

ASSESSMENT OF POSTNATAL DEPRESSION AND SOME ASSOCIATED RISK FACTORS AMONG MOTHERS DELIVERED IN A TERTIARY HEALTH CARE CENTRE: A CROSS SECTIONAL STUDY**Dr. Vishal Samadhan Dhande^{1*}, Dr. R. D. Gadekar², Dr. Deepak Sonni Patil³, Manasi Aheer⁴, Sonali Suryawanshi⁴, Pooja Hajare⁴ and Pallavi Ijjapwar⁴**¹Assistant Professor, Department of Community Medicine, GMC Aurangabad, (MS).²Associate Professor, Department of Community Medicine, SCGMC Nanded, (MS).³Intern Doctor, SCGMC Nanded, (MS).⁴MBBS Final Part-I, SCGMC Nanded, (MS).***Corresponding Author: Dr. Vishal Samadhan Dhande**

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ABSTRACT

Background: Postnatal depression is particularly important because it is so common and because it occurs at such a critical time in the lives of the mother, her baby and her family. **Objective:** To find out prevalence of postnatal depression among mothers delivered in tertiary health care centre and to study some risk factors responsible for it. **Materials and Methods:** This cross sectional study was conducted in a tertiary care teaching hospital of Maharashtra state during period July to December 2018. Total 375 mothers delivered in same hospital were screened for postpartum depression using Hindi version of EPDS (Edinburgh Postnatal Depression Scale). **Results:** Prevalence of postpartum depression was found to be 17.6 %. Risk factors found to be significantly associated with postnatal depression were education, planning of pregnancy, obstetric outcome, breast feeding initiation, gender of baby, previous history of abortion, support from family after pregnancy, history of domestic abuse, family history of psychiatric disorders etc. **Conclusion:** This study identified certain socio-demographic and some other risk factors for postpartum depression, which helps to design intervention and preventive strategies for the same.

KEYWORDS: *Postnatal depression, EPDS (Edinburgh Postnatal Depression Scale), Tertiary health care centre.***INTRODUCTION**

Postpartum depression (PPD) is a type of clinical depression which can affect woman after childbirth.^[1] It is a serious mental health problem among women and its consequences have important implications for the welfare of the family and the development of the child.^[2] It is important to identify postnatal depression early because, without treatment, it can lead to ongoing depression. It can also have an impact on maternal competence in childcare and has lasting and serious consequences upon the physical and psychological development of the child.^[3] According to the National Institutes of Mental Health studies, the childbearing years are when a woman is most likely to experience depression in her lifetime.^[4] Approximately 15% of all women will experience PPD following the birth of a child.^[4] Thus, the recognition and assessment of this psychological disorder is important. Hence the present study was undertaken to determine the prevalence of probable depression among women delivered at tertiary care hospital in Maharashtra state and identify some risk factors that affect postnatal depression.

MATERIALS AND METHODS

The present cross sectional study was carried out in Dr. Shankarrao Chavan Government Medical College, Nanded in Maharashtra state during period July to December 2018. Study population were women delivered in this hospital and admitted in postnatal care ward. Permission from the head of the institute was taken before the start of the study.

Sample size was calculated by taking 18 % as a prevalence of postpartum depression in south India from study by Suguna A et al.^[2] Considering 95% confidence level and 5 % allowable error with 10% population as non response/incomplete answers. The sample size came to be 250. And thus we studied total 375 participants.

Edinburgh Postnatal Depression Scale (EPDS)^[5] was used to screen postpartum depression among women delivered at tertiary health care centre. EPDS is a validated tool for screening for postnatal depression. The participants were administered the Edinburgh Postnatal Depression Scale (EPDS) in the local language. The face

and content validity of the questionnaire in local language was already done by experts.

The 10 item scale gauges depression based on a 7-day recall of mood and feelings, each item scored on a severity scale of 0 to 3, giving a total score ranging from 0 to 30. Mothers who score above 13 are likely to be suffering from depressive illness of varying severity (operational definition of depression based on EPDS score). At cut – off score of 9, it has 100% specificity and sensitivity of 76%.^[6] Along with this, demographic information such as mothers' age, residence, occupation, education, type of family, number of family members and some risk factors like type of delivery, gender of neonate, breast feeding initiation, antenatal complication, support from family members, history of abortion etc. were collected in a background information sheet.

Informed written consent was taken from every participant. To ensure participant privacy data was collected in a separate room. Data analysis was done using SPSS trial Version 20.0.

RESULTS

Total 375 study participants were studied in this study, out of these 66 (17.6%) mothers were found to have postnatal depression according to EPD scale.

The mean age of study participants was 23.78 ± 3.45 years. Most of i.e. 226 study participants were from age

group 21-25 years old. More than half i.e. 242 educated up to middle school. The association between education and postpartum depression was found to be statistically significant (P value < 0.05). 227 were house wife, 272 were resident of urban area and the association between residence of mother and PPD was found to be statistically significant (P value < 0.05). 188 were Hindu by religion, 165 were belonging to below poverty line, and 231 were from three generation family. (Table No.1)

Out of total, 290 study participants had done more than or equal to 4 ANC visit, 197 study participant said that present pregnancy was their planned pregnancy. 339 study participants delivered a healthy baby. 256 had started early breast feeding, 205 had delivered a girl child, 134 were having some antenatal complications, 26 were having more than or equal to 2 previous history of abortion. 287 were having strong family support during pregnancy, 72 were having history of domestic abuse, 26 were having family history of psychiatric illness. (Table No.2)

Pregnancy planning, obstetric outcome, breast feeding initiation, gender of baby, history of abortion, support of family during pregnancy, history of domestic abuse and family history of psychiatric illness these risk factors were found to be statistically significant with postnatal depression. (P value < 0.05) (Table No.2)

Table 1: Sociodemographic profile of study subjects.

	Depressed (n=66)	Not Depressed (n=309)	Total (n = 375)	CHI SQUARE
Age group				
<20	12	56	68	$X^2 = 6.391$ $P = 0.094$
21-25	33	193	226	
26-30	16	51	67	
>31	5	9	14	
Education				
Illiterate	0	20	20	$X^2 = 12.043$ $P = 0.017$
Primary	14	28	42	
Middle school	40	202	242	
Higher secondary	7	40	47	
Graduation and above	5	19	24	
Occupation				
Housewife	39	188	227	$X^2 = 0.070$ $P = 0.792$
Working	27	121	148	
Resident				
Urban	12	91	103	$X^2 = 3.466$ $P = 0.040$
Rural	54	218	272	
Religion				
Hindu	30	158	188	$X^2 = 1.864$ $P = 0.394$
Muslim	13	69	82	
Buddha	23	82	105	
Below poverty line				
Yes	24	141	165	$X^2 = 1.896$ $P = 0.169$
No	42	168	210	
No. Of living children				
0-2	53	269	322	$X^2 = 2.043$ $P = 0.153$

≥ 3	13	40	53	
Family members				$X^2 = 4.252$ $P = 0.119$
1-5	21	126	147	
6-10	29	138	167	
>10	16	45	61	
Type of family				$X^2 = 1.000$ $P = 0.606$
Three Generation	44	187	231	
Nuclear	7	44	51	
Joint	15	78	93	
Marriage duration				$X^2 = 1.009$ $P = 0.604$
0-5 Years	39	184	223	
6-10 Years	19	99	118	
≥ 11 Years	8	26	34	

Table 2: Association between various risk factors and the prevalence of postnatal depression among the study participants.

Parameter	Depressed (n=66)	NOT Depressed (n=309)	Total (n = 375)	CHI SQUARE
ANC visits				$X^2 = 0.437$ $P = 0.509$
1-3	17	68	85	
≥ 4	49	241	290	
Planned Pregnancy				$X^2 = 5.11$ $P = 0.029$
Yes	43	154	197	
No	23	155	178	
Type of delivery				$X^2 = 0.089$ $P = 0.766$
Normal	57	271	328	
Caesarean	09	38	47	
Breast feeding Initiation				$X^2 = 10.166$ $P = 0.001$
Immediately	56	200	256	
Delayed	10	109	119	
Gender of baby				$X^2 = 4.654$ $P = 0.030$
Male	22	148	170	
Female	44	161	205	
Antenatal complications				$X^2 = 2.49$ $P = 0.122$
Yes	18	116	134	
No	48	193	241	
H/o abortion				$X^2 = 5.967$ $P = 0.015$
1	66	283	349	
≥ 2	0	26	26	
Availability of family support during pregnancy				$X^2 = 5.325$ $P = 0.021$
Very less	10	23	33	
Often	12	43	55	
Strong	44	243	287	
History of Domestic abuse				$X^2 = 6.36$ $P = 0.01$
Yes	20	52	72	
No	46	257	303	
Family history of psychiatric disorder				$X^2 = 8.384$ $P = 0.003$
Yes	10	16	26	
No	56	293	349	
Involvement of husband in baby care				$X^2 = 1.948$ $P = 0.378$
Less	6	34	40	
Often	20	69	89	
Strong	40	206	246	

DISCUSSION

All the women who delivered in this hospital and admitted in PNC ward were interviewed for Postnatal

Depression by EPDS Scale with some Social characteristics and risk factors like Age, Sex, Income, Occupation, gender of neonate, family support, history of

abortion obstetric outcome, antenatal complications etc. They were not aware of their mental health status. Depressive disorder was detected in 17.6 % (95% CI) by Edinburgh Postnatal Depression Scale of depression, similar results were found by Suguna A et Al (18%)^[2] also the results are comparable to results of a study done on Egyptian women^[7] where the prevalence of PPD was 17.9%, which is similar to previous results in developed countries⁽⁸⁾ and developing countries including Sudan.^[9]

Another study done in Goa, Mangalore and Wardha showed the prevalence 22%, 31.44% and 24% respectively.^[10-12] Differences in reported prevalence among various studies might be due to differences in the cut-off score used for EPD scale, reporting style, differences in educational status, levels of social support or its perception, differences in perception of mental health, as well as biological vulnerability factors.

The prevalence was more among the women who had unplanned pregnancy in the present study this may be because mentally they were not ready to accept the newborn as it was not planned. Postnatal depression and the literacy status of the women in the present study were statistically associated which was similar to a study done rural areas of Belagavi, Karnataka, this may be because literate women will be more empowered and know to handle the thorny situations in the life.^[13]

Gender of the baby was statistically significant with the postnatal depression. Study done in Mangalore,^[11] also showed high prevalence among women who delivered female baby. This may be due to deeply rooted culturally male dominated Indian society; male children are preferred because of the cultural practices prevalent in India like ‘‘boys are assets and girls liability’’

Poor support of family during pregnancy, history of domestic abuse were also some risk factors which were statistically significant, similar finding were found in a cohort study by Chandran M^[14] in rural area of Tamil Nadu. Support (both physical and emotional) from the family, especially husband and in-laws, during the pregnancy definitely has a protective role. Poor support and domestic abuse gives very strong and long term psychological impact in women’s life

The study, thus, strengthens the findings of previous studies and signifies the importance of identifying PPD, more so because none of these mothers had sought help for these symptoms, although they were functionally impaired.

Certain limitations should be kept in mind while interpreting results of this study. The study was conducted among women admitted in a single hospital. The use of a single scale to measure probable postnatal depression, i.e. the EPDS was another limitation of this study. And finally some inherent limitations of the EPD scale i.e. it is a questionnaire based on recall and

depending greatly on the woman’s comprehension of the questions and rapport with the investigator.

It should also be mentioned that some factors (e.g., somatic illness, bio- hormonal factors) were not controlled in the present study, which may have a role in PPD.

CONCLUSION

This study provides useful information about the prevalence of PPD and risk factors especially some sociodemographic factors & role of socio-cultural environment and practices prevalent in this region. Early screening of the women may reduce the adverse outcomes among both mother and child. Interventions that would specifically target women with risk factors which were describe in this research may help to decrease the prevalence of PPD among these populations. Proper counselling should be done to all the pregnant women and the family members for the birth preparedness.

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