group

b) All patients delivering in TMH

C) Who deliver between December 2018 to November 2019

Exclusion criteria:

a) Critically ill

b) Past history of depression

c) Comorbid medical or psychiatric illness

STUDY PERIOD: one year (January 2019 to December 2019)

STUDY DESIGN: AN OBSERVATIONAL STUDY PROSPECTIVE HOSPITAL BASED

SAMPLE SIZE: USING FORMULA TO FIND THE SAMPLE SIZE

$n=(Z1a/2)^2$. P(1-P)/d2 n= sample size

21-α/2= 1.96(Always constant for 95% confidence interval) p=13% prevalence (proportion) of postpartum psychiatric disorder 1-P-1-0.13-.87

d= correction factor/precision approx. 5%, Now calculate using formula n= 174

RESULT

Table 1: Clinical Profile of Study Population

Sl. No	Clinical data	variable	Total Number	depressed	n% of depressed
1	ANC	Booked	151	11	7.28
		Unbooked	23	03	13.04
2	Term of delivery	Preterm	13	03	23.07
		Term	161	11	6.83
3	Mode of delivery	Normal VD	150	11	7.33
		Cs	24	03	12.5
4	Sex of the baby	Male	93	04	4.30
		female	81	09	11.11
5	Birth order	Primigravida	14	03	21.42
		Multigravida	160	11	6.87

Table 2: Association between postpartum depression and number of children dead (still birth+ neonatal death) prior to present delivery

EPDS score	Still/ neonatal death	Total patient	Depressed	e
	Nil	146	11	0.570
	>/= 1	28	03	
	Total	174	14	
GHQ 12 score	Nil	146	13	
	>/=1	28	03	0.761
	Total	174	16	

Table 3: Distribution of EPDS SCORE and GHQ 12 SCORE with SES STATUS and ANC

		Number	Depressed	N % of depressed	p-value
EPDS SCORE	LW	38	05	13.15	0.190
	MD-HG	136	09	6.61	
	TOTAL	174	14	8.04	
GHQ 12 SCORE	LW	38	07	18.42	0.026
	MD-HG	136	09	6.61	
EPDS SCORE	UNBKD	23	03	13.04	0.344
	BKD	151	11	7.28	
	Total	174	14	8.04	
GHQ 12 SCORE	UNBKD	23	05	21.73	0.025
	BKD	151	11	7.28	
	Total	174	16	9.19	

Prevalence of PPD was higher among women who had given birth to a girl baby. A higher proportion of women with multiple birth had depression postpartum compared to women who had single birth and women who had delivered by vaginal route had a higher prevalence of depression compared to women delivered by caesarian section(p<.05). In EPDS score, 3 patients had Depressed out of 28 total patients in >/= 1 Still/ neonatal death. Association of postpartum depression with number of children dead (still birth+ neonatal death) prior to present delivery was not statistically significant (p=0.570). In GHQ 12 score, 3 patients had Depressed out of 28 total patients in >/= 1 Still/ neonatal death. Association of postpartum depression with number of children dead (still birth+ neonatal death) prior to present delivery was not statistically significant (p=0.761). In our study, 5 (13.15%) patients had Depressed out of 111 total patients LW of EPDS SCORE and 9 (6.61%) patients had Depressed out of 136 total patients MD-HG of EPDS SCORE. EPDS SCORE with SESTATUS was not statistically significant (p=0.190). In our study, 7 (18.42%) patients had Depressed out of 38 total patients LW of GHQ 12 SCORE and 9 (6.61%) patient had Depressed out of 136 total patients MD-HG of GHQ 12 SCORE. GHQ 12 SCORE with SESTATUS was statistically significant (p=0.026). In our study, 3 (13.04%) patients had Depressed out of 23 total patients UNBKD of EPDS SCORE and 11 (7.28%) patients had Depressed out of 151 total patients BKD of EPDS SCORE. EPDS SCORE with ANC was not statistically significant (p=0.344). In our study, 5 (21.73%) patients had Depressed out of 23 total patients UNBKD of GHQ 12 SCORE and 11 (7.28%) patient had Depressed out of 151 total patients BKD of GHQ 12 SCORE. GHQ 12 SCORE with ANC was statistically significant (p=0.025).

DISCUSSION

This study was conducted at Tata Main Hospital, Jamshedpur. TMH is a tertiary care centre and surrounded by rural and urban areas. This study was approved by Ethics committee of the hospital.

The prevalence of PPD ranges from 7.6% to 39% in various areas of the world and differs according to the population tested and screening tools used. Prevalence of PPD even varies based on the timing when screening was carried out.

Twenty-one of the 174 patients lacked literacy. Of the 174, the majority (111) had completed their schooling. Out of the whole study population, just 42 had a degree. In these three categories, the PPD prevalence was 14.28%, 4.5%, and 14.28%, respectively. PPD equally impacted women with greater levels

of education and those who were illiterate. The least impacted by PND were women with only a high school education. This contrasts with a research conducted in Lebanon that found a link between a poor educational attainment and an increased incidence of PPD. M. Chaaya et al. (2002)] [7].

We observed in our study that PND was more prevalent among low socioeconomic class women. Chaaya M et al (2002) [7] & Gonidakis F et al (2008) [8] observed that 78.16% of women belonged to middle & high class, 21.83% belonged to lower class.

Similar findings were made by Josefsson et al. (2002) [9], who said that PPD was unaffected by delivery modality. The route of delivery had an impact on the prevalence of PPD, according to our study's data, however the EPDS score did not demonstrate this to be statistically significant. On the other hand, the reverse was discovered with GHQ12. When comparing the frequency of postnatal depression across preterm and term deliveries, our study revealed that PPD was more common in preterm birthing women than in term birthing women.

In our study out of 174, 146 had no perinatal loss prior to index delivery and only 28 had one or more perinatal loss in the previous deliveries. The prevalence of postnatal depression was found to be higher in the second group as compared to the ones with no perinatal loss using both the scoring system, but this difference was not statistically significant. Association was seen to be present between psychiatric illness and number of previous stillbirths and neonatal death before this delivery. In our study, from both the scoring system EPDS and GHQ12 score data were statistically non-significant. P(>.05). Perinatal loss was a significant psychological trauma to parents both immediately as well as in the long term, and there was a tendency to focus exclusively on affective symptomatology in such cases. Another study reported findings similar to ours. But data were statistically significant. In that study, 94 of 192 study subjects reported previous fetal deaths/abortions. Women with multiple pregnancy losses were more likely to be diagnosed with major depression than women with one loss. (Giannandrea SA et al, 2013)[10]

In our study, the mothers were assessed using the Edinburgh Postnatal Depression Scale and the General Health Questionnaire (GHQ12). This table showed the prevalence of PND using both EPDS and GHQ12 scales. 16(9.19%) and 14(8.04%) according to GHQ12 & EPDS respectively were found to be suffering from PND. Positive correlation was found between EPDS score and GHQ12 score and it was statistically significant. (p value<.0001). EPDS has been validated in a number of situations as a screening instrument for postnatal depression. Adjustment of the EPDS cut off point also allows for identification of psychological distress. The GHQ-12 worked as effectively in low-income countries as it did elsewhere. The present study examined the ability of the EPDS to yield similar results with the GHQ-12 in detecting postnatal psychological distress. Follow-up study of women at 2 weeks and 6 weeks postpartum showed a declining trend in PND.

The distribution of SE-status EPDS and GHQ12 SCORES. The majority of the women in our survey (78.16%) belonged to middle and upper class, while a smaller percentage (21.83%) belonged to lower socioeconomic level. The EPDS score showed a statistically negligible level of depression among lower class and middle-high class individuals, at 13.15% and 6.61%, respectively. The GHQ12 score showed a statistically significant level of depression among both groups, at 18.42% and 6.61%, respectively. Lower socioeconomic position has also been found to be a moderate-risk factor for postpartum depression, according to Stewart DE, et al. (2003) [11]. Fisher J et al. (2012) [12] produced comparable findings.

CONCLUSION

The purpose of this prospective study was to determine the prevalence of depression in postpartum mothers and the contributing variables. It is crucial to screen for and treat mental morbidity as part of standard prenatal care due to the detrimental effects on the fetus and the poor mother health of pregnant women with mental illness. The majority of postpartum mothers only want comfort. It has been discovered that postpartum women may reliably detect depression by using the ten-item Edinburgh Postnatal Depression Scale (EPDS). This quick screening tool may be simply implemented for routine practice usage in obstetrical care settings since it has been validated in populations of expectant and recent mothers.

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