



Prevalence of Post Partum Depression Among Postnatal Women at a Tertiary Care Centre Using Edinburgh Post Partum Depression Scale

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ABSTRACT

Postpartum depression is a grave mental health problem, which is more prevalent than society realizes and poses great risk. It has been associated with lack of breastfeeding, aversion towards the baby and negative impact on the development of the child. A total of 300 women who delivered between January 14 to March 31 of 2020 at Saveetha Medical College and Hospital were chosen following ethical clearance. After explaining the aspects of the Edinburgh Postpartum Depression Scale in their native language, the questionnaire was provided. A score of 10 and above were considered positive. Data were evaluated using SPSS and Chi square test. The prevalence of PPD was seen in 14% of women. It was higher with vaginal delivery, in women who had multiple births, lack of financial and social support, with domestic violence and alcoholic partner. Medical help was advised to women who scored 10 and above; only 5% sought medical intervention. Others did not recognize depression as a health issue. This shows the lack of awareness among the population. Medical health professionals should spread awareness, conduct more studies to evaluate the prevalence, the predisposing factors, methods for early diagnosis and ways to help women overcome "THE OTHER SIDE OF MOTHERHOOD".



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INTRODUCTION

Postpartum depression (PPD), a term applied to depression prevalent during the postpartum period (up to 1 year after childbirth), is a grave mental health problem that is more prevalent than society realizes. (O'hara, 2009) Postpartum blues refers to mood variations common in the first week to 10

days after delivery and usually resolve without any intervention, unlike postpartum depression. Symptoms include irritability, insomnia, anxiety, tearfulness, and elation. (Gibbs *et al.*, 2008)

According to the DSM-5 (DSM-5, 2013), 50% of cases of postpartum depression start to develop during the antenatal period. Therefore, not only postpartum but mood disorders during pregnancy should also attract attention.

The postpartum period is intense change and transition for women that necessitates adaptation and family support. (Glavin and Leahy-Warren, 2013) Parental depression has a negative impact on the cognition, emotional and physical development of the infant (Teissedre and Chabrol, 2004) and can cause behavioral disturbances. (Babatunde and Moreno-Leguizamon, 2012) As far as mothers are concerned, the onset of depression affects the quality of the relationship with the partner and other social relationships, (Teissedre and Chabrol,

2004) causes aversion towards taking care of the baby (Babatunde and Moreno-Leguizamon, 2012) and negatively influences the quality of life (Santos *et al.*, 2014), thus affecting the economic productivity of women and family. (Scope *et al.*, 2013) Depression during the antenatal/postnatal period can also influence the men in their ways of fathering (Khan, 2011), causing marital problems between husband and wife (Khan *et al.*, 2009) and leads to the decreased interest of the father in parenting their child. (Beestin *et al.*, 2014)

In 1968, the prevalence of postpartum depression was 11%, as reported by Pitt. (Pitt, 1968) Since then, epidemiological investigations have led to the formulation of The Edinburgh Postpartum Depression Scale (EPDS) in 1987 by Cox (Cox *et al.*, 1987), and screening measures have since progressed rapidly. In 1996, the prevalence of postpartum depression was reported to be 13% (O'hara and Swain, 1996). Recently, the prevalence of postpartum depression in Western countries has reportedly been in the range of 13–19% (O'hara and McCabe, 2013).

A wide range of potential risk factors, including socio-demographic parameters, family dynamics, antenatal determinants, medical illness and pregnancy related outcomes, have been attributed to the causation of depression among women, as mentioned in Table 1.

MATERIALS AND METHODS

A total of 300 postnatal women were chosen for the study from the Obstetrics ward in Saveetha Medical College and Hospital. The population for the study consisted of postnatal women who recently delivered in our hospital and women who came for a postnatal check up following home delivery. Exclusion criteria included women who were unable to understand the questionnaire and who did not give consent for the study purpose. The study period was from January 14, 2020, to March 31, 2020.

After obtaining written consent from the subjects, each aspect of The Edinburgh Postpartum Depression Scale (EPDS) was explained to the participants in their native language (mostly tamil). To ensure privacy, each subject was taken to a separate room. The questionnaire consisted of details of mother: age, number of pregnancies, duration of hospital stay, education, occupation, religion, income, history of any psychiatric disorders, obstetric history including history of abortions and death of any children, details of current pregnancy and delivery, sex of the child, mode of delivery and social factors like alcoholism in partner and family pressure to have a male child. The subjects were then provided The

Edinburgh Postpartum Depression Scale (EPDS), which consists of 10 questions used for screening PPD. EPDS has a sensitivity of 94.1% and a specificity of 90.2%. A score of 10 and above were considered positive for PPD and they were referred to a senior physician for further management. Data was evaluated using descriptive statistics and Chi square test was used to analyse the association between the categorical variables (demographic details and delivery characteristics).

RESULTS

The total number of women eligible for the study were 300 and informed consent was obtained from all of them. In this study, the mean age of participants was found to be 25.5 years, and most of the women were under-educated (illiterate or studied less than class 12) (63.3%) and housewives (93.2%).

Most of the deliveries were institutional (96.3%). Place of delivery being primary health centre for 115 women and a medical college hospital for 175 women. The rest of the women were delivered vaginally at home (10). The number of deliveries conducted by doctors was 225 and by nurses 65. Among the 300 deliveries, there were 3 stillbirths and 10 twin deliveries.

Among the total study population, the prevalence of postpartum depression (score 10 and above) was 14% (42/300), in which the prevalence of major depression (13 and above) was found to be 10% (30/300) and those with minor depression (score between 10 and 12) was 4% (12/300) [Table 2]. 11% of the women who had depression were found to have the previous history of depression during their last delivery. Medical help was given to women who scored a score of 10 and above in EPDS.

The association of all demographic details with postpartum depression is not significant except age and type of family. The demographic details are as follows—age, education, occupation, the standard of living and type of family. The prevalence of depression was found to be high in mothers of age group <18 (20%) and above 30 (20%). Mothers in the nuclear family also had a high prevalence of postpartum depression (16.6%). (Table 3)

It was also found that the prevalence of PPD in women who had a girl child and the number of days they stayed in hospital after the delivery was not significant. However, there was a strong association between certain factors and PPD. Women who had a vaginal mode of delivery than caesarean section had a higher prevalence of depression and multipara

Table 1: Risk factors for post-partum depression

Socio-demographic factors	Family dynamics	Antenatal factors	Medical illness during pregnancy	Health sector related factors
Age (younger than 18) Race Educational status Low socio-economic status Social/cultural beliefs	Domestic violence Deprivation of support from family members Lack of knowledge and awareness Birth of a girl child	Unplanned pregnancy Decline of health during pregnancy Improper health care seeking behaviour	History of depression Poor maternal and postnatal health	Improper provision of and access to healthcare services Poor quality of the doctor-patient relationship

Table 2: EPDS score (n=300)

EPDS score	Prevalence
Score <10	258 (86%)
Score 10-12	12 (4%)
Score >13	30 (10%)

EPDS: Edinburgh Postpartum Depression Scale

Table 3: Demographic details and prevalence of postpartum depression

Demographic details	Total no of women	No of women with depression	Chi square	value	
Age	<18 18-30 >30	10 275 15	2 35 3	2.48	0.288
Educational qualification	Uneducated 1 to 12 th grade Higher education	20 180 100	12 25 5	41.7	0.00001
Income	Low or medium High	240 60	24 18	15.86	0.00068
Family type	Joint Nuclear	120 180	12 30	2.63	0.142

women had a higher prevalence compared to primipara. (Table 4)

Other factors which affected the depressed mothers were lack of financial and social support, type of family—nuclear and low socio-economic status. Family disharmony due to domestic violence and alcoholic partner are also some of the factors.

DISCUSSION

Among the 300 women in our study, the prevalence of postpartum depression was 14%, out of which

major depression was 10% (30/300) (that is, score 13 and above).

The findings of this study were similar to a community-based study of postpartum depression in rural southern India, where the prevalence of depression was found to be 11%. Similarly, in a place called Gadchiroli, the prevalence of major depression with signs of anxiety was 7.5%. (Chandran *et al.*, 2002)

There was a difference in the prevalence of this study as compared to other studies taken place in Mumbai (2%), Pune (23%), Bangalore (3%). This

Table 4: Delivery characteristics and prevalence of postpartum depression

Characteristics	Total no of women	No of women with depression	Chi square	P value	
Mode of delivery	Vaginal	159	37	24	0.00001
	Cesarean	1441	5		
Delivery Order	1	40	17	27.2	0.00001
	>= 2	160	25		
No of fetus	Single	290	36	18.08	0.000021
	Multiple	10	6		
Delivery outcome	Still	3	2	7.3	0.006895
	Live	297	40		
Sex of child	Male	180	12	0.14	2.64
	Female	120	30		

difference could be attributed to some factors such as 1) Data collection methods, 2) Type of lifestyle of the women, 3) Methodology.

In a study conducted in Pune, the history of depression before the last delivery was found to be 23%, but in our study, the same is found to be 11%. This could be due to the fact that depression is not considered a health problem by most people in the rural areas and also, there is a social stigma of consulting a psychiatrist; therefore, chances of it being under reported is high and hence the results.

In this study, depression associated with multiple births in women is high, although this factor is less considered in other studies. This factor can be justified by the fact that mothers with multiple births will be demanded more time and care by the babies, which is stressful. The prevalence of depression in our study was more in women who had vaginal delivery as compared to those who had a cesarean delivery. Whereas, certain studies report vice versa. And others say that there is no difference between the two. The finding in our study can be justified by the fact that women who delivered vaginally returned home earlier and had to do household chores and therefore had minimum rest, hence making them more susceptible to it.

In our study, among three women who had a still-birth, two of them were diagnosed to have depression. When interviewed, the woman who was not depressed stated that she received abundant emotional support from her family and friends and thus, it helped her overcome the death of her child. This shows the strength of family support for women who are fighting depression.

Other factors which affected the mothers were lack of financial and social support, type of family - nuclear and low socio-economic status. Family

disharmony due to domestic violence and alcoholic partner were also some of the factors. A study conducted by Patel et al. and Chandran et al. also suggests these as risk factors for depression ([Patel et al., 2002](#)).

Among the total women in the study, only 5% of them sought some medical intervention. Those who didn't seek any help stated that they did not recognize depression as a major health issue. This shows the lack of awareness about depression among the population.

Symptoms of depression improve over a period of time from pregnancy into postpartum, especially when given appropriate counselling and treatment.

Thus, taking into account all the ill effects of depression, a prompt screening should be conducted for all the antenatal women, early in pregnancy as well as in the postpartum period. Appropriate treatment should be given to those who are diagnosed with depression.

CONCLUSION

Motherhood is meant to be a joyful journey, but some women end up in a dark and discouraging place because of postpartum depression. Medical health professionals should spread awareness about PPD and enlighten the family about the importance of moral support. More studies need to be conducted to further evaluate the prevalence of PPD in India, the predisposing factors, methods for early diagnosis and ways to help women overcome "THE OTHER SIDE OF MOTHERHOOD".

Ethical Approval

The study was approved by the Institutional Ethics Committee of Saveetha Medical College and Hospital.

Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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