



## **Prevalence of Postpartum Depression among Mothers in the Rural Area of Gurugram, Haryana, India: A Cross -Sectional Survey**

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### **ABSTRACT**

*Postpartum Depression (PPD) is a significant public health problem with prevailing of depressive symptoms seen in the postpartum period and has severe consequences on the wellbeing of mothers, newborn and families. Purpose of the present study is designed to find the prevalence of postpartum depression among mothers of rural areas in Gurugram. Survey with total of 211 postpartum mothers were enrolled in the study. To find out the desired result the Edinburgh postpartum depression scale (EPDS) was administered through questionnaire method. 84.76% prevalence rate was found to be the rate of postpartum depression which indicates the increased risk of depression disorders and more extensive clinical assessment and setting up of supporting groups in the rural areas of the Gurugram, Haryana. From the present study it is concluded that the prevalence of postpartum depression was found to be high in mothers. Nuclear family, Child illness, known cause of medical illness or any complication observed in the pregnancy could predict the high risk of depression in post-partum period.*

**Keywords-** Postpartum, depression, symptoms, EPDS.

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### **INTRODUCTION**

Mental health is an important aspect of overall well-being. Depression is a major public health problem that causes significant morbidity and disability worldwide. Its impact on rural women, particularly those in the reproductive age range, is underappreciated and affecting almost one out of every ten patients seen in primary care settings [1]. It is believed that the development of mental issues is more likely to occur during pregnancy and immediately following childbirth. Postpartum depression is among the most prevalent psychopathologies throughout these phases (PPD). It is a maternal condition that significantly affects the mother, her child, and her family [2]. PPD refers to non-psychotic depressive episodes that occur in women between four and six weeks after giving birth and are characterised by a loss of interest, insomnia, and lack of energy. [3, 4] According to a WHO survey, around 25-85% of women experience postpartum depression, with 7-17% developing severe depression. [5]. It is estimated that 100 to 150 women out of every 1000 births worldwide are affected.[6] The delivery of a girl child and the associated societal stigma can lead to depression in moms in some situations. Women who delivered after unplanned pregnancies, mothers' socioeconomic position being a major contributing factor. However, due to inherent gender bias, such as a husband's or life-reluctance partner's in child care, roughly 12.6 percent of women in the higher strata of society also suffered from PPD. [7] The statistics show that Asian women are more likely than North American women to experience depression during pregnancy. PPD appears to have a multi-factorial aetiology, with risk variables from demographics, economics, psychology, obstetrics, and medicine all contributing. Specific risk factors in low- and middle-income countries such as India, Pakistan, and Turkey include the birth of a girl child, the protective effect of cultural rituals, financial uncertainty, marital violence, and a lack of social support. [3]. Postpartum depression can have an impact on the mother-infant bond as well as the child's growth and development. Children of depressed mothers have more cognitive, behavioural, and interpersonal issues than children

of non-depressed mothers. Children of moms with postpartum depression are more likely to be underweight and stunted as per a meta-analysis done in underdeveloped nations. Additionally, moms who are depressed are less likely to nurse their kids and get the right medical attention. According to a longitudinal study carried out in low and middle-income nations poor psychological outcomes in children up to 10 years have been linked to parental postpartum depression. Despite the fact that postpartum depression is a severe medical concern for many women, it is commonly misdiagnosed and thus ignored [8]. Thus, the present study aimed to document the prevalence of postpartum depression among mothers of rural area of Gurugram, Haryana.

## **MATREIAL AND METHODS**

The current study used a cross-sectional survey design. The research was conducted at the SGT Hospital and Research Center in Gurugram, Haryana, as well as in Gurugram's rural districts. The study population included postpartum women over the age of 18 living in rural Gurugram, Haryana, who were in the postpartum period (2-6 weeks) following delivery and only lived in Haryana. Sampling design- Purposive Sampling Technique was used. A Total of 211 postpartum women were surveyed around the rural areas of Gurugram, Haryana. Duration of the study-The study lasted 6 months, beginning in June 2021 and ending in November 2021. Attribute Variables-Demographic variables - Age, Type of delivery, Number of deliveries and socioeconomic status was used as attribute variables in this study. Inclusion Criteria-consists of postpartum women over the age of 18, 2-6 weeks postpartum period Ability to understand the questionnaire language, consent to participate in the study Postpartum women who have lived in the study area for more than a year. Exclusion Criteria-includes women with psychiatric disorder and Uncooperative behaviour of women. Women with previous history of depression. Data Collection method- Survey Method through Questionnaire (Edinburgh Postnatal Depression Scale) was opted.

## **PROCEDURE**

The current survey was conducted in Gurugram's rural areas over a 6-month period, from October 2020 to March 2021. The institutional ethics committee granted ethical approval for this study. The study's target population, consisting of 211 postpartum women aged 18 or older who had given birth during the previous two to six weeks, lived in a rural area of Gurgaon, Haryana, and were willing to participate in the study, was also included. The study's objectives and intent were thoroughly explained to the participants. To collect information from postnatal women, a semi-structured questionnaire written in the local language was used. The questionnaire contained questions on age, socioeconomic status, type of delivery, number of deliveries, neonatal and postnatal factors, psychosocial factors were obtained through Google forms. Edinburgh Postnatal depression Scale was used as a outcome measure for data collection to identify participants with post-partum depression. The Edinburgh Post Depression Scale (EPDS) was used to screen participants in outpatient settings, home visits, and at 6-8 weeks postpartum depression.

## **Edinburgh postnatal depression Scale**

The Edinburgh Postpartum Depression Scale (EPDS) has been found to be a useful and reliable tool for identifying women who may be suffering from postpartum depression. The EPDS is easy to use with simple language, which is understandable by the participants, comprising of 10 questions and has emerged as an effective screening tool. Selecting the response that most accurately reflected their feelings during the past seven days was required of the participants. The scoring system consists of maximum score of 30 and each answer by the participant is given a score from 0 to 3. A score of 10 or more suggests possible depression. The clinical judgement should not be overlapping with the EPDS score. A complete assessment should be carried out by the concerned specialist to confirm the diagnosis [9].

**Collection of data:** Data was collected by hospital visits and by home visits, using an interviewer-administered questionnaire prepared on google forms. The participants were made to understand the questions in the local language if they failed to understand the language of the questionnaire. To avoid the biasness the participants were asked questions wherein they were encouraged to answer without any assistance from the family members. The confidentiality of the participants was maintained.

## **Data Analysis**

The SPSS statistical package version 20.0 for Windows 7 was used to analyse the data. The analysis for demographic characteristics was done in frequency and percentage.

## RESULTS

### Descriptive statistics

**Table 1: Socio demographic characteristics (N=210)**

Variable		N	%
Age	21-25	67	31.90
	26-30	77	36.67
	31-35	38	18.09
	36-40	23	10.95
	>40	5	2.39
Occupation	Housewife	121	57.61
	Service	89	42.39
Type of family	Joint	118	56.20
	Nuclear	92	43.80
Residence	Rural	123	58.58
	Urban	87	41.42

Table:1 shows that 210 postpartum mothers were evaluated for postpartum depression, according to the study. As a result, the response rate was 100%.

**Table 2: Frequency and frequency percentage of delivery related characteristics of the participants (N=210)**

Variable		N	%
Parity	1 child	79	37.61
	2 child	62	29.53
	>2 child	69	32.86
Type of delivery	Normal vaginal delivery	114	54.28
	Cesarean section	96	45.72
Complications during pregnancy or delivery	Yes	07	3.33
	No	203	96.67
Infant illness after delivery	Yes	21	10
	No	189	90

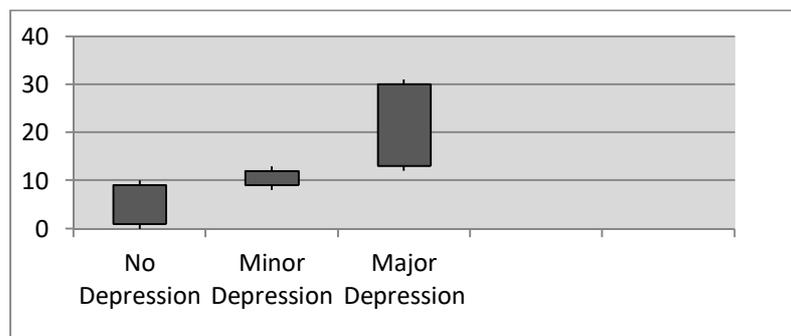
Table 2 shows that the most of participants was 1 child (37.61%). Majority of mothers were gave birth by normal vaginal (54.28%) and 45.72% through C- section. 3.33% mothers were experienced complications during their pregnancy. Any type of infant illness after delivery was reported by 10% mothers.

### Inferential statistics

**Table 3: Edinburgh Postnatal Depression Scale (EPDS) total score for subjects included in the study ( N= 210).**

EPDS Score	N	%
<9	19	9.04
9-12	13	6.20
≥ 13	178	84.76

Table 3 data shows that 19 (9.04%) women with normal EPDS score i.e., less than 9 but an EPDS score between 9 and 12 among 13 (6.20%) mothers suggested minor depression. Furthermore, 178 (84.76%) mothers have equal to or more than 13 score indicated the increased risk for development of major depression disorder which requires detail clinical assessment and follow up along with support group therapy.



**Figure 1: Edinburgh Postnatal Depression Scale (EPDS) total score for subjects included in the study**

Total 210 postpartum females of Haryana with age group more than 18 years and in the postpartum period of 2-6 weeks were included in our study. The mean age of the participated females was 28.85±5.2; with minimum 21 years and maximum 46 years, respectively. Most of the participants were homemaker (57.61%) and lived in joint family (56.20%). Most (58.58%) of the study participants were from rural settings only 41.42 % were from urban population. 37.61% females have 1 child previously. Majority of mothers were gave birth by normal vaginal (54.28%) and 45.72% through C- section. 3.33% females reported that they experienced complications during their delivery. Any type of infant illness after delivery was reported by 10% mothers. The EDPS score of 178 study participants was  $\geq 13$  and the prevalence of PND was 178 (84.76%) indicated increased risk for major depressive disorder requiring clinical assessment or follow up.

## DISCUSSION

The current study was conducted among postpartum females of the rural area of Gurugram, Haryana; the prevalence of PPD was found to be 84.76% which was very high with EDPS score of  $\geq 13$ . A study conducted by K. Mishra et al. in urban slum of Bhubaneswar reported a prevalence of 8.57%.<sup>[2]</sup> Another study conducted among women conducted in urban slums of Dharwad reported a prevalence of 7.7% [10]. These differences in prevalence can be because in present study most of the population is from rural areas which 58.58% , whereas others were urban based studies. A study conducted in a health training centre of rural bangalore showed 11.47% PPD prevalence by using EPDS Scale [11]. These finding are supported by another prospective chorot study which was conducted on 200 pregnant women of chhainsa Haryana in their third trimester and after follow up to 6 weeks of postpartum period they found that 12% of PPD prevalence was present after using EPDS scale [5]. A study of 102 postpartum women conducted in Mandya which is a tertiary care hospital in rural area of Karnataka revealed a prevalence of PPD of 31.4%. [3]. The prevalence rate was higher in the present study when compared with other studies. The higher rate might be due to occupation, type of family, illness of infant after delivery and complication during and after delivery etc. Many other studies found that the sex of the newborn, mode of delivery, unplanned pregnancy, high risk pregnancy, being unhappy with in-laws, low family income, low educational status, mood swings, and low mood during pregnancy were risk factors for PPD [8]. According to a study, gender-specific characteristics play a significant role in predicting postpartum depression. 1/3<sup>rd</sup> of women or more than that in this country reported that they are beaten by their husbands, making violence against women a serious public health concern [12]. Postpartum depression has been linked to violence against women on a regular basis. Given the deep-seated preference for male offspring in Indian society, some women may find pregnancy to be a stressful time due to gender stereotyping and the meagre control they have over their reproductive health. As a result, women who already have a girl kid experience more stress as a result of their desire for their unborn child to be a boy. The likelihood of the child developing depression is higher if she is a girl.

## CONCLUSION

In the current study, the prevalence of PPD was 84.76%, which is extremely high. Pregnancy complications, poverty, female childbirth, and pre-existing medical conditions may all indicate an increased risk of PPD. It is past time for health policymakers to take the necessary steps to include a mental health component in reproductive and child health programmes. Health professionals and workers must be trained to recognise and treat depression in postpartum women as soon as possible.

## LIMITATIONS

- Only rural areas were considered in the present study.
- EDPS is a screening tool for ruling out post-partum depression but not confirmatory.

## CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest. The research received no specific grant from any funding agency in the public, community, or non-for profit sectors.

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