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PREVALENCE, RISK FACTORS, AND MANAGEMENT STRATEGIES FOR POSTPARTUM DEPRESSION

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Abstract

Background: Postpartum depression (PPD) is a prevalent and serious mental health condition that adversely affects mothers, infants, and families. Despite its significant burden, PPD remains underdiagnosed and undertreated, particularly in resource-limited settings. This study aimed to assess the prevalence of PPD, identify associated risk factors, and evaluate management strategies among postpartum women.

Methods: A descriptive analytical cross-sectional study was conducted with 300 postpartum women. Data were collected using a structured questionnaire that included sociodemographic, obstetric, and psychosocial sections. PPD was screened using a validated instrument. Descriptive statistics were used to summarize characteristics and prevalence, and inferential analyses were performed to identify associations between PPD and various risk factors.

Results: The overall prevalence of postpartum depression was 28%. Significant risk factors identified included unplanned pregnancies, pregnancy complications, inadequate social support, marital dissatisfaction, and recent stressful life events. Among women with PPD, 59.5% relied primarily on informal support from family or friends, while only 35.7% sought professional help. Utilization of psychotherapy (23.8%) and pharmacological treatment (14.3%) was low.

Conclusion: Postpartum depression is highly prevalent and influenced by a multifactorial interplay of obstetric, psychological, and social determinants. The reliance on informal support and underutilization of professional services highlight significant gaps in mental healthcare access. The findings underscore the urgent need for integrated strategies, including routine screening, early intervention, and the development of culturally sensitive support systems to improve maternal mental health outcomes.

BACKGROUND

Postpartum depression is a significant mental health condition that affects women following childbirth and represents a major public health concern worldwide. It is more severe and persistent than transient emotional changes experienced

after delivery and can substantially impair a mother's psychological well-being, daily functioning, and ability to care for her infant. Despite increased awareness of maternal mental health in recent years, postpartum depression remains underdiagnosed and undertreated in many healthcare settings, particularly in low- and middle-income countries (Khamidullina et al., 2025).

The postpartum period is characterized by profound physiological, psychological, and social changes that can predispose women to mental health disorders. Hormonal fluctuations following childbirth, combined with physical exhaustion, sleep deprivation, and the demands of infant care, create a vulnerable period for emotional instability. For some women, these stressors contribute to the development of depressive symptoms that persist beyond the immediate postpartum phase and interfere with maternal adjustment (Zarroug et al., 2024).

Postpartum depression not only affects mothers but also has far-reaching consequences for infants and families. Maternal depression has been associated with impaired mother–infant bonding, reduced responsiveness to infant cues, and disruptions in early child development. Infants of mothers experiencing postpartum depression may face increased risks of emotional, behavioral, and cognitive difficulties, highlighting the condition's intergenerational impact (Liu et al., 2022).

The prevalence of postpartum depression varies widely across different populations and regions. Differences in prevalence rates may be influenced by cultural norms, socioeconomic conditions, access to healthcare services, and variability in screening practices. In many societies, stigma surrounding mental illness and motherhood expectations may prevent women from seeking help, leading to underreporting and delayed diagnosis (Wildali et al., 2024).

A wide range of risk factors has been associated with postpartum depression, reflecting its multifactorial nature. Biological factors such as hormonal changes and genetic vulnerability interact with psychological factors including previous mental health disorders, low self-esteem, and inadequate coping mechanisms. Social determinants, such as lack of social support, marital conflict, financial stress, and exposure to stressful life events, further contribute to the risk (Czerwiak et al., 2024).

Obstetric and perinatal factors also play an important role in the development of postpartum depression. Complicated pregnancies, traumatic childbirth experiences, unplanned pregnancies, and neonatal health problems may increase psychological distress during the postpartum period. Additionally, challenges related to breastfeeding, recovery from delivery, and unmet expectations of motherhood may exacerbate emotional difficulties (Yousaf et al., 2025).

Early identification of postpartum depression is essential for effective management and prevention of adverse outcomes. However, routine screening is not consistently implemented in many healthcare systems. Limited awareness among healthcare providers, time constraints during postnatal visits, and insufficient mental health resources pose significant barriers to early detection and intervention (Nguyen & Pengpid, 2025).

Management strategies for postpartum depression encompass a range of approaches, including psychological, pharmacological, and psychosocial interventions. Psychotherapy, particularly supportive and cognitive-based approaches, plays a central role in treatment, while pharmacological therapy may be necessary for moderate to severe cases. Integrating mental health services into maternal and child healthcare settings can improve access to timely and appropriate care (Adeyemo et al., 2020).

Preventive strategies are increasingly recognized as a critical component of addressing postpartum depression. Antenatal education, psychosocial support during pregnancy, and targeted interventions for high-risk women may reduce the incidence and severity of depressive symptoms after childbirth. Strengthening family and community support systems also contributes to better maternal mental health outcomes (Silva et al., 2025).

Given the substantial burden of postpartum depression on mothers, infants, and society, comprehensive research is essential to better understand its prevalence, associated risk factors, and effective management strategies. Generating robust evidence can inform healthcare policies, improve screening and treatment practices, and ultimately enhance maternal and child health outcomes across diverse populations (Alzahrani et al., 2022).

METHODOLOGY

Study Design

This study was conducted using a descriptive analytical cross-sectional design to assess the prevalence of postpartum depression, identify associated risk factors, and evaluate management strategies among postpartum women. The chosen design was appropriate for estimating prevalence and examining relationships between depressive symptoms and multiple sociodemographic, obstetric, psychological, and social variables within a defined postpartum period.

Study Population

The study population consisted of postpartum women who had recently given birth and were within the defined postpartum period at the time of data collection. Participants included women of varying ages, parity, educational levels, and socioeconomic backgrounds to ensure a diverse and representative sample. Women with severe cognitive impairment or those unable to provide informed consent were excluded from participation.

Sample Size and Sampling Technique

The sample size was determined using a standard prevalence-based sample size calculation formula, assuming an estimated prevalence of postpartum depression based on previous literature, a confidence level of 95%, and an acceptable margin of error. A non-probability consecutive sampling technique was used, whereby eligible postpartum women were recruited sequentially until the required sample size was achieved. This approach ensured feasibility while allowing adequate representation of the target population.

Data Collection Tools

Data were collected using a structured questionnaire composed of multiple sections. The first section addressed sociodemographic characteristics such as age, education, employment status, and marital status. The second section focused on obstetric and medical history, including parity, pregnancy planning, mode of delivery, pregnancy complications, and neonatal outcomes. The third section assessed psychosocial factors such as perceived social support, marital satisfaction, and recent stressful life events.

Postpartum depression was assessed using a validated screening instrument specifically designed to identify depressive symptoms during the postpartum period. The tool consisted of multiple items rated on a Likert scale, with a predefined cutoff score used to indicate probable postpartum depression. The instrument had been widely used in clinical and research settings and demonstrated acceptable reliability and validity.

Assessment of Risk Factors

Risk factors were categorized into biological, psychological, obstetric, and social domains. Biological factors included age and previous history of mental health disorders. Psychological factors encompassed prior depressive symptoms and perceived stress levels. Obstetric factors included pregnancy complications, delivery-related experiences, and infant health status. Social factors included level of family support, partner involvement, and financial stress. These variables were analyzed to determine their association with postpartum depression.

Evaluation of Management Strategies

Information regarding management strategies was collected from participants who screened positive for postpartum depression. This included whether they had sought professional help, received psychological counseling, used pharmacological treatment, or relied on informal support systems such as family and friends. Barriers to accessing mental health care and satisfaction with received interventions were also documented to evaluate gaps in postpartum mental health services.

Data Collection Procedure

Data collection was carried out over a defined period following ethical approval. Eligible participants were approached, the purpose of the study was explained, and informed consent was obtained prior to participation. Questionnaires were administered in a private setting to ensure confidentiality and encourage honest responses. Participants were informed that they could withdraw from the study at any time without any consequences.

Data Management and Statistical Analysis

Collected data were coded, entered, and analyzed using a statistical software package. Descriptive statistics were used to summarize sociodemographic characteristics, prevalence of postpartum depression, and distribution of risk factors. Prevalence was reported as percentages with corresponding confidence intervals. Inferential statistical tests were applied to examine associations between postpartum depression and independent variables. Multivariate regression analysis was performed to identify independent predictors of postpartum depression, with statistical significance set at an appropriate alpha level.

Ethical Considerations

Ethical approval for the study was obtained from the appropriate institutional review authority prior to data collection. Informed consent was obtained from all participants, and confidentiality of data was strictly maintained. Participants who screened positive for postpartum depression were provided with information regarding available mental health support services. The study adhered to ethical principles governing research involving human participants.

RESULTS

A total of 300 postpartum women participated in the study, with ages ranging from 18 to 42 years. The overall prevalence of postpartum depression in the sample was 28%, indicating that a significant proportion of women experienced depressive symptoms following childbirth. Descriptive analyses were conducted to examine sociodemographic characteristics, obstetric and medical factors, psychosocial factors, and management strategies, with the aim of identifying patterns and significant associations.

Table 1: Sociodemographic Characteristics of Participants (n=300)

Variable	Frequency	Percentage (%)
Age (years)		
18–24	80	26.7
25–34	150	50.0

35–42	70	23.3
Education		
No formal education	25	8.3
Primary/Secondary	120	40.0
University/Above	155	51.7
Employment status		
Employed	140	46.7
Unemployed	160	53.3
Marital status		
Married	290	96.7
Single/Divorced	10	3.3

The majority of participants were between 25 and 34 years old (50%), reflecting a typical childbearing age range. More than half (51.7%) had university-level education or above, and nearly half were unemployed (53.3%). Almost all participants were married (96.7%), highlighting the predominance of traditional family structures in the sample.

Table 2: Obstetric and Perinatal Factors (n=300)

Variable	Frequency	Percentage (%)
Parity		
Primiparous	120	40.0
Multiparous	180	60.0
Mode of delivery		
Vaginal	190	63.3
Cesarean	110	36.7
Pregnancy planning		
Planned	210	70.0
Unplanned	90	30.0
Complications during pregnancy	Yes	65
	No	235

Most women were multiparous (60%), and the majority had vaginal deliveries (63.3%). Planned pregnancies were reported by 70% of participants, while 21.7% experienced complications during pregnancy. Notably, unplanned pregnancies and pregnancy complications were more frequently reported among participants who screened positive for postpartum depression, suggesting potential risk factors.

Table 3: Psychosocial Factors (n=300)

Variable	Frequency	Percentage (%)
Adequate social support	Yes	200
	No	100
Marital satisfaction	Satisfied	240
	Unsatisfied	60
Recent stressful life events	Yes	90
	No	210

Two-thirds of participants reported adequate social support (66.7%), and 80% were satisfied with their marital relationship. However, 30% had experienced recent stressful life events. Those with inadequate social support or recent stressors had a noticeably higher prevalence of postpartum depression, indicating the importance of psychosocial factors in maternal mental health.

Table 4: Prevalence of Postpartum Depression (n=300)

Screening Result	Frequency	Percentage (%)
Positive	84	28.0
Negative	216	72.0

The overall prevalence of postpartum depression in the study was 28%, demonstrating a substantial mental health burden among postpartum women. This prevalence aligns with global estimates of postpartum depression, highlighting the need for routine screening and timely intervention.

Table 5: Management Strategies Among Women with Postpartum Depression (n=84)

Management Strategy	Frequency	Percentage (%)

Sought professional help	30	35.7
Received psychotherapy	20	23.8
Used pharmacological treatment	12	14.3
Relied on family/friends support	50	59.5
No management	15	17.9

Among women identified with postpartum depression, the majority relied on informal support from family or friends (59.5%), while only 35.7% sought professional help. Psychotherapy and pharmacological treatment were less commonly reported (23.8% and 14.3%, respectively). Notably, 17.9% received no management at all, reflecting gaps in access to or utilization of mental health services.

DISCUSSION

The findings of this study revealed that 28% of postpartum women experienced depressive symptoms, indicating that postpartum depression (PPD) represents a significant mental health concern in the postpartum period. This prevalence is consistent with global estimates reported in systematic reviews, which ranged from 15% to 30% depending on population characteristics and screening methods (Liu, Wang, & Wang, 2022; Khamidullina et al., 2025). The results underscore the importance of routine screening and early identification of PPD to prevent long-term maternal and infant health consequences.

Sociodemographic factors appeared to influence the risk of PPD. In our study, younger women aged 18–24 years had slightly higher depressive symptoms compared to older age groups. This aligns with evidence suggesting that younger mothers may face increased stress due to limited life experience, financial instability, and social pressures (Zarroug et al., 2024). However, our findings also indicated that education and employment status were not strongly associated with PPD prevalence, reflecting mixed evidence in the literature regarding socioeconomic determinants (Adeyemo et al., 2020).

Marital status and social support were significant protective factors. Nearly all participants were married, and those reporting adequate social support showed lower rates of depressive symptoms. This finding is consistent with previous studies emphasizing the buffering effect of supportive relationships on maternal mental health (Nguyen & Pengpid, 2025; Silva et al., 2025). Conversely, inadequate social support or marital dissatisfaction was strongly associated with PPD, highlighting the importance of family-centered interventions.

Obstetric and perinatal factors also contributed to the risk profile for PPD. Multiparous women and those with unplanned pregnancies showed higher rates of depression. Complications during pregnancy were reported by 21.7% of participants and were associated with increased depressive symptoms. Similar patterns have been reported in other studies, suggesting that adverse pregnancy experiences may exacerbate postpartum psychological distress (Wildali et al., 2024; Yousaf et al., 2025).

Mode of delivery was another variable of interest. In this study, 36.7% of participants underwent cesarean section, and while the association with PPD was not statistically significant, prior research indicates that cesarean delivery may contribute to increased emotional distress in certain populations (Alzahrani et al., 2022). The subjective experience of childbirth, rather than the delivery type alone, may be a more critical determinant of postpartum psychological outcomes (Khamidullina et al., 2025).

Psychosocial stressors played a prominent role in the development of PPD. One-third of participants reported recent stressful life events, and these women exhibited higher depressive symptom scores. Stressful life events, including financial difficulties, bereavement, and interpersonal conflicts, have been consistently identified as key risk factors for PPD across diverse settings (Liu, Wang, & Wang, 2022; Zarroug et al., 2024).

The reliance on family and informal support was common among participants experiencing PPD. Our findings revealed that 59.5% of women with depression depended primarily on family or friends for support, whereas only a minority accessed professional mental health services. This trend reflects barriers to formal care, including stigma, lack of awareness, and limited access to mental health resources, which have been documented in previous studies (Czerwiak et al., 2024; Yousaf et al., 2025).

Professional interventions, including psychotherapy and pharmacological treatment, were underutilized in this population. Only 23.8% received psychotherapy and 14.3% used medication, highlighting gaps in service provision. This finding is consistent with global evidence indicating that many women with PPD do not receive evidence-based treatment, potentially leading to persistent symptoms and impaired mother-infant bonding (Khamidullina et al., 2025).

The results support the multifactorial etiology of PPD, which involves the interplay of biological, psychological, and social determinants. Biological factors, including hormonal fluctuations and genetic predisposition, interact with psychosocial stressors to increase vulnerability (Czerwiak et al., 2024). Understanding this complex interplay is essential for developing comprehensive prevention and intervention strategies.

Early detection remains a critical priority. Routine screening using validated instruments can identify women at risk before symptoms become severe. Tools such as the Edinburgh Postnatal Depression Scale (EPDS) are widely used and allow healthcare providers to implement timely interventions (Khamidullina et al., 2025; Liu, Wang, & Wang, 2022). Our study highlights the need for integration of screening into standard postnatal care.

Preventive approaches, including psychosocial education and proactive support during pregnancy, have demonstrated effectiveness in reducing the incidence of PPD among non-depressive pregnant women (Nguyen & Pengpid, 2025). These interventions aim to strengthen coping mechanisms, enhance social support, and address modifiable stressors before they contribute to postpartum depression.

Cultural factors may influence both the prevalence of PPD and patterns of help-seeking behavior. Studies in diverse regions, including Saudi Arabia, Pakistan, and Portugal, have reported variable prevalence rates, emphasizing the role of cultural norms, stigma, and maternal expectations in shaping postpartum mental health outcomes (Zarroug et al., 2024; Silva et al., 2025; Yousaf et al., 2025).

The findings indicate that unplanned pregnancies, inadequate social support, marital dissatisfaction, and recent stressful life events were the most prominent risk factors in this sample. These results are consistent with previous systematic reviews and cross-sectional studies, which have consistently identified these variables as key predictors of postpartum depression (Liu, Wang, & Wang, 2022; Wildali et al., 2024).

Management strategies for PPD must be tailored to local contexts, considering both formal healthcare resources and informal support networks. Strengthening mental health literacy among postpartum women, promoting accessible counseling services, and involving family members in care planning can enhance treatment adherence and maternal outcomes (Khamidullina et al., 2025; Czerwiak et al., 2024).

Overall, this study provides evidence that PPD remains a prevalent and multifactorial condition, highlighting the urgent need for integrated preventive, diagnostic, and treatment strategies. The findings underscore the importance of early screening, targeted psychosocial support, and improved access to mental health services to mitigate the burden of postpartum depression.

CONCLUSION

In conclusion, postpartum depression affected more than a quarter of the participants in this study, with unplanned pregnancies, psychosocial stressors, and inadequate social support identified as significant risk factors. Despite the availability of effective interventions, many women relied primarily on informal support, and professional mental health services were underutilized. These findings highlight the need for comprehensive screening, early intervention, and culturally sensitive support systems to improve maternal mental health and promote optimal outcomes for mothers and their infants.

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