



## **A Cross Sectional Study on Prevalence of Postpartum Depression among Recently Delivered Women in a Tertiary Care Hospital, Chennai, India**

**V. K. Sita<sup>a\*\*</sup> and Meenakshi<sup>a†</sup>**

<sup>a</sup> *Department Obstetrics and Gynaecology, Saveetha Medical College, Chennai, Tamil Nadu, India.*

### **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

### **Article Information**

DOI: 10.9734/JPRI/2021/v33i63B35246

### **Open Peer Review History:**

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/75507>

**Original Research Article**

**Received 20 October 2021**

**Accepted 27 December 2021**

**Published 29 December 2021**

## **ABSTRACT**

**Background:** Postpartum depression is a common type of depression most people are not much aware and the most important causes being poverty, unwanted child/gender, marital disharmony and lack of family support.

**Aim:** The aim of the study was to assess the prevalence of postpartum depression among recently delivered women in a tertiary care hospital in an urban setup.

**Methodology:** It was a cross sectional type of study in urban population in a tertiary care hospital in Chennai. Data on postpartum depression was collected using Edinburgh Postnatal Depression Scale (EDPS).

**Results:** A total 165 postpartum women participated in the study. The prevalence of postpartum depression was found to be 19.23% (an EPDS score of 10 and above) and it was noted in our study that none of these women sort to any medical help.

**Conclusion:** The study shows prevalence of postpartum depression is quite high and none of those women sought appropriate medical help. All health care professionals have to be trained to raise awareness, detect and treat postpartum depression among women promptly.

<sup>#</sup> Undergraduate,

<sup>†</sup> Assistant professor,

<sup>\*</sup>Corresponding author

*Keywords: Postpartum depression; postpartum women; Edinburgh postnatal depression scale: depression.*

## 1. INTRODUCTION

Postpartum depression is the depression that occurs after childbirth, which most often goes unrecognized. It is told to be one of the most common complication of postpartum. Around 1 in 5 women are experiencing antenatal depression and antenatally depressed women have 6-fold increased risk of developing postpartum depression [1,2]. This contributes substantially to maternal mortality and morbidity and represents a considerable public health problems affecting women and their families [3]. Maternal depression results in low birth weight of infants, higher rates of underweight at 6 months of age, poor long term cognitive development, higher rates of antisocial behaviour and more frequent emotional problems among their children [4]. A few risk factors that contribute to maternal depression are marital status of mother, unplanned or unwanted pregnancy, poor relationship with partner, lack of emotional support from family and poverty, social adversity, previous history of depression or any anxiety disorders [5,6]. Maternal depression can lead to extensive long term effects on women, children and their families [7] and most cases remain undetected and unnoticed, most probably due to lack of screening. Many studies have demonstrated that detection of postpartum depression, can be improved by routine screening. This routine screening during perinatal period helps in early detection and in turn results in early intervention of postpartum depression. Even though many treatment strategies are present, many women do not get benefitted from them. It is much worse in developing countries where <5% of women tend to avail care [4].

Current study aims to study the prevalence of postpartum depression among recently delivered women in suburban population in Saveetha Medical College and Hospital in Kancheepuram district, Tamil Nadu.

## 2. METHODOLOGY

A cross sectional study was conducted among recently delivered women attending the obstetrics and gynaecology department of a tertiary care college and hospital in the urban part of Chennai, Tamil Nadu during a time period of January 2021 to June 2021. They

predominantly belonging to the age groups from 18 to 40 years. The sample size was calculated based on a study done by Shriram et al [8] in a rural population in southern India, the minimum expected prevalence as 11% of women experiencing postpartum depression and 5% allowable error, using the formula  $4pq/d^2$ , the sample size was calculated as 156. All women who attended the outpatient department of obstetrics and gynaecology in the tertiary care hospital in Chennai who had a pregnancy outcome from January 2021 to May 2021 and completed 42 days since the last delivery but <6 months of delivery included in this study.

The questionnaire had 2 parts: part 1 - Pre tested and structural questionnaire consisting their socio demographic details (age, sex, type of family, family income, total family members, parity status, area of incidence, place of stay) part 2- screening on postpartum depression were collected using Edinburgh Postnatal Depression Scale (EPDS). The EPDS was translated in native language and explained by the data collector. It consists of 10 questions, each scoring from 0 to 3, with a maximum score of 30. A score of 10 -12 indicates moderate depression and 13 and more, clinically relevant depression, which requires intervention. In this study women who had a score of more than 13 were enquired what symptoms they predominantly felt and whether symptoms persisted for 7 consecutive days or more and if it persisted, they were asked whether they sought medical help. These women were also enquired about the factors contributing to their depression.

The data entry was done in Microsoft excel sheet, and data was analysed by using SPSS software version 22. Frequencies and percentages were calculated. Chi square test was done to find association.

## 3. RESULTS

156 eligible postpartum women were selected for this study and all of them was interviewed after obtaining a written informed consent in their native language. Majority of these women belonged to the age group of 20-30 years (87.8%) and most of them were following Hindureligion (80.0%) and it was observed that most of them belonged to nuclear families (61.5%).

**Table 1. Shows EPDS score of women**

EPDS Score	Frequency (%)
1-9	126 (80%)
10-12	8 (5%)
13 and above	22 (14%)

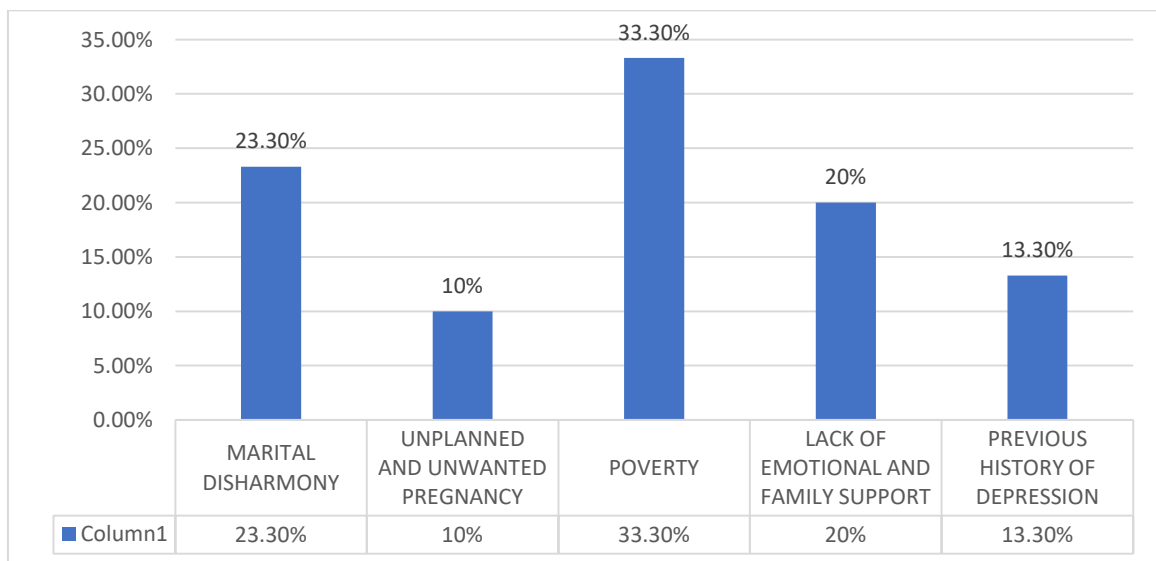
The prevalence of depression (score of 10 and above) was found to be 30(19.23%). In that woman facing major depression and requires

medical help was 22(14.10%). Amongst the women who got a score of 10 and above gave a previous history of depression or any of anxiety disorders.

From the table it can be observed that educational qualification, socio economic class and parity showed a statistically significant relationship with occurrence of depression

**Table 2. Associations of postpartum depression with demographic details**

Demography Details	Total Women	Women with Postpartum Depression (%)	P<0.05
Age			
<20	3	0 (0%)	0.234
20-30	137	22(73.33%)	
>31	16	8(26.66%)	
Educational Status			
Illiterate	5	3(10%)	0.001
Primary Education	20	6(20%)	
Secondary Education	127	20(66.6%)	
Higher Education	4	1(3.3%)	
Family Type			
Joint	60	8(26.6%)	0.136
Nuclear	96	22(73.33%)	
Socioeconomic Class			
Low	60	10(33.33%)	0.001
Middle	92	19(63.3%)	
Upper	4	1(3.3%)	
Parity			
Primi Gravida	70	12(40%)	0.004
Multi Gravida	86	18(60%)	



**Fig. 1. shows factors that are considered to be causes of depression by women. In a suburban setup, it is very obvious from the figure that poverty is one of the major factors attributed for women to feel depressed. Another major reason noted was marital disharmony, domestic violence and lack of any kind of family support towards women**

In spite of this high incidence of women reporting symptoms of depression, it was quite alarming to notice that none of these women ever sought any professional help.

#### **4. DISCUSSION**

In this cross sectional study conducted among 156 postpartum women in a suburban area in Chennai, Tamil Nadu, the prevalence of depression was found to be 19.23% and among them 14.70% of women had major depression which required medical attention.

The study findings were found to be similar to a community-based study that was conducted in rural area of Jharkhand, Orissa and Tamil Nadu [8,9]. The prevalence of major depression is almost similar to that to a study in Gadchiroli, where severe anxiety and depression was present in 7.4% of women [9]. The prevalence of depression in this study was different from that of results found in studies conducted in South Karnataka (2.3%), Delhi (6.0%), Goa (23.0%) and other countries like Australia (16.9%) [9-16]. This difference may be due to difference in methodology of this study and various differences in socio cultural environment of women.

It was observed in our study postpartum depression was more prevalent among multiparous women even though no study has yet explored it as a risk factor for depression. Further studies are required to have strong evidence on same Poverty, lack of emotional and family support, unwanted pregnancy, unwanted gender especially girl child, marital disharmony, physical abuse and domestic violence were some of the major risk factors that contributed to depression among women. These factors were similar to that of results attained in a study conducted by Patel et al, Chandran et al, meta-analysis by Beck and Tatamo [6,10,11,17,18].

During our entire study we could notice that none of these women including those who suffered from major depression ever sought any kinds of medical help for the same at all, and it might be due to the social stigma, or never perceiving it as a health problem. It might be due to the low awareness levels among women. In our study all the women who had a score of 10 and above were sent for medical counselling and help.

According to a study conducted by Bowen et al, symptoms of depression progress over the entire

course of pregnancy [19]. Hence a thorough screening of depression should be done all over starting from antenatal period.

#### **5. CONCLUSION**

In our study we noted there was a high prevalence of postpartum depression among women and none of those women availed for proper medical help. Regular awareness camps on postpartum depression can be conducted for women attending the outpatient department. The women need to be aware of various symptoms of postpartum depression and taught how to differentiate from baby blues as negligence of symptoms is one of major cause of lack of seeking medical help. All health professionals need to be trained to raise awareness, detect and treat depression promptly.

#### **CONSENT**

Only those women who did not give consent for the study were excluded from the study. All the women were interviewed in the outpatient department after obtaining written informed consent in native language of Tamil.

#### **ETHICAL CLEARANCE**

The study was approved by the institutional ethics committee of Saveetha Medical College, Chennai, Tamil Nadu.

#### **ACKNOWLEDGEMENT**

The authors are grateful to the Obstetrics and Gynaecology Department of tertiary care medical college and hospital for providing the opportunity to conduct the study

#### **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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