

## **Research Article**

### **Exploratory study to analyze the relationship of socio demographic parameters with postpartum depression in females at Tertiary care centre**

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**Abstract:** It is an exploratory study to analyze the relationship of socio demographic parameters with depressive features in postpartum females. The study included 100 females who had live birth. The depression score was collected using HAM-D scale on the 30<sup>th</sup> day of delivery. Results show 18% of females suffering from postpartum depression and multiple socio demographic parameters affecting the mental health of the mothers. From the result, we gain insight in the factors which might be responsible for postpartum depression in females.

**Keywords:** Socio demographic parameters, post partum depression

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#### **INTRODUCTION**

Pregnancy is a major life event of every adult female. A pregnant female passes through many changes in the body including physical, biological, hormonal as well as psychological. So overall pregnancy, child birth and entering into motherhood become very stressful event for a female and during this process they need much family support. Birth of a child is considered a moment of joy for any female but while passing through such changes some women may suffer from depression.

Symptoms and criteria to diagnose postpartum depression are similar to that of major depressive episode. In DSM-5[1], criteria for major depression includes at least 2 weeks period of sad mood, or reduced interest in all activities and 4 symptoms out of the following – changes of weight, sleep, psychomotor activity, feelings of guilt, worthlessness, forgetfulness, difficulty in making decisions, lethargy and recurrent suicidal ideas, thoughts or attempts.

Many of the epidemiological studies consider postpartum depression occurring within 6-12 weeks of postpartum period [2]. Researches carried out in India reports the prevalence rate of postpartum depression 5-23 % [4-10]. One study reported the prevalence rate of postpartum depression to be 12.5 % in Gujarat [7].

Researches carried out report many different risk factors that can predispose women towards the

development of depression in post partum period. They are socio demographic factors like age of mother[ 3, 12], socio economic status [15, 16, 18, 19, 20], area of residence [3], level of education [12], employment [12], obstetric factors like planning of pregnancy [8], mode of delivery[8, 10],gender of infant [5], and parity [22].

#### **OBJECTIVE**

The objective of the study is to analyze the relationship of socio demographic parameters with postpartum depression in females at the end of 1<sup>st</sup> month of delivery in a tertiary centre at Surendra nagar.

#### **METHODOLOGY**

The current study was conducted at C.U. Shah medical college, Surendra nagar. Women attending gynecology dept. during their postpartum period after 1 month of the delivery were included in the study. After obtaining written informed consent their socio demographic and obstetric details were collected. HAM-D scale was used to detect presence of depression.

#### **Hamilton Rating Scale for Depression [23] (HAM-D):**

HAM-D is a clinician rating scale for rating the severity of depression. HAM – D provides an indication for depression and over time, guide to recovery. It is one of the most commonly used and accepted outcome measures for evaluating the severity of depression symptoms. The HAM – D was designed

to be administered by a trained professional using a semi-structured interview. Even though Hamilton provides no specific guideline for the administration and scoring of the scale or any standardized questions for eliciting information from the patients, high inter-rater reliability has been observed<sup>24</sup>. It takes about 20-

30 minutes to complete the interview and score the results. Ten items are scored on a 5 point scale ranging from 0 = not present to 4 = severe. Two items are scored from 0-3, and nine items are scored from 0-2. Sum the total to arrive at a conclusion.

**RESULTS**

**Table-1**

	Depressed n=frequency (%)	Not Depressed n=frequency (%)	Total n=frequency (%)
<b>Age (in years)</b>			
≤ 20	0 (0)	11 (13.42)	11 (11)
21-30	15 (83.3)	64 (78.05)	79 (79)
31-40	3 (16.7)	7 (8.53)	10 (10)
Total	18 (18)	82 (82)	100 (100)
<b>Education</b>			
Illiterate	5 (27.78)	29 (35.36)	34 (34)
Educated	13 (72.22)	53 (64.64)	66 (66)
Total	18 (18)	82 (82)	100 (100)
<b>Occupation</b>			
Working	3 (16.7)	15 (18.29)	18 (18)
Housewife	15 (83.3)	67 (81.71)	82 (82)
Total	18 (18)	82 (82)	100 (100)
<b>Area of residence</b>			
Urban	4 (22.2)	23 (28.05)	27 (27)
Rural	14 (77.8)	59 (71.95)	73 (73)
Total	18 (18)	82 (82)	100 (100)
<b>Gender of new born</b>			
Male	3 (16.7)	42 (51.21)	45 (45)
Female	15 (83.3)	40 (48.79)	55 (55)
Total	18 (18)	82 (82)	100 (100)
<b>Parity</b>			
Primipara	2 (11.1)	51 (62.19)	53 (53)
Multipara	16 (88.9)	31 (37.81)	47 (47)
Total	18 (18)	82 (82)	100 (100)
<b>Planning about pregnancy</b>			
Planned	8 (44.4)	16 (19.51)	24 (24)
Unplanned	10 (55.6)	66 (80.49)	76 (76)
Total	18 (18)	82 (82)	100 (100)
<b>Mode of delivery</b>			
LSCS	7 (38.9)	32 (39.02)	39 (39)
Vaginal delivery	11 (61.1)	50 (60.98)	61 (61)
Total	18 (18)	82 (82)	100 (100)
<b>Socio economic status</b>			
Upper class	0 (0)	6 (7.32)	6 (6)
Middle class	8 (44.4)	47 (67.07)	55 (55)
Lower class	10 (55.6)	29 (25.61)	39 (39)
Total	18 (18)	82 (82)	100 (100)

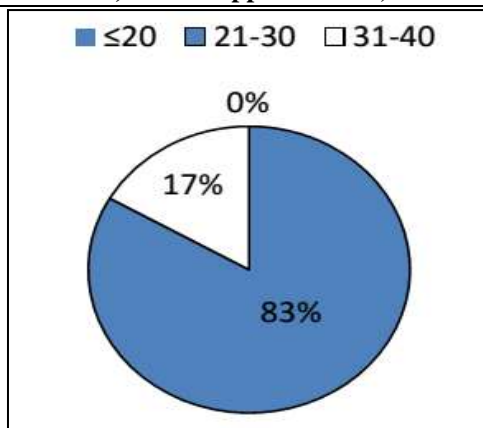


Fig-1: Percentage of females having PPD and its relationship with Age of Mother

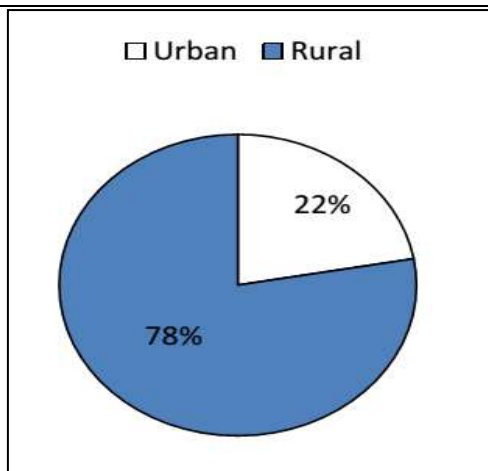


Fig- 4: Percentage of females having PPD and its relationship with Residence of Mother

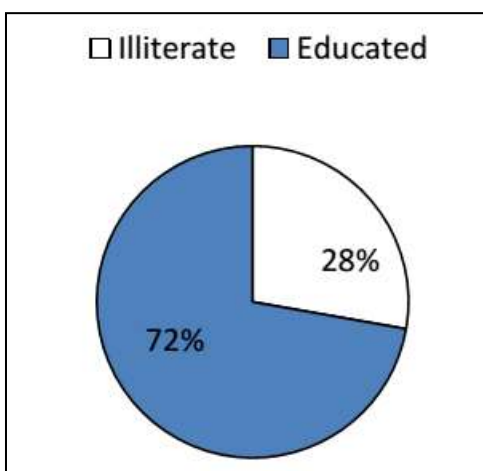


Fig- 2: Percentage of females having PPD and its relationship with Education of Mother

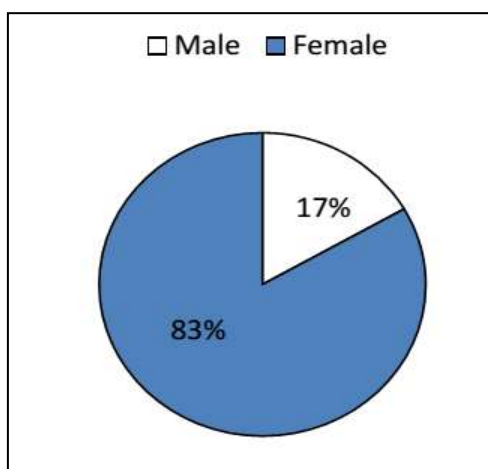


Fig- 5: Percentage of females having PPD and its relationship with Gender of new born

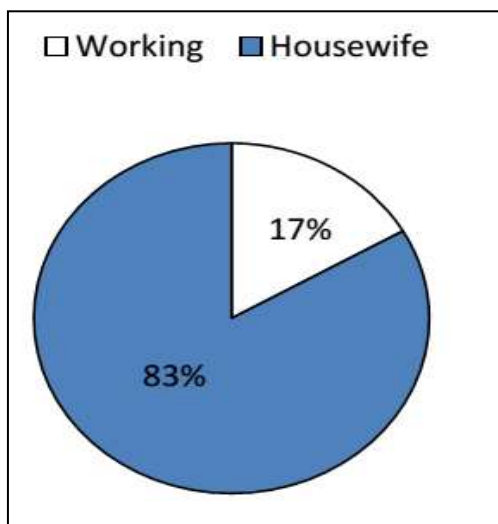


Fig- 3: Percentage of females having PPD and its relationship with Occupation of Mother

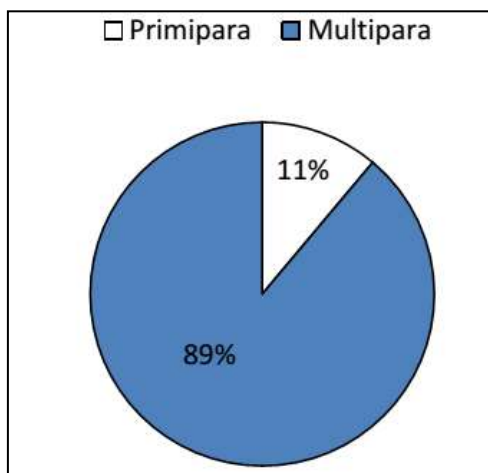
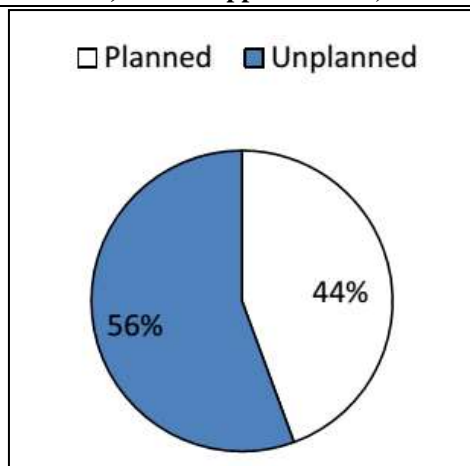
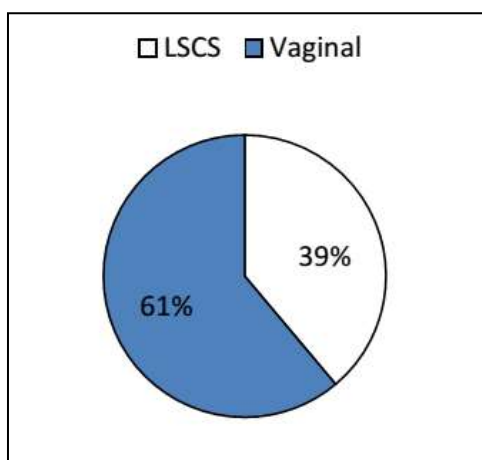


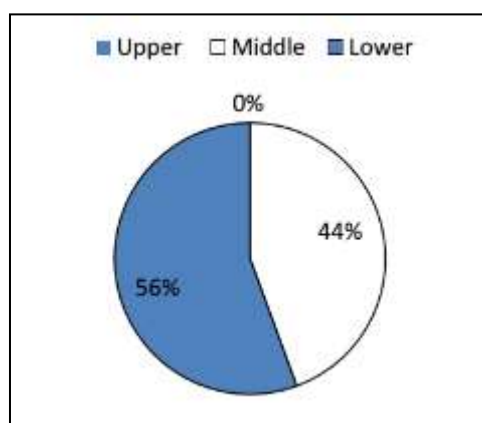
Fig- 6: Percentage of females having PPD and its relationship with Parity



**Fig- 7: Percentage of females having PPD and its relationship with Planning of pregnancy**



**Fig- 8: Percentage of females having PPD and its relationship with Mode of Delivery**



**Fig- 9: Percentage of females having PPD and its relationship with Socioeconomic Status**

## DISCUSSION

Out of the 100 subjects in study, 18 females (18%) were found to be having postpartum depression. In those 18 subjects, we evaluated for the factors which might suggest the probable causes for PPD. 83.3% women from depressed group from the age group 21-30 years showed higher score in HAM-D (Table 1, Figure

1). This corroborates with the previous studies [3, 11, 12]. In relation to education of mother, women who were educated seemed to be more depressed than the women who were illiterate as they constituted 72.22% of the total depressed women (Table 1, Figure 2). This contrasted from the previous studies [12, 17- 20]. We observed that those women who were housewives were more depressed than those who were working and constituted 83.3% of the total depressed women (Table 1, Figure 3). This corroborates with the previous studies [12, 14, 16, 18-20]. Women hailing from rural area were found to be more depressed than females living in urban areas and constituted 77.8% of the total depressed women (Table 1, Figure 4). This corroborates with the previous study<sup>3</sup>. Women who delivered a female child were found to be more depressed than the females who delivered a male child and constituted 83.3% of the total depressed women (Table 1, Figure 5). These results are similar to those of previous studies [5, 7-10].

Also, it was observed that multiparous mothers were more depressed than primipara mothers and constituted 88.9% of the total depressed females (Table 1, Figure 6). This corroborates with previous studies [6, 7, 13]. There was no much difference found in depression in females in context to planning of pregnancy (Table 1, Figure 7). Those females who delivered via LSCS suffered depression more than those who delivered by vaginal route and constituted 61.1% of the total depressed females (Table 1, Figure 8). These results are similar to those of previous studies [18, 21]. There was no much difference found in depression in females in context to socioeconomic status of the mother (Table 1, Figure 9).

## CONCLUSION

More depressive features were noted in women of age group 21-30 years, those who were educated; those were housewives, living in rural areas, who delivered a female child. Females who were multiparous and delivered by LSCS were found more depressed. The limiting factor for present study was its smaller sample size. There was no conflict of interest in the present study.

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