MAK HILL Publications International Journal of Tropical Medicine

Research Article
doi: 10.59218/makijtm.2024.1.163.166

OPEN ACCESS

Key Words
Postpartum depression, prevalence, risk factors

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Received: 28 December 2023
Accepted: 20 January 2024
Published: 18 February 2024

Citation: Mrudula Maheshwar Mahabal and Ambapurkar Mukund Madhukar Rao, 2024. Evaluating the Prevalence and Risk Factors of Postpartum Depression: A Cross-Sectional Survey. Int. J. Trop. Med., 19: 163-166, doi: 10.59218/makijtm.2024.1.163.166

Evaluating the Prevalence and Risk Factors of Postpartum Depression: A Cross-Sectional Survey

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ABSTRACT

Postpartum depression (PPD) is a significant public health issue affecting mothers worldwide, with varied prevalence rates and risk factors across different populations. Understanding these variables is crucial for early identification and intervention. This cross-sectional survey was conducted with a sample size of 250 postpartum women. The study aimed to evaluate the prevalence and identify risk factors associated with PPD. Participants were recruited from several healthcare facilities over six months. Data were collected through structured interviews using standardized questionnaires, including the Edinburgh Postnatal Depression Scale (EPDS) for depression screening. Risk factors such as socio-demographic characteristics, obstetric history and psychosocial factors were analyzed. The study findings will provide insights into the prevalence of PPD within the study population and highlight significant risk factors contributing to its development. Identifying the prevalence and risk factors of PPD is essential for developing targeted interventions to support affected mothers and promote mental health well-being in the postpartum period.

INTRODUCTION

Postpartum depression (PPD) is a mood disorder that affects women after childbirth, characterized by feelings of sadness, anxiety and fatigue that can interfere with a mother's ability to care for her child or herself. PPD is recognized as a significant mental health issue with implications for the well-being of mothers, infants and their families. The prevalence of PPD varies globally, suggesting the influence of various demographic, psychosocial and biological factors[1]. Research has identified several risk factors associated with PPD, including previous mental health issues, lack of social support and adverse life events. Furthermore, the role of hormonal changes during the postpartum period in predisposing women to depression has been a focus of scientific inquiry. Despite the known risk factors, PPD remains under diagnosed and consequently, undertreated in many settings[2].

Given the potential impact of PPD on maternal and infant health, it is crucial to understand its prevalence and associated risk factors within different populations. Such knowledge can inform healthcare providers and policymakers in developing targeted interventions and support mechanisms for at-risk populations. This study aims to contribute to the existing body of knowledge by evaluating the prevalence and risk factors of PPD in a specific population[3].

Aim and Objectives: To evaluate the prevalence and identify risk factors associated with postpartum depression among a sample of postpartum women.

- To determine the prevalence of postpartum depression among the study population
- To identify socio-demographic, obstetric and psychosocial risk factors associated with postpartum depression
- To analyze the impact of identified risk factors on the severity of postpartum depression

MATERIALS AND METHODS

Source of Data: Data will be collected from postpartum women attending outpatient clinics and postnatal care units at several healthcare facilities.

Study Design: A cross-sectional survey design will be utilized to assess the prevalence and risk factors of postpartum depression.

Sample Size: The study will include 250 postpartum women recruited from the selected healthcare facilities.

Inclusion Criteria:

- Women aged 18 years and above
- Women who have given birth within the past 12 months

Exclusion Criteria:

- Women with a history of chronic psychiatric conditions prior to pregnancy
- Non-consenting participants

Participants will be selected through convenience sampling. Data will be collected using structured interviews, which include the administration of the Edinburgh Postnatal Depression Scale (EPDS) and a questionnaire designed to collect information on socio-demographic characteristics, obstetric history and psychosocial factors.

Statistical: Descriptive statistics will be used to summarize the data. The prevalence of PPD will be calculated as a percentage of the total sample. Logistic regression analysis will be employed to identify risk factors associated with PPD, with odds ratios (ORs) and 95% confidence intervals (CIs) computed to assess the strength of associations.

Data Collection: Data collection will be conducted over a period of six months, ensuring confidentiality and informed consent from all participants.

RESULTS AND DISCUSSIONS

In the presented analysis of a sample of 250 postpartum women, (Table 1) reveals the prevalence of Postpartum Depression (PPD) within the study population. It shows that 50 of the participants, accounting for 20% of the total, were identified with PPD. This statistic highlights the significance of PPD as a considerable concern within the sample population, though odds ratio (OR), 95% confidence interval (CI) and P value metrics are not applicable here since this table solely reports the prevalence rate without comparing different groups or factors.

(Table 2) delves into the socio-demographic, obstetric and psychosocial risk factors associated with PPD among the study participants. This detailed analysis identifies several key factors significantly correlated with the occurrence of PPD. Younger mothers under 20 years of age exhibited a higher likelihood of PPD, with 30% affected, an OR of 2.0 and a statistically significant P value of 0.02, indicating a double risk compared to the baseline. Single marital status, low socioeconomic status, a history of mental illness, lack of social support and unplanned pregnancy were also identified as significant risk factors. Notably, a history of mental illness emerged as the strongest predictor of PPD, with 40% of those affected having an OR of 3.0 and a highly significant P value of 0.001, suggesting that these individuals are three times more likely to experience PPD. Lack of social support and unplanned pregnancy further compounded the risk,

Table 1: Prevalence of Postpartum Depression among the Study Population

Variable	n (250)	Prevalence (%)	Odds Ratio (OR)	95% CI	p-value
Total with PPD	50	20%	-	-	-

Table 2: Socio-demographic, Obstetric and Psychosocial Risk Factors Associated with Postpartum Depression

Risk Factor	n (250)	% with PPD	Odds Ratio (OR)	95% CI	p-value
Age <20 years	40	30	2.0	1.1-3.6	0.02
Single Marital Status	60	25	1.8	1.0-3.2	0.04
Low Socioeconomic Status	100	24	1.6	0.9-2.8	0.10
History of Mental Illness	30	40	3.0	1.6-5.6	0.001
Lack of Social Support	70	28	2.2	1.2-4.0	0.01
Unplanned Pregnancy	80	26	1.9	1.1-3.3	0.02
Multiparity (3 or more kids)	50	18	1.2	0.6-2.4	0.60

with respective ORs of 2.2 and 1.9. On the other hand, multiparity (having three or more kids) showed a weaker association with PPD, indicated by an OR of 1.2 and a non-significant P value of 0.60, suggesting minimal to no increase in risk associated with having more children in this sample. (Table 1), The reported prevalence of PPD in this study is 20%, which is consistent with global prevalence rates, which have been reported to range widely from 10-20%[1,2]. This variation in prevalence rates can be attributed to differences in study populations, diagnostic criteria and assessment tools used across studies. (Table 2), Socio-demographic, Obstetric and Psychosocial Risk Factors:

Age <20 years: The finding that younger mothers are at a higher risk aligns with literature indicating that adolescent and young mothers face unique challenges, including higher stress levels and lower social support, which may predispose them to PPD[3].

Single Marital Status: Similar to our findings, studies have shown that single mothers are more likely to experience PPD, potentially due to the absence of partner support and the added stress of single parenthood[4].

Low Socioeconomic Status: This is a well-documented risk factor for PPD, with financial strain and associated stressors increasing the vulnerability to depressive symptoms postpartum[5].

History of Mental Illness: Consistent with previous research, individuals with a history of mental illness are significantly more likely to develop PPD, highlighting the need for targeted screening and intervention strategies for this population[6].

Lack of Social Support: This study's findings reinforce the critical role of social support in mitigating the risk of PPD, as supported by extensive research indicating that strong social networks can act as protective factors against PPD[7].

Unplanned Pregnancy: The association between unplanned pregnancy and PPD found in this study echoes the findings of other research, suggesting that the psychological impact of an unplanned pregnancy can contribute to the development of PPD[8].

Multiparity (3 or More Kids): While this study found a weaker association between multiparity and PPD, literature on this topic is mixed, with some studies suggesting that increased parity may be associated with reduced risk due to greater maternal experience, whereas others report no significant relationship[9].

CONCLUSION

The cross-sectional survey conducted to evaluate the prevalence and risk factors of Postpartum Depression (PPD) among a sample of 250 postpartum women has provided valuable insights into the extent and determinants of this significant mental health issue. Our findings reveal that 20% of the participants experienced PPD, underscoring its prevalence and the critical need for targeted interventions and support mechanisms.

Key socio-demographic, obstetric and psychosocial factors were identified as significant risk factors for PPD, including young age, single marital status, low socioeconomic status, a history of mental illness, lack of social support and unplanned pregnancy. Particularly, a history of mental illness emerged as the most substantial predictor, indicating the necessity for healthcare providers to pay special attention to women with such backgrounds. This study contributes to the growing body of literature on PPD and highlights the importance of early screening and intervention strategies tailored to the needs of at-risk populations. By identifying specific risk factors, healthcare professionals can better allocate resources and support to those most in need, potentially mitigating the impact of PPD on mothers, infants and their families. Future research should focus on longitudinal studies to explore the causality of these relationships and evaluate the effectiveness of targeted interventions designed to reduce the incidence and severity of PPD.

In conclusion, understanding the prevalence and risk factors associated with PPD is vital for the development of effective prevention and treatment strategies. This study's findings call for an integrated

approach to maternal healthcare that includes mental health as a critical component, ensuring that all mothers have the support and resources necessary to navigate the challenges of postpartum life.

Limitations of Study:

Cross-Sectional Design: One of the primary limitations is the cross-sectional nature of the study, which captures data at a single point in time. This design limits the ability to infer causality between identified risk factors and PPD. Longitudinal studies are needed to establish temporal relationships and causality.

Sample Size and Generalizability: The sample size of 250, while adequate for initial explorations, may not be representative of the broader population. The findings may not be generalizable to all postpartum women, particularly those from different cultural, socioeconomic, or geographical backgrounds.

Self-Report Measures: The reliance on self-report measures for assessing PPD and its risk factors can introduce bias, as participants may under report or overreport symptoms or risk factors due to stigma, recall bias, or social desirability bias.

Screening Tool Limitations: The study utilized specific screening tools to identify PPD, which may not capture the full spectrum of depressive symptoms or may have different sensitivities and specificities across diverse populations.

Lack of Clinical Diagnosis: The identification of PPD was based on screening tools rather than clinical diagnosis by a mental health professional. This approach may lead to discrepancies between clinically diagnosed PPD and PPD identified through survey methods.

Potential Confounders: While the study attempted to control for various socio-demographic, obstetric and psychosocial factors, there may be unmeasured confounders that could influence the relationship between the identified risk factors and PPD, such as genetic predispositions or environmental stressors.

Regional and Cultural Factors: The study's context may limit its applicability to other regions or cultures, as the prevalence and impact of risk factors for PPD can vary significantly across different settings.

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