ORIGINAL ARTICLE

POSTPARTUM DEPRESSION AT SECONDARY HEALTHCARE LEVEL IN NORTHERN PAKISTAN

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Background: Postpartum depression is a global phenomenon. The magnitude is even wider when it comes to developing countries compared to industrialized counterparts. Identification of depression by healthcare works at levels is necessary to provide adequate support and resources to women suffering from postpartum depression to improve their mental health and overall wellbeing. This study aimed to determine the factors associated with depression among postpartum patients presenting to a secondary healthcare facility in Timergara District, Lower Dir. **Methods:** A total of 382 women, 6 to 8 weeks postpartum were registered from 1st March, 2024 to 31st October, 2024. Participants' and their partners' sociodemographic profile as well as obstetrical, neonatal, and psychiatric data were gathered using a self-devised structured questionnaire. DSM-V criteria were used to identify postpartum depression disorder. SPSS-25 was used to analyze data. **Results:** Fifty-seven (57.2%) patients were in the age group 18–30 years, 98 (25.65%) patients fulfilled the definition of postpartum depression. Their mean age was 29.07±5.59 years. A significant association (p<0.05) was observed between the planned nature of pregnancy, infant's gender and the patient's relation with in-laws with postpartum depression. **Conclusion:** Postpartum depression is prevalent among younger mothers particularly those experiencing social dissatisfaction, unplanned pregnancies and giving birth to female babies.

Keywords: Depression, DSM-V, Pakistan, Postpartum, Resource-limited settings

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INTRODUCTION

Postpartum period is a high-risk period when women are prone to many mental health conditions like postpartum blue, depression and even psychosis. Women may have postpartum depression (PPD) as early as one month after giving birth.[1] A meta-analysis and thorough assessment of PPD revealed that 24.7% of postnatal women suffer from mental diseases worldwide.[2] Given the potential impact of maternal mental health conditions on the mother's physical wellbeing, child development, and family and societal relationships, PPD is recognized as a public health concern.[3]

The mental wellbeing of mothers can have implications for the development of attachment insecurity in their offspring, as well as the mental health of adolescents.[4] Children with negligent parenthood as a consequence of compromised maternal mental health are at risk of becoming negligent parents themselves leading to a perpetuated cycle of dysfunctional family dynamics. Children of depressive disorders women are more prone to restricted development, diarrhoeal episodes, and infectious diseases.[4,5]

Multiple studies have revealed that occupation, educational level, being primigravida, gender of the newborn, prior episodes of depression (including amid gestation), companion's depressive disorders, discontentment with the spouse, and an absence of interpersonal assistance were among the key variables that lead to depressive symptoms in women following delivery.[6,7] In another study BMI, mode of delivery, family type, number of children alive, exclusive breastfeeding, and frequency of physical activity had an association with PPD.[8] The financial status of families, which is directly proportional to access to medical care and education, have been argued in some research to be more significant than these other determinants.[9]

Considering infant gender, some studies have observed a higher risk of PPD among mothers of girls, while some contradict that a significant association exists.[10,11] Some findings from earlier research point to a possible increase in PPD incidence among women residing in metropolitan settings.[9] Prevalence of PPD was found to be 30%[12] in Pakistan, 17% in developing countries, and 11% in developed countries.[13]

The aim of this study was to determine the frequency of depression in postpartum patients and factors associated with it in a secondary healthcare facility in Lower Dir area of Pakistan. This study will help to create awareness among gynaecologists and obstetricians to pay attention to mental health of patients prone to PPD.

MATERIAL AND METHODS

This cross-sectional study was conducted, after approval from Ethical Review Board of Saidu Medical College, Swat, at the Department of Obstetrics and Gynaecology, at a secondary level hospital in Timergara Tehsil, District Lower Dir of northern Pakistan. Our estimated sample size was 382 at 95% confidence level,

anticipated frequency of 46%[14] and 5% margin of error. All women who attended the hospital at 6–8 weeks postpartum were included in the study. A self-devised structured questionnaire was used to collect data after getting written informed consent from the patients. Women who had given birth to twins or had any co-morbidities like thyroid problem, hypertension, diabetes or any respiratory or cardiac issues were excluded.

Six components of a structured questionnaire were used to collect data *viz*. socio-demographic data, obstetric and child information, marital life such as the quality of relationships as well as availability of assistance from families, information on parenting, and questions on participants' and partners' past histories of depression. Both prenatal care logbooks and interviews were used to gather information on demographics, obstetrics, infants, and social support. Information about all these factors was recorded and its association with postnatal depression was studied. Postpartum Depression was diagnosed using DSM-V criteria, defined as presence of ≥5 of symptoms namely: Depressed mood, disturbed appetite, disturbed sleep (insomnia or hypersomnia), lack of interest in activities or pleasure (anhedonia), physical agitation or retardation, fatigue or loss of energy, feeling of being worthless or excessive guilt, decreased concentration, and recurrent thoughts of death.[15]

Data analysis was done using SPSS-25. Variables were sorted into four primary groups for statistical analysis: demographics, obstetric and newborn features, information about marital relationships, and couple's histories of depression. Continuous variables like patient's age, income, and partner's age was tabulated as Mean±SD. Categorical variables like gender of infant, patient's education, occupation, residence, parity and mode of delivery were described in terms of frequencies and percentages. Postpartum depression was stratified against patient's demographic and obstetric profile, factors related to infant, partner, social or family circumstances and previous history of depression. Association was determined by applying Chi-square test and $p \leq 0.05$ was considered statistically significant.

RESULTS

This study included a total of 382 patients. The age of the patients ranged from 18 to 40 years with mean age 29.07±5.59 years. Among them, 98 (25.65%) patients satisfied the DSM-V criteria for PPD. Among those 98 patients who had postpartum depression, most of the patients belonged to the age group 18 to 30 years, comprising 57 (58.1%) participants. The mean duration of marriage of the patients was 5.680±1.030 years. Among the PPD patients 61 (62.2%) had none or limited schooling, 21 (21.4%) participants attained high school and 16 (16.3%) participants had higher education. A major portion (73, 74.5%) of the participants were housewives/unemployed, 51 (52.0%) participants had family income ranging Rs. 50,000 to 100,000 per month. The distribution of rural and urban residence was 58 (59.2%) *vs* 40 (40.8%) respectively.

Fifty-three (54.1%) patients having PPD were first time mothers. Sixty-five (66.3%) patients had vaginal delivery with or without instrumentation. The mean gestational age of the patients was 38.028±0.879 weeks. Fifty-eight (59.3%) patients had female babies. (Table-1).

Sixty-one (62.2%) patients did not receive the expected social support from their in-laws and spouse. The majority 67 (68.4%) of PPD patients were living in a combined family system. Seventeen (17.3%) patients had a previous history of depression. Partners of 9 (9.2%) patients had a history of depression. (Table-2).

Table-1: Association of obstetric and infant factors with PPD (n=382) [n (%)]

	PPD		Total	χ^2	*p*
	Yes (n=98)	No (n=284)			
Gestational Age					
37–38 weeks	69 (70.4)	178 (62.7)	247	1.868	0.171
39–40 weeks	29 (29.6)	106 (37.3)	135		
Parity					
Primi-parity	53 (54.1)	126 (44.7)	179	2.723	0.098
Multi-parity	45 (45.9)	158 (55.6)	203		
Nature of pregnancy					
Planned	82 (83.7)	154 (54.2)	236	26.752	<0.001*
Unplanned	16 (16.3)	130 (45.8)	146		
Delivery					
NVD	65 (66.3)	186 (65.5)	251	0.022	0.882
C-Section	33 (33.7)	98 (34.5)	131		
Infant's Gender					
Male	40 (40.8)	189 (66.5)	229	13.026	<0.001*
Female	58 (59.2)	95 (33.5)	153		

*Statistically significant

Table-2: Association of family circumstances/social and partner factors with PPD (n=382) [n (%)]

	PPD		Total	χ^2	*p*
	Yes (n=98)	No (n=284)			
Relation with in-laws/partner					
Satisfied	37 (37.8)	210 (73.9)	247	42.305	<0.001*
Unsatisfied	61 (62.2)	74 (26.1)	135		
Family system					
Joint	67 (68.4)	214 (75.4)	281	1.795	0.180
Nuclear	31 (31.6)	70 (24.6)	101		

*Statistically significant

DISCUSSION

This study was conducted in a far-flung area of Pakistan with limited healthcare facilities. It was observed that 25.65% of women seeking postpartum treatment at our facility exhibited symptoms suggestive of PPD. The range of PPD prevalence is around 17% in developing countries, whereas in developed countries, the figure drops to around 11%.[13] Results from our study show a higher prevalence as compared to the average for developing countries. In Pakistan, the prevalence of postpartum depression has

been estimated to be around 30%.[12] Our findings are in agreement to the local study. This is expected as the study was conducted in a region with very strong cultural hierarchies.

It has been observed that self-reported symptoms serve as a reliable predictor of the proportion of postpartum mental problems.[14,16] The responses to questions pertaining to self-reported symptoms, asked at the secondary health facility during this study, were used to diagnose probable PPD. There is a high possibility of prevalence of PPD being greater than our observations when determined by psychiatrists, and more refined tools are used. However, this simple approach to the diagnosis of PPD can serve as the first step in the referral process so that no woman needing therapy is neglected.

Low contentment with the gender of the baby and prenatal mood disorder were factors linked to probable PPD in previous studies.[17] Our study also shows similar findings with female gender of the baby and previous history of depression showing significant association with PPD. This highlights the deep impact of societal norms preferring a male child over a female on the mother despite having no control over the factor.

Unintended pregnancy has also been linked to PPD.[18] According to previous prospective research, unexpected pregnancies increase the risk of postpartum depression (PPD) and parenting stress in women by causing marital conflict and poor involvement of father in child care.[19] A multi-country study also discovered that unplanned pregnancy was associated with an elevated risk of developing depression during the postnatal period.[20] Although the effect of unexpected pregnancy on PPD peaked at 4 months after delivery, the effect on parenting stress persisted for up to 2 years, suggesting long-term repercussions on mother and child health.[21] Other than unplanned nature of pregnancy, primi gravidity and a history of miscarriage is shown to be associated with increased risk of developing depression in the postnatal period.[22] Our study suggests a similar association between planned nature of a pregnancy and presence of PPD.

The majority of research has consistently suggested a strong relationship between PPD and poor birth experiences. According to a previous cohort study, PPD developing as a result of post-traumatic stress disorder has been shown to have a detrimental impact on interpersonal relationships in couples.[23] Satisfaction with the birth experience is mainly impacted by women's prenatal expectations, but it also includes several other elements including protection, encouragement, admiration, confidentiality, and involvement in family planning decisions.[24] Birth experience is also affected by differences in home and institutional deliveries.[25] An indirect impact of pre-partum depression scores and birth experience on postpartum maternal-child bonding, which is mediated by postpartum depression, was also described by Eitenmüller *et al*[26].

Previous studies have consistently indicated that a woman's relationship with her spouse significantly influences her mental wellbeing. PPD, unwanted pregnancy, birth experience and couple relationships, all have an impact on one another.[25,26] Couples are nonetheless susceptible to psychological issues and marital discontent since the move stresses out their life and accentuates their differences.[27] Research was conducted among Indonesian mothers to explore the extent to which PPD is affected by spousal relationships, husband involvement, and maternal health behaviour revealing that negative interactions between partners have long-term effects on depression throughout gestation and postpartum for both parents.[28] To support parents' mental health, healthcare institutions may be able to offer classes on birthing education and enhance the dynamics of co-parenting for couples.[29] Jamshaid *et al*[30] have suggested that PPD acts as a mediator between attachment trauma and maternal self-efficacy, whereas emotional support is a moderator.

This study was conducted in a setting not usually considered for screening or treatment of psychiatric disorders ignoring an important component of maternal and child health which has a substantial effect on family dynamics. Hence it has some limitations. The use of a previously validated questionnaire might have strengthened the study but due to a lack of trained personnel for data collection and the simplicity of purpose, DSM-V criteria have been used. The scope of this study was limited only to exclude presence or absence of PPD and did not consider its severity. Future studies with qualitative components integrated into the study might be able to give better insights into the problem in our particular settings.

CONCLUSION

Frequency of postpartum depression in our study population was 25.65%, and majority of the patients were younger mothers aged 18–30 years. Significant association of postpartum depression was found with obstetric, social, and familial factors, and primiparous mothers were affected more than multiparous mothers. Unplanned pregnancy and female babies were significantly associated with PPD.

RECOMMENDATIONS

Development of depression should be kept in mind while taking care of the mother during early postpartum period. Prevention and treatment of PPD should be tailored to the individual needs of each mother and may require a multidisciplinary approach.

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