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FREQUENCY AND DETERMINANTS OF POSTPARTUM DEPRESSION.

Muhammad Umar Ghafoor[1], Rabia Arshed Usmani[2], Zaidan Idrees Choudhary[3], Shahbaz Ahmad[4], Aftab Nazir[5], Faiza Irshad[6]

1. MBBS, M.Phil
Assistant Professor Community Medicine
Independent Medical College, Faisalabad.
2. MBBS, DMCH, DGO, FCPS
HOD Community Medicine
Independent Medical College, Faisalabad.
3. MBBS, MD, FCPS
Assistant Professor, Psychiatry department
HBS Medical College, Islamabad.
4. MBBS, MPH, MCPS
Associate Professor Community Medicine
Independent Medical College, Faisalabad.
5. MBBS, MPH
Assistant Professor
Department of Community Medicine
Independent Medical College, Faisalabad.
6. MBBS, FCPS
Consultant Gynaecologist

Correspondence Address:
Dr. Muhammad Umar Ghafoor
Department of Community Medicine
IMC, Faisalabad.
omarghafoor@live.com

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ABSTRACT… Objectives: This study was designed to evaluate the frequency of postpartum depression in new mothers at a tertiary care hospital in Faisalabad and identify the factors associated with the condition. **Study Design:** Cross-sectional study. **Setting:** Department of Community Medicine at Independent University Hospital, Faisalabad. **Period:** Over a period of three months from February 2018 to May 2018. **Material & Methods:** Included 213 subjects selected through nonprobability purposive sampling patients who had given birth in the last six months were included in the study. The Punjabi version of Edinburgh Postnatal Depression Scale was used to assess for depression. Socio-demographic and medical information was collected on a pre-designed proforma. Data was analyzed using SPSS version 23. Chi square test was applied to ascertain association. **Results:** Out of the total 213 participants, 33.8% (n=72) of the study sample were suffering from postnatal depression. The socio-demographic profile of the depressed patients showed that most of them were uneducated (84.72%), housewives (77.78%) living with extended families (68.06%). The difference in the number of depressed women among extended and nuclear families was found to be statistically significant (p-value of 0.004). The study also showed that women suffering from postpartum depression were less likely to breastfeed their babies (p-value 0.046). **Conclusion:** Postpartum depression was identified in more than one thirds of the females included in this study. This high number should raise an alarm for all health professionals. Detection through mandatory screening and early intervention can prevent the adverse consequences this disorder carries for the mother and the child.

Key words: Postpartum Depression.

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INTRODUCTION

Pregnancy and childbirth are a time of significant physical and emotional stress for females. A transient period of low mood and emotional instability is experienced by many new mothers, but 10-15% of females experience more severe psychological disturbances. These include constant low mood, feelings of worthlessness and hopelessness, sleep and appetite disturbances and an inability to take care of the newborn.[1] This psychiatric condition, known as postpartum depression (PPD) leads to marked impairment in functioning and mother-child bonding.[2] Studies from western countries quote figures of postpartum depression as 100-150/1000 live births but there is emerging evidence that PPD is more common in low and middle income countries.[2,3]

Postpartum depression presents significant problems for both the mother and the child. Studies suggest that postpartum depression leads to a greater chance of severe psychiatric disorders in females such as psychosis while increasing the risk of suicide and infanticide.[4] On the other hand, children of mothers with postpartum depression have greater cognitive, behavioral and interpersonal problems compared with the children of non-depressed mothers.[5] A meta-analysis in developing countries showed that the children of mothers with postpartum depression are also at greater risk of being underweight and stunted.[6]

Many biological, psychological and social factors have been implicated as risk factors for postpartum depression[7] however these studies

have been predominantly conducted in western societies with their starkly different social and cultural landscapes. There remains a shortage of data from Pakistan which may help to identify the risk factors for postnatal depression in our settings and lead to early intervention and treatment.

The objective of this study was to determine the frequency of postpartum depression among new mothers presenting to the outpatient clinic of a tertiary care hospital and to highlight the associated socio-demographic, obstetric and psychological factors for postnatal depression.

MATERIAL & METHODS

This descriptive cross-sectional study was conducted at the community medicine department of Independent University Hospital, Faisalabad from February 2018 to May 2018.

Patients presenting to the OB/GYN outpatient department of the Independent University Hospital who had given birth in the last six months were approached for the study.

Non- probability purposive sampling was used to recruit 213 subjects to the study. The sample size was calculated by Raosoft sample size calculator with 95% confidence level and 5% margin of error.

Permission was obtained from administration of Independent University Hospital. The patients were informed about the aims and structure of the study. Written informed consent was taken from all patients willing to participate in the project. The socio-demographic, obstetric and newborn variables were collected on a custom designed questionnaire administered by the interviewer. A pre-validated, Punjabi translation of Edinburgh Postnatal Depression Scale (EPDS) was used to diagnose postpartum depression. A score of 10 or higher on the EPDS was considered significant.

Data was analyzed using the software, Statistical Package for Social Sciences (SPSS), version 23. Descriptive statistics such as mean, standard deviation, frequency and percentage were applied to the socio-demographic, medical and obstetric variables. Chi-square test was applied to ascertain association with a p-value <0.05 considered to be significant.

RESULTS

Out of the total 213 participants, 33.8% (n=72) were found to be suffering from postpartum depression based on the EPDS score (Figure-1). The mean age of the sample was 28.03 years with a standard deviation of 3.96 and an age range of 19-39 years. A significant majority (86%) of the participants were uneducated (n=185) and 75% (n=160) were housewives.

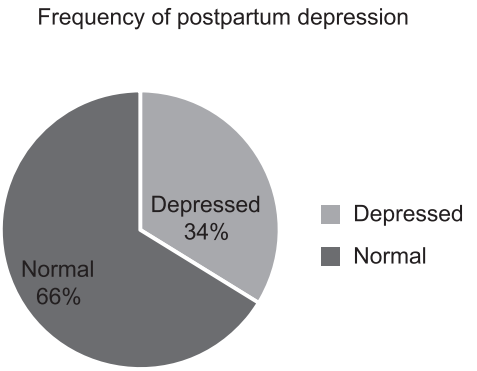

Figure-1. Pie chart showing prevalence of depression in the sample based on EPDS score

Out of the total 213, 55% (n=118) of the participants had delivered through normal vaginal route while 13% (n=28) of the total babies had been born with congenital defects. Household income of 76 % (n=166) of the participants was less than Rs.50, 000/- per month. The gender of the babies was evenly divided with 100 females and 113 males. 53.9% (n=115) of the mothers included in the study lived with extended families. Another finding was that the depressed mothers were not breastfeeding their newborns as much as the non-depressed mothers (p-value 0.046) (Figure-2).

The depressed and non-depressed subjects were compared on study variables and Table-I and Table-II summarize the results.

Subjects	Level of Education	Occupation	Family Structure	Monthly Income
Depressed	**Educated:** 11 (15.27 %) **Uneducated:** 61 (84.72%)	**Housewife:** 56 (77.77%) **Working:** 16 (22.23%)	**Nuclear:** 23 (31.94%) **Extended:** 49 (68.06%)	**<50,000:** 59 (81.94%) **>50,000:** 13 (18.06%)
Non-depressed	**Educated:** 17 (12.06%) **Uneducated:** 124 (87.94%)	**Housewife:** 104 (73.75%) **Working:** 37 (26.25%)	**Nuclear:** 75 (53.19%) **Extended:** 66 (46.81%)	**<50,000:** 107 (75.88%) **>50,000:** 34 (24.12%)
	p-value = 0.525	p-value = 0.616	p-value = 0.004	p-value = 0.383

Table-I. Comparison of socio-demographic variables among depressed and non-depressed

Subjects	Mode of Delivery	Gestation Period	Gender of Child	Birth Defects
Depressed	**NVD:** 36 (50%) **C-section:** 36 (50%)	**Term:** 59 (81.94%) **Pre-term:** 13 (18.06%)	**Male:** 44 (61.11%) **Female:** 28 (38.89%)	**Present:** 11 (15.27%) **None:** 61 (84.72%)
Non-depressed	**NVD:** 82 (58.15%) **C-section:** 59 (41.85%)	**Term: 27** (19.14%) **Pre-term: 114** (80.86%)	**Male:** 69 (48.93%) **Female:** 72 (51.07%)	**Present:** 17 (12.05%) **None:** 124 (87.95%)
	P-value = 0.308	p-value = 1.00	p-value = 0.111	p-value = 0.525

Table-II. Comparison of obstetric variables among depressed and non-depressed

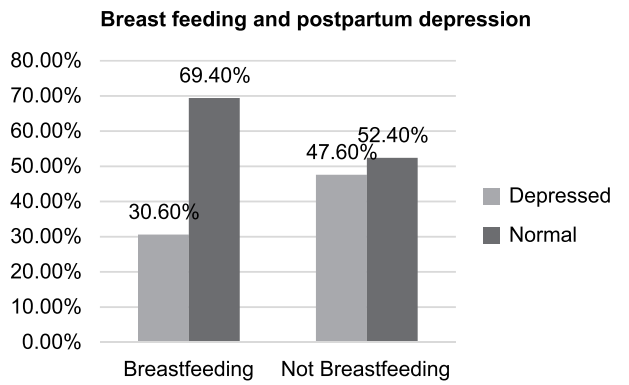

Figure-2. Bar chart showing comparison of the frequencies of breast feeding in the depressed and non-depressed patients. (p-value: 0.046)

DISCUSSION

The study looked at the prevalence of postpartum depression in females and tried to identify associated factors which may predispose or perpetuate the disorder. Out of the total 213 participants, 33.8% (n=72) were found to be suffering from postpartum depression. Studies conducted by Muneer et al in Rawalpindi and Afridi et al in Peshawar showed similar prevalence of postpartum depression.[8,9] This is in contrast to the studies done in the developed countries where this number is much smaller.[10,11] This may be attributed to poor antenatal care services, lack of psychological interventions, socioeconomic adversity and worsening geopolitical situation of our country.[12] A preponderance of the depressed patients was seen to be uneducated housewives with a monthly household income of less than Rs.50, 000. Majority of the depressed women lived in extended families (Table-I) and the difference in the frequency of the two groups was found to be statistically significant. The literature on this issue is divided; one study from USA showed that women living in extended families benefited from greater social support[13], while studies conducted in our region propose that living with in-laws served may be more stressful, predisposing patients to psychological problems after delivery.[14] A comparison of the obstetric and medical variables of the depressed and non-depressed patients of the sample is given in Table-II. Although numerical differences between the two groups are evident, we were unable to ascertain any statistically significant association between mode of delivery, term of gestation and gender of

child to postpartum depression although previous literature does show this association.[15,16] Figure-2 shows the bar chart comparing depressed and non-depressed females on breastfeeding. The study showed that females who were depressed were less likely to breast feed their babies. Other studies have also reported early breastfeeding cessation in mothers who are depressed. It has also been hypothesized that breastfeeding may help to reduce postpartum depression in susceptible females.[17,18]

One of the limitations of hospital-based studies such as this one is that it may not be representative of the general population. Additionally, certain variables like years of marriage, previous off springs and quality of marital relationship were not investigated.

CONCLUSION

A high number of females were found to be suffering from postpartum depression in our study. Postpartum depression needs attention in terms of screening, early intervention and increased psychological support for new mothers.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author(s) Full Name	Contribution to the paper	Author(s) Signature
1	M. Umar Ghafoor	Materials & Methods, Results, Analysis.	
2	Rabia Arshed Usmani	Study design, Questionnaire development.	
3	Zaidan Idrees Ch.	Introduction, literature review, discussion, references.	
4	Shahbaz Ahmad	Data collection, Proof reading.	
5	Aftab Nazir	Data collection, Proof reading.	
6	Faiza Irshad	Data collection, Proof reading.	