Medicina Moderna
ISSN 2360-2473 Volume 13, Issue 2, 1041-1054
Journal link: https://medicina-moderna.com/
https://www.scopus.com/sourceid/21101053585

Investigating the Prevalence and Management of Postpartum Depression in Low-Resource Settings

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Submission: 01 November 2025 | Acceptance: 20 February 2026 | Publication: 09 March 2026

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ABSTRACT:

Background: Postpartum depression (PPD) is a significant public health concern, particularly in lowresource settings where access to mental health care is often limited. The condition can adversely affect maternal health, infant development, and family dynamics, necessitating effective identification and management strategies.

Aim: The study aimed to investigate the prevalence of postpartum depression and assess the effectiveness of management strategies in low-resource settings.

Methods: This prospective observational study was conducted at Civil Hospital Kahuta Rawalpindi from October 2023 to September 2024. A total of 80 postpartum women were recruited using purposive sampling. Participants were screened for PPD using the Edinburgh Postnatal Depression Scale (EPDS),

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and those with positive findings were assessed further through clinical interviews. Management strategies, including counseling and pharmacotherapy, were implemented based on the severity of symptoms, and outcomes were monitored over a six-months period.

Results: The prevalence of postpartum depression in the study population was found to be 45%, with a higher occurrence among women with limited social support and financial constraints. Counseling was provided to all diagnosed cases, while 33% required additional pharmacological intervention. After four weeks of management, 75% of participants reported significant improvement in depressive symptoms, with better outcomes observed in those who adhered to the recommended treatment protocols.

Conclusion: Postpartum depression was prevalent in a substantial proportion of women in low-resource settings. Tailored management strategies, combining counseling and pharmacotherapy, proved effective in alleviating symptoms. The findings underscore the need for integrating mental health services into maternal care programs in low-resource settings to ensure early detection and intervention for PPD.

Keywords: Postpartum depression, low-resource settings, prevalence, management, maternal mental health, counseling, pharmacotherapy.

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INTRODUCTION:

Postpartum depression (PPD) is a significant public health concern that adversely impacts maternal and infant well-being. It is a complex and multifaceted condition that extends beyond the typical "baby blues," characterized by persistent sadness, fatigue, and a diminished ability to care for oneself or one's infant. Despite its prevalence globally, the recognition and management of PPD have been notably challenging in low-resource settings, where healthcare systems are often underfunded, and cultural stigmas surrounding mental health persist [1]. This study aimed to explore the prevalence and management of PPD in such settings, shedding light on the factors influencing maternal mental health and the strategies employed to address this condition.

The prevalence of PPD has been extensively studied in high-income countries, where structured screening tools, adequate healthcare infrastructure, and awareness campaigns have contributed to the early identification and management of affected women. However, in low-resource settings, data on PPD have remained limited and inconsistent. This gap in knowledge was partly attributed to the absence of standardized diagnostic criteria, lack of awareness among healthcare providers, and cultural norms that often discouraged women from expressing emotional distress [2]. Consequently, the true burden of PPD in these areas remained largely underestimated, leaving many women without the support they required. Social determinants of health, including poverty, limited education, food insecurity, and lack of social support, were known to exacerbate the risk of developing PPD. Women in low-resource settings often faced additional stressors, such as the expectation of returning to strenuous labor shortly after childbirth or the inability to access maternal healthcare services due to geographical or financial constraints. These factors compounded the likelihood of PPD while simultaneously impeding the implementation of effective management strategies [3].

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The cultural context also played a crucial role in shaping the understanding and management of PPD. In many low-resource settings, mental health issues were either dismissed or attributed to spiritual or supernatural causes. As a result, women exhibiting symptoms of PPD were often stigmatized or advised to seek non-medical interventions, such as traditional healing practices. While community support networks existed in some cultures, their effectiveness varied widely, and these networks often lacked the training or resources to provide adequate support [4].

Healthcare systems in low-resource settings faced numerous barriers in addressing PPD. Limited availability of mental health professionals, overburdened primary care facilities, and inadequate integration of mental health services within maternal healthcare programs hindered early detection and treatment. Moreover, the lack of awareness and training among healthcare providers further contributed to missed diagnoses and suboptimal management of PPD. This study highlighted the critical need for context-specific strategies to overcome these challenges, emphasizing the importance of leveraging existing community resources and integrating mental health interventions into primary healthcare systems [5].

Previous research had underscored the effectiveness of interventions such as psychoeducation, counseling, and peer support groups in reducing the burden of PPD. However, these approaches were often underutilized in low-resource settings due to financial and logistical constraints. Innovative, low-cost solutions, such as task-shifting models that trained community health workers to deliver basic mental health care, showed promise in bridging the gap. Additionally, mobile health technologies offered a novel avenue to improve access to mental health services by providing remote counseling and education [6].

This study aimed to address the knowledge gap by investigating the prevalence of PPD in low-resource settings, identifying key risk factors, and evaluating current management practices. By doing so, it sought

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to provide actionable insights that could inform the development of culturally sensitive, sustainable interventions tailored to the unique challenges of these regions. Recognizing and addressing PPD in lowresource settings was not only essential for improving maternal mental health but also critical for fostering the overall well-being of families and communities [7].

METHODOLOGY:

Study Design:

This study employed a descriptive cross-sectional design to investigate the prevalence and management strategies of postpartum depression (PPD) in low-resource settings. The study aimed to identify contributing factors, evaluate the available treatment options, and assess the overall effectiveness of these interventions.

Study Setting:

The research was conducted at Civil Hospital Kahuta, a healthcare facility that serves a diverse population, including women from low-resource settings. The hospital's obstetrics and gynecology department provided a robust platform for accessing postpartum women and gathering relevant data.

Study Duration:

The study was conducted over a 12-month period from October 2023 to September 2024. This duration was chosen to capture data across various seasons, ensuring a comprehensive understanding of PPD prevalence and management throughout the year.

Study Population:

The study population comprised postpartum women attending Civil Hospital Kahuta for postnatal care or related consultations. Women within six months postpartum were eligible for inclusion to ensure the

timely identification of PPD symptoms. **Inclusion and Exclusion Criteria** Inclusion criteria were as follows:

Women aged 18 years or older.

Women who had given birth within the past six months.

Willingness to provide informed consent.

Exclusion criteria included:

Women with a known history of psychiatric disorders prior to pregnancy.

Women who experienced pregnancy loss or neonatal death during the study period.

Non-consenting participants.

Sample Size:

A total of 80 participants were recruited through consecutive sampling, ensuring representation of postpartum women attending the hospital during the study period. The sample size was calculated to provide adequate statistical power for prevalence estimates and subgroup analyses.

Data Collection Tools:

Data collection was performed using a structured questionnaire that included three sections:

Sociodemographic and Clinical Information: Age, education, socioeconomic status, number of children, mode of delivery, and complications during pregnancy or childbirth.

Screening for PPD: The Edinburgh Postnatal Depression Scale (EPDS) was utilized to assess depressive symptoms. A validated cut-off score was employed to identify probable cases of PPD.

Management and Coping Strategies: Information on the use of mental health services, pharmacological treatments, counseling, and informal support systems was collected.

Data Collection Procedure:

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Trained healthcare professionals administered the questionnaire during routine postnatal visits. Participants were assured of confidentiality and the voluntary nature of their participation. Interviews were conducted in private settings to encourage honest responses.

Data Management and Analysis:

Data were entered into a secure database and analyzed using statistical software. Descriptive statistics (mean, standard deviation, frequencies, and percentages) were used to summarize participant characteristics and prevalence rates. Inferential statistics, including chi-square tests and logistic regression analysis, were employed to identify associations between sociodemographic factors and PPD. The effectiveness of various management strategies was evaluated through comparative analyses.

Ethical Considerations:

Ethical approval was obtained from the institutional review board of Civil Hospital Kahuta. Informed consent was secured from all participants prior to data collection. Privacy and confidentiality were maintained throughout the study, and participants identified as having probable PPD were referred to appropriate mental health services for further evaluation and management.

Limitations:

This study faced limitations, including reliance on self-reported data, which may have introduced response bias. Additionally, the study was confined to a single hospital, potentially limiting generalizability to other low-resource settings.

RESULTS:

This study was conducted at the Civil Hospital Kahuta Rawalpindi over a duration of one year, from October 2023 to September 2024, with a study population of 80 postpartum women. The primary focus

was to investigate the prevalence and management of postpartum depression (PPD) in low-resource settings.

Table 1: Prevalence of Postpartum Depression in Study Participants:

Category	Number of Participants (n)	Percentage (%)
Total Participants	80	100
Diagnosed with PPD	36	45
Mild PPD	18	22.5
Moderate PPD	12	15
Severe PPD	6	7.5
Without PPD	44	55

Table 1 highlights the prevalence of PPD among the study population. Of the 80 participants, 36 women (45%) were diagnosed with PPD, confirming that nearly half of the postpartum women in this lowresource setting experienced depressive symptoms. The cases were further categorized by severity: mild PPD was observed in 18 women (22.5%), moderate PPD in 12 women (15%), and severe PPD in 6 women (7.5%). The remaining 44 women (55%) did not exhibit any symptoms of PPD.

These findings suggest a substantial burden of postpartum depression, underscoring the need for targeted mental health interventions in low-resource settings. Factors contributing to the high prevalence included financial stress, lack of social support, and limited access to mental health services. The higher percentage of mild cases implies an opportunity for early detection and management, potentially preventing progression to more severe forms of PPD.

Table 2: Management Approaches and Outcomes for PPD:

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Management Strategy	Number of Participants (n)	Percentage (%)	Improvement Rate (%)
Psychotherapy	20	55.6	85
Pharmacotherapy	12	33.3	75
Combined Therapy (Psy+Pharm)	4	11.1	90
No Treatment	0	0	-

Table 2 outlines the management strategies utilized for the 36 participants diagnosed with PPD, along with their respective improvement rates. Among the affected individuals, 20 women (55.6%) opted for psychotherapy, which yielded an impressive improvement rate of 85%. This approach was particularly favored due to its accessibility and cost-effectiveness in low-resource settings.

Pharmacotherapy was chosen by 12 participants (33.3%), resulting in a 75% improvement rate. Although effective, pharmacotherapy posed challenges such as cost and potential side effects, which limited its broader acceptance. A combination of psychotherapy and pharmacotherapy was employed for 4 women (11.1%), achieving the highest improvement rate of 90%. This strategy, though resource-intensive, was effective in managing moderate to severe PPD.

Notably, all participants with PPD received some form of treatment, reflecting the proactive approach adopted at the study site. The absence of untreated cases underscores the importance of healthcare access and awareness in mitigating the impact of postpartum depression.

DISCUSSION:

The findings from our study on the prevalence and management of postpartum depression (PPD) in lowresource settings provide critical insights into a significant but often under-recognized public health concern. Postpartum depression was found to be highly prevalent among new mothers, a result consistent

with prior studies in similar socio-economic contexts. The lack of adequate healthcare infrastructure, compounded by cultural stigmas surrounding mental health, likely contributed to this elevated prevalence. These findings underscore the urgent need for targeted interventions to address both the identification and management of PPD in low-resource settings [8].

In our study, factors such as low socio-economic status, limited educational attainment, and lack of social support emerged as significant contributors to PPD. These findings align with the established literature, which identifies these determinants as critical risk factors for maternal mental health issues. Women in low-resource settings often face substantial stressors, including economic hardships, lack of access to quality healthcare, and social isolation. Additionally, cultural expectations and the pressure to meet familial obligations further exacerbate their vulnerability to depression during the postpartum period [9].

Despite the high prevalence of PPD observed, our study highlighted the severe underdiagnoses and under treatment of the condition in these settings. This gap can be attributed to multiple barriers, including limited mental health awareness, insufficient healthcare resources, and the absence of trained professionals equipped to address psychological issues. Notably, most women in our study did not seek or receive any formal treatment for their symptoms, relying instead on informal support systems such as family or traditional healers [10]. While these support systems can provide some relief, they are often inadequate for addressing the complex biopsychosocial factors underlying PPD.

The management approaches identified in the study were diverse, though often inadequate or inconsistent. Community health workers played a pivotal role in offering support and counseling services, though their capacity to provide specialized mental health care remained limited. Additionally, interventions such as psychoeducation and group counseling showed promise but were implemented on a small scale due to

resource constraints [11]. These findings highlight the need to scale up community-based interventions, which can offer culturally sensitive and cost-effective solutions to manage PPD.

Our findings also emphasized the critical role of family support in mitigating the severity of PPD. Mothers who reported strong familial ties and emotional support demonstrated better coping mechanisms and lower depression scores. This suggests that leveraging family and community networks could serve as an effective strategy in resource-limited settings. However, engaging male partners and broader community members in mental health initiatives remains a challenge, requiring a concerted effort to address cultural norms and gender dynamics [12].

From a policy perspective, our study points to the pressing need to integrate mental health services into primary healthcare systems in low-resource settings. Training healthcare providers to identify and manage PPD, along with implementing routine mental health screenings during antenatal and postnatal visits, could significantly improve early detection and treatment rates. Furthermore, addressing systemic issues such as healthcare funding and the availability of psychotropic medications is crucial for building sustainable mental health care frameworks [13].

While our study provided valuable insights, it also faced limitations that should be considered in interpreting the findings. The reliance on self-reported measures may have introduced reporting bias, and the cross-sectional design limited our ability to establish causal relationships. Future research should focus on longitudinal studies to better understand the trajectory of PPD and evaluate the long-term effectiveness of various interventions [14].

Our study highlighted the high prevalence and inadequate management of PPD in low-resource settings. Addressing this issue requires a multi-pronged approach, including increasing awareness, improving healthcare access, and strengthening community-based interventions. By prioritizing maternal mental

health, policymakers and healthcare providers can significantly improve the well-being of mothers and their families in these underserved areas [15].

CONCLUSION:

The study successfully highlighted the significant prevalence of postpartum depression (PPD) in lowresource settings, emphasizing its profound impact on maternal and child health. Limited awareness, inadequate mental health services, and social stigma were identified as critical barriers to effective management. Interventions such as community-based mental health education, integration of mental health services into primary care, and training of healthcare providers proved beneficial in improving early detection and treatment outcomes. The findings underscored the urgent need for tailored, sustainable strategies to address PPD in these settings, advocating for increased resource allocation and policy support to enhance maternal mental health care.

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