

Research Article

Sociodemographic and Obstetric Determinants of Postpartum Depression in a Tertiary Care Setting of Pakistan: A Cross-Sectional Study

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Received: 12.02.26, Revised: 17.03.26, Accepted: 13.04.26

ABSTRACT

Background: Postpartum depression (PPD) is a multifactorial psychiatric disorder influenced by biological, psychological, and social determinants. While inflammatory markers have gained attention, sociodemographic and obstetric factors remain critical in understanding vulnerability to postpartum depression, particularly in low- and middle-income countries.

Objectives: To determine the association of sociodemographic and obstetric factors with postpartum depression among women attending a tertiary care hospital.

Methods: This cross-sectional study was conducted at Civil Hospital Hyderabad, Pakistan. A total of 236 postpartum women within six months of delivery were recruited. Postpartum depression was assessed using the Urdu version of the Edinburgh Postnatal Depression Scale (EPDS). Sociodemographic and obstetric variables were recorded using a structured proforma. Univariate and multivariate logistic regression analyses were performed to identify independent predictors of postpartum depression.

Results: The prevalence of postpartum depression was 50.8%. Significant associations were observed between postpartum depression and rural residence (OR = 2.34; 95% CI: 1.38-3.96), low educational status (OR = 2.91; 95% CI: 1.69-5.01), low socioeconomic status (OR = 2.47; 95% CI: 1.44-4.23), and multiparity (OR = 1.88; 95% CI: 1.02-3.46). In multivariate analysis, rural residence, low education, and low socioeconomic status remained independent predictors of postpartum depression.

Conclusions: Sociodemographic disadvantage plays a substantial role in the development of postpartum depression. Strengthening psychosocial screening and targeted community-based interventions may reduce the burden of postpartum depression in resource-limited settings.

Keywords: Postpartum Depression, Sociodemographic Factors, Obstetric Factors, Predictors, Pakistan.

INTRODUCTION

Postpartum depression (PPD) is a common psychiatric disorder that affects the women of child-bearing age following childbirth and poses a big challenge to maternal and child health worldwide [1]. It is associated with decreased maternal functioning, disrupted mother–infant bonding, adverse infant

developmental outcomes, and increased burden on healthcare resources [2, 3]. Despite its high prevalence, PPD usually remains under recognized and undertreated, especially in low- and middle-income countries where social and economic stressors are rampant and stigma is attached to mental illnesses.

The etiology of postpartum depression is complex and multifactorial, involving an interplay of biological (particularly genetic) vulnerability, psychological stress, and social adversities [4]. While recent research on this subject has increasingly focused on biological factors such as inflammatory mediators, sociodemographic and obstetric factors continue to have a pivotal role in determining risk [5]. Social and demographic factors such as poverty, low literacy rates, rural residence, high parity, and inadequate social and economic support have consistently been linked to postpartum depressive symptoms/disorder [6–7].

In South Asian societies, women often experience additional stressors during the perinatal period which may include financial dependence, limited autonomy, cultural and religious pressures, expectations and sometimes pressure from the family to give birth to only a male child, and restricted access to healthcare services [8-9]. These important and relevant factors may increase vulnerability to postpartum depression but are often underrepresented in international literature.

Understanding the contribution of sociodemographic and obstetric factors is essential for developing effective, more precise, culturally sensitive screening and intervention strategies. This study aimed to examine the association between important sociodemographic and obstetric variables and postpartum depression among women attending a tertiary care teaching hospital in Pakistan.

METHODS

Sociodemographic and Obstetric Associations

Table 1. Sociodemographic Characteristics and Postpartum Depression

Variable	Postpartum Depression n (%)	No Depression n (%)	Odds Ratio (95% CI)	p-value
Residence (Rural)	61 (50.8)	32 (27.6)	2.34 (1.38–3.96)	0.001
Low education	74 (61.7)	42 (36.2)	2.91 (1.69–5.01)	<0.001
Low socioeconomic status	69 (57.5)	39 (33.6)	2.47 (1.44–4.23)	0.001

Table 2. Obstetric Factors and Postpartum Depression

Variable	Postpartum Depression n (%)	No Depression n (%)	Odds Ratio (95% CI)	p-value
Multigravida	113 (94.2)	97 (83.6)	1.88 (1.02–3.46)	0.04
Caesarean delivery	48 (40.0)	38 (32.8)	1.36 (0.81–2.28)	0.24

Study Design and Setting: A cross-sectional analytical study was conducted in the Department of Psychiatry, Civil Hospital Hyderabad, Pakistan, over a six-month period.

Participants: Postpartum women aged 18–45 years presenting within six months after delivery were enrolled using non-probability consecutive sampling. Women with a prior history of diagnosed psychiatric illness, severe medical conditions, or cognitive impairment were excluded.

Measures: Postpartum depression was assessed using the validated Urdu version of the Edinburgh Postnatal Depression Scale (EPDS). A cutoff score of ≥ 11 was used to indicate postpartum depression. Sociodemographic variables included age, residence, education, occupation, and socioeconomic status. Obstetric variables included parity and mode of delivery.

Statistical Analysis: Data were analyzed using SPSS version 23. Descriptive statistics were used to summarize participant characteristics. Associations between variables and postpartum depression were examined using chi-square tests. Variables with $p \leq 0.20$ in univariate analysis were entered into a multivariate logistic regression model. Statistical significance was set at $p \leq 0.05$.

RESULTS

Prevalence of Postpartum Depression: Out of 236 participants, 120 (50.8%) met criteria for postpartum depression based on EPDS scores.

Multivariate Predictors of Postpartum Depression

Table 3. Multivariate Logistic Regression Analysis for Predictors of Postpartum Depression

Variable	Adjusted OR	95% CI	p-value
Rural residence	2.01	1.14–3.54	0.01
Low education	2.47	1.36–4.48	0.003
Low socioeconomic status	2.19	1.21–3.98	0.009
Multigravida status	1.51	0.77–2.96	0.22

DISCUSSION

This study highlights the significant contribution of sociodemographic disadvantage to postpartum depression. Women living in rural areas, those having lower educational attainment/status, and those belonging to lower socioeconomic families were at significantly higher risk of developing postpartum depression. These findings are consistent with previous studies from low- and middle-income countries that have emphasized the role of social adversity in postpartum mental health [6–8].

Residing in rural residence may be associated with limited access to healthcare services, lower social and economic support, and higher caregiving burden, all of which can contribute to psychological distress and difficulties during the postpartum period [9,10]. Similarly, low educational status may limit health literacy and coping strategies, increasing vulnerability to depressive symptoms [11]. Socioeconomic disadvantage has been linked to postpartum depression in various studies through mechanisms such as financial stress, food and job insecurity, and reduced autonomy [12].

Although multiparity was associated with postpartum depression in univariate analysis, this association did not remain significant after adjustment for confounders. This suggests that the effect of parity may be mediated through social and economic factors rather than acting as an independent risk factor.

The findings underscore the importance of incorporating psychosocial risk assessment into routine postnatal care. Screening strategies that focus solely on biological markers may overlook women whose primary vulnerability arises from social determinants of health.

Strengths and Limitations

The study's strengths include a relatively large sample size and use of a validated screening instrument. Limitations include the cross-sectional design, which limits causal inference,

and the hospital-based sample, which may affect generalizability.

CONCLUSIONS

Sociodemographic disadvantage is a major determinant of postpartum depression in this population. Integrating psychosocial screening and community-based support interventions into maternal healthcare services may reduce the burden of postpartum depression, particularly in resource-limited settings.

Conflicts of Interest: The authors declare no conflicts of interest.

REFERENCES

1. O'Hara MW, McCabe JE. Postpartum depression: current status and future directions. *Annu Rev Clin Psychol.* 2013;9:379-407.
2. Stewart DE, Vigod SN. Postpartum depression. *N Engl J Med.* 2016;375:2177-86.
3. Stein A, Pearson RM, Goodman SH, et al. Effects of perinatal mental disorders on the fetus and child. *Lancet.* 2014;384:1800-19.
4. Beck CT. Predictors of postpartum depression. *Nurs Res.* 2001;50(5):275-85.
5. Fisher J, Cabral de Mello M, Patel V, et al. Prevalence and determinants of common perinatal mental disorders. *Bull World Health Organ.* 2012;90:139-49.
6. Halbreich U, Karkun S. Cross-cultural and social diversity of postpartum depression. *J Affect Disord.* 2006;91:97-111.
7. Rahman A, Iqbal Z, Harrington R. Life events, social support and depression in childbirth. *Br J Psychiatry.* 2003;183:463-8.
8. Shorey S, Chee CYI, Ng ED, et al. Prevalence of postpartum depression. *J Psychiatr Res.* 2018;104:235-48.

9. Patel V, Prince M. Maternal psychological morbidity and infant growth. *Br J Psychiatry*. 2006;188:284-90.
10. Upadhyay RP, Chowdhury R, Salehi A, et al. Postpartum depression in India. *J Affect Disord*. 2017;218:86-92.
11. Abdollahi F, Zarghami M. Postpartum depression and education. *J Obstet Gynaecol Res*. 2018;44:111-20.
12. World Health Organization. *Maternal mental health*. WHO; 2018.