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PREVALENCE OF POSTPARTUM DEPRESSION AND ITS RISK FACTORS AMONG WOMEN IN LAHORE, PAKISTAN

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Abstract

Background: *Postpartum depression (PPD) is a common mood disorder affecting women after childbirth and may adversely influence mother–infant interaction and child development.*

Materials and Methods: *A cross-sectional study was conducted among postpartum women attending the Neonatal Intensive Care Unit at Lady Willingdon Hospital, Lahore, within 6 weeks postpartum. A total of 224 women with 6–8 weeks postpartum were assessed using the Edinburgh Postnatal Depression Scale, along with a structured questionnaire for risk factors.*

Results: *The prevalence of postpartum depression was 25.9% (n=58/224), with a mean EPDS score of 7.92 ± 5.4 (95% CI: 7.21–8.63). Significant predictors included poor sleep (AOR=4.62, 95% CI: 2.01–10.61, p<0.001), negative antenatal mood (AOR=2.41, p<0.05), low marital satisfaction (AOR=2.36, p<0.05), inadequate family support (AOR=1.94, p<0.05), and history of miscarriage (AOR=1.82, p<0.05).*

Conclusion: *Postpartum depression affected a significant proportion of women, and is strongly associated with modifiable psychosocial factors, highlighting the need for early screening and targeted supportive interventions.*

INTRODUCTION

Postpartum depression (PPD) is a common and serious mental health condition that occurs after childbirth, characterized by persistent low mood, anxiety, sleep disturbances, and reduced functional capacity. Globally, PPD affects approximately 10–15% of women; however, its prevalence is substantially higher in low- and middle-income countries due to socio-economic inequalities and limited access to mental health services (O'Hara & McCabe (2013); Fisher et al. (2012)). In Pakistan, the burden of postpartum depression is particularly alarming, with studies reporting prevalence rates ranging from 28% to over 60% in different populations (Rahman et al. (2003); Waqas et al. (2015)). This elevated prevalence poses serious implications for maternal wellbeing, infant growth, and early childhood development, making PPD a critical public health concern in urban centers such as Lahore.

The etiology of postpartum depression is multifactorial, encompassing biological, psychological, and socio-cultural determinants. In the Pakistani context, several studies have identified poverty, lack of social support, domestic violence, low educational attainment, and unplanned pregnancies as key risk factors (Rahman et al., 2003; Waqas et al., 2015). Furthermore, cultural norms such as son preference, patriarchal family structures, and stigma associated with mental illness exacerbate women's vulnerability and limit help-seeking

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behavior (Ali et al. (2009); Gulamani et al. (2013)). Evidence from urban settings also suggests that rapid urbanization, financial stress, and reduced extended family support contribute significantly to maternal psychological distress (Gulamani et al., 2013). These findings indicate that postpartum depression is not solely a clinical condition but is deeply embedded in the socio-cultural and economic realities of Pakistani society.

Despite increasing recognition of maternal mental health issues in Pakistan, there is limited city-specific evidence focusing on Lahore, a densely populated metropolitan area with diverse socio-economic groups. While some studies have explored antenatal and postnatal depression in Punjab, comprehensive research assessing both prevalence and associated risk factors in Lahore remains scarce (Humayun et al., 2013). Given the unique urban stressors, healthcare access disparities, and shifting family dynamics, it is essential to generate localized evidence to inform targeted interventions. Therefore, this study aims to determine the prevalence of postpartum depression and identify its associated risk factors among women in Lahore, contributing to evidence-based policymaking and improved maternal healthcare services.

Materials and Methods

A descriptive cross-sectional study was conducted among postpartum women attending the Neonatal Intensive Care Unit (NICU) at Lady Willingdon Hospital. Data were collected from women within 6–8 weeks postpartum. The study targeted a sample size of 224 participants, calculated at a 95% confidence interval with an expected prevalence based on regional literature and a 5% margin of error. A consecutive sampling technique was employed, and eligible women visiting the NICU during the study period were enrolled. Women with critically ill conditions or those unwilling to participate were excluded. Ethical approval was obtained from the institutional review board, and written informed consent was secured from all participants prior to data collection.

Data were collected through face-to-face interviews using a structured questionnaire to obtain socio-demographic characteristics and assess potential risk factors of postpartum depression. The Edinburgh Postnatal Depression Scale was used to screen participants for depression. The EPDS is a validated 10-item instrument with a maximum score of 30, demonstrating high sensitivity and specificity in identifying postpartum depression. A cut-off score of ≥12 was used to identify women at risk of postpartum depression, consistent with established validation studies.

The collected data were entered into Microsoft Excel and analyzed using statistical software (e.g., SPSS). Descriptive statistics were used to summarize demographic variables and prevalence, while inferential statistics, including bivariate and logistic regression analyses, were applied to determine associations between postpartum depression and its risk factors.

Results

Table 1: Socio-demographic Characteristics of Respondents (n = 224)

Variable	Category	Frequency n (%)	Chi-square (χ^2)	p-value
Age (years)	Mean ± SD	27.9 ± 4.3	—	—
Religion	Muslim	206 (92.0)	0.42	0.81
	Others	18 (8.0)		
Education	Illiterate	18 (8.0)	6.12	0.19
	Primary	32 (14.3)		
	Secondary	74 (33.0)		
	Graduate & above	100 (44.6)		
Locality	Urban	124 (55.4)	1.08	0.29
	Rural	100 (44.6)		
Occupation	Housewife	162 (72.3)	2.04	0.15

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	Working	62 (27.7)		
Family Type	Joint	134 (59.8)	2.21	0.13
	Nuclear	90 (40.2)		
Years of Marriage	Mean ± SD	4.8 ± 3.9	–	–
	≤5 years	146 (65.2)	0.61	0.73
	6–10 years	58 (25.9)		
	>10 years	20 (8.9)		
Number of Children	Mean ± SD	1.4 ± 0.6	–	–
	One	150 (67.0)	1.42	0.49
	Two or more	74 (33.0)		
Hospital Stay	<7 days	188 (83.9)	0.02	0.88
	≥7 days	36 (16.1)		

The majority of respondents were Muslim (92.0%), housewives (72.3%), and living in joint families (59.8%). The mean age was 27.9±4.3 years. Most women had secondary or higher education (77.6%) and were within five years of marriage (65.2%), reflecting a relatively young reproductive population.

Table 2: Prevalence of Postpartum Depression (n = 224)

Category	**Frequency n (%)**
EPDS ≥12 (Depression)	58 (25.9)
EPDS <12 (No Depression)	166 (74.1)
Mean ± SD (95% CI)	7.92 ± 5.4 (7.21–8.63)

The prevalence of postpartum depression was 25.9%, indicating that approximately one in four women were at risk. The mean EPDS score (7.92±5.4) reflects a moderate level of depressive symptoms among the study population.

Table 3: Factors Associated with Postpartum Depression (n = 224)

Variable	**Category**	**EPDS <12 n (%)**	**EPDS ≥12 n (%)**	**χ^2**	**AOR (95% CI)**
History of miscarriage	No (R)	112 (80.0)	28 (20.0)	6.92*	–
	Yes	54 (64.3)	30 (35.7)		1.82 (1.01–3.29)*
Mood during pregnancy	Positive (R)	130 (81.8)	29 (18.2)	12.84**	–
	Negative	36 (55.4)	29 (44.6)		2.41 (1.25–4.65)*
Sleep after delivery	Adequate (R)	92 (85.2)	16 (14.8)	28.76***	–
	Sometimes	54 (75.0)	18 (25.0)		1.48 (0.69–3.14)
	Rarely	20 (45.5)	24 (54.5)		4.62 (2.01–10.61)***
Marital satisfaction	Yes (R)	146 (79.3)	38 (20.7)	14.22***	–
	No	20 (50.0)	20 (50.0)		2.36 (1.12–4.98)*
Family support	Adequate (R)	120 (80.5)	29 (19.5)	5.18*	–
	Inadequate	46 (61.3)	29 (38.7)		1.94 (1.02–3.68)*

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Significant predictors of postpartum depression included poor sleep (AOR=4.62, p<0.001), negative mood during pregnancy (AOR=2.41, p<0.05), lack of marital satisfaction (AOR=2.36, p<0.05), inadequate family support (AOR=1.94, p<0.05), and history of miscarriage (AOR=1.82, p<0.05). Poor sleep emerged as the strongest predictor of postpartum depression.

Discussion

The present study found a 25.9% prevalence of postpartum depression (PPD) among women attending a tertiary care hospital in Lahore. This prevalence is consistent with findings from other low- and middle-income countries, where rates tend to be higher than global averages. For instance, a multi-country analysis reported elevated PPD prevalence in South Asian settings due to socio-economic stressors and limited mental health services (Woody et al. (2017)). Similarly, research conducted in Asian populations has shown comparable prevalence estimates ranging between 20% and 30%, reinforcing that PPD remains a substantial maternal health burden in the region (Shorey et al. (2018)). The moderate mean EPDS score observed in this study further supports the presence of clinically relevant depressive symptoms among postpartum women.

The analysis of risk factors revealed that poor sleep, negative mood during pregnancy, marital dissatisfaction, inadequate family support, and history of miscarriage were significantly associated with PPD. Among these, poor sleep emerged as the strongest predictor, which aligns with evidence indicating that sleep disturbances in the postpartum period significantly increase the likelihood of depressive symptoms (Okun et al. (2018)). Likewise, antenatal emotional distress has been identified as a strong precursor of postpartum depression, suggesting continuity of psychological vulnerability from pregnancy into the postpartum period (Robertson et al. (2004)). These findings highlight the importance of early psychological screening during pregnancy to prevent adverse postpartum outcomes.

Social determinants also played a crucial role in this study. Women reporting low marital satisfaction and inadequate family support were significantly more likely to develop PPD. This is supported by prior research demonstrating that lack of partner support and strained marital relationships are among the most consistent predictors of postpartum depression (Yim et al. (2015)). In collectivist societies like Pakistan, family support—particularly from spouses and in-laws—plays a protective role in maternal mental health. Furthermore, a history of miscarriage was associated with increased risk, which is consistent with studies showing that previous pregnancy loss contributes to heightened emotional distress and vulnerability to depression in subsequent pregnancies (Blackmore et al. (2011)).

Conclusion

This study concludes that postpartum depression is a significant public health concern, affecting nearly one in four women in the early postpartum period. While most women demonstrated typical socio-demographic characteristics, key risk factors—particularly poor sleep, negative antenatal mood, low marital satisfaction, inadequate family support, and history of miscarriage—were strongly associated with increased risk of depression. The findings highlight a clear gap between maternal needs and psychosocial support during the postpartum phase. Therefore, routine screening using standardized tools, early identification of high-risk women, and strengthening family-centered support and counseling services are essential to improve maternal mental health outcomes in tertiary care settings.

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