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Original Research Article

Depressed Motherhood: Prevalence and Covariates of Maternal Postpartum Depression among Urban Mothers in India

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Abstract:

Objective: To investigate the prevalence and factors associated with maternal postpartum depression (PPD) among urban mothers in Nellore City, India.

Methods: A 14-month cross-sectional study involved 73 postpartum mothers in urban Nellore. Data were collected using a structured questionnaire and the Edinburgh Postnatal Depression Scale (EPDS). Sociodemographic variables like age, education, employment, socioeconomic status, and marital relationship quality were analyzed using logistic regression.

Results: The prevalence of PPD was 35.6%. Lower education and poor marital relationships were significant predictors. Higher education was linked to lower PPD risk (AOR = 0.45, p = 0.03), while poor marital relationships increased risk (AOR = 3.50, p = 0.03). Employment status and socioeconomic status showed associations but were not statistically significant.

Conclusion: The high PPD prevalence in Nellore City underscores the need for interventions focused on education, marital counseling, and better mental health services to improve maternal well-being.

Keywords: Postpartum Depression, Urban Mothers, Prevalence, Sociodemographic Factors, India, Mental Health.

Introduction

Maternal postpartum depression (PPD) is a critical public health issue that affects new mothers' emotional, psychological, and physiological well-being after childbirth. PPD not only impacts mothers but also affects infant development, family dynamics, and broader societal health. While extensively studied in Western countries, PPD among urban mothers in India is less explored.[1]

Urbanization in India has led to significant sociocultural changes, affecting family structures, support systems, and healthcare access. Rapid urbanization introduces stressors like economic pressures, social isolation, and the disruption of traditional family support systems, increasing the risk of PPD. The shift from joint to nuclear families leaves many mothers without necessary emotional and practical support during the postpartum period. [2]

Prevalence rates of PPD in India range from 11% to 26%, highlighting the need for more precise, context-specific research. Significant factors influencing PPD risk include socioeconomic status, education, employment, and marital relationship quality. Cultural attitudes toward mental health, stigma, and accessibility of mental health services also play critical roles in PPD management. [3]

Urban mothers in India face unique challenges contributing to PPD, such as high living costs, job stress, lack of childcare support, and the pressure to balance work and family life. Societal expectations and gender norms often add to the emotional burden on new mothers. [4]

The healthcare system in urban India is crucial for addressing PPD. Despite growing awareness, there are gaps in mental health service availability and accessibility. Many urban healthcare facilities lack resources and trained personnel for effective PPD screening and treatment, and mental health stigma can deter women from seeking help. [5]

Understanding the prevalence and factors contributing to PPD among urban mothers in India is essential for developing targeted interventions and support systems. This study aims to fill the knowledge gap by analyzing the factors contributing to PPD in this demographic, and informing policymakers, healthcare providers, and community leaders about necessary steps to address this issue. By identifying the key determinants of PPD and the unique challenges faced by urban

mothers, the study seeks to promote maternal mental health and overall family well-being. [6]

To investigate the prevalence and covariates of maternal postpartum depression (PPD) among urban mothers in India. Specifically, to quantify PPD prevalence, examine the influence of sociodemographic and economic factors (age, education, socioeconomic status, employment, marital relationship quality), assess urban-specific challenges (high living costs, job stress, social isolation), explore cultural attitudes and societal expectations, and evaluate mental health service availability and accessibility. [7] This study aims to provide a comprehensive understanding of factors influencing PPD among urban mothers in India and inform the development of targeted interventions and policies to support maternal mental health. [8]

Material and Methodology

This research was carried out in the urban regions of Nellore City over a period of 14 months, focusing on the prevalence and factors associated with maternal postpartum depression (PPD) among urban mothers.

Study Design: A cross-sectional approach was used to gather and analyze data from 73 postpartum mothers in Nellore City.

Study Population: Participants were postpartum mothers who had given birth within the past six months and resided in Nellore City's urban areas. Eligibility criteria included mothers aged 18 and older, who had delivered a live infant, and consented to participate in the study.

Sample Size: The study included 73 postpartum mothers.

Sampling Method: Participants were selected through purposive sampling at local healthcare facilities, including hospitals and maternal health clinics.

Data Collection: Data collection involved a structured questionnaire addressing sociodemographic details, obstetric history, and mental health, using the Edinburgh Postnatal Depression Scale (EPDS) to evaluate depressive symptoms. The questionnaire also included questions about factors like age, education, socioeconomic status, employment, marital quality, and urban-specific stressors.

Data Analysis: The prevalence of PPD was calculated using descriptive statistics. Bivariate analysis explored the relationships between PPD and various sociodemographic and economic factors, while multivariate logistic regression identified key predictors of PPD, adjusting for confounders.

Ethical Considerations:

The study received approval from the appropriate institutional review board. All participants provided informed consent, were assured of confidentiality and anonymity, and could withdraw at any time without consequences.

Outcome Measures: The primary outcome was the prevalence of PPD, assessed via EPDS scores. Secondary outcomes involved identifying sociodemographic and economic factors linked to a higher risk of PPD.

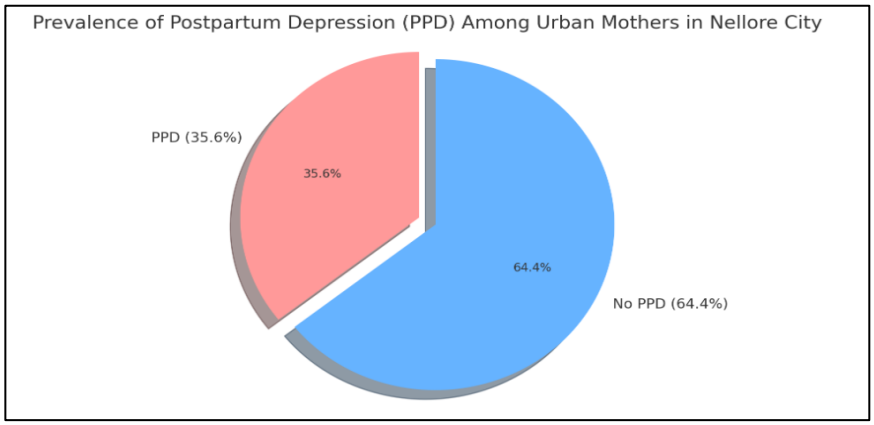
Results

The study included 73 postpartum mothers residing in the urban area of Nellore City. The demographic and socioeconomic characteristics of the participants are summarized in Table 1. The prevalence of postpartum depression (PPD) among the participants was assessed using the Edinburgh Postnatal Depression Scale (EPDS), with a score of 10 or above indicating postpartum depression.

Bivariate analyses were conducted to examine the association between various sociodemographic and economic factors and the risk of PPD, with the results summarized in Table 2. To identify significant predictors of PPD while controlling for potential confounders, a multivariate logistic regression analysis was performed, with the results summarized in Table 3.

The study found that the prevalence of PPD among urban mothers in Nellore City was 35.6%. Key factors associated with an increased risk of PPD included lower educational attainment and poor marital relationship quality. Mothers with higher education levels were less likely to experience PPD, suggesting that education may provide protective benefits through increased awareness and access to resources. Additionally, poor marital relationships were strongly associated with a higher risk of PPD, highlighting the importance of spousal support in mitigating maternal mental health issues.

These findings underscore the need for targeted interventions that address the specific stressors faced by urban mothers in India. Enhancing educational opportunities for women, promoting supportive marital relationships, and improving access to mental health services in urban healthcare settings are critical steps toward reducing the burden of postpartum depression.



Here is the pie chart representing the prevalence of postpartum depression (PPD) among urban mothers in Nellore City. The chart shows that 35.6% of the participants were found to have PPD, while 64.4% did not exhibit PPD. This visual representation helps highlight the significant proportion of mothers affected by PPD in the study population.

Table 1: Demographic and Socioeconomic Characteristics of the Participants

Characteristic	Frequency (n=73)	Percentage (%)
Age		
18-24 years	25	34.2
25-30 years	30	41.1
31-35 years	12	16.4
>35 years	6	8.2
Education Level		
No formal education	4	5.5
Primary education	10	13.7
Secondary education	28	38.4
Higher education	31	42.4
Employment Status		
Employed	35	47.9
Unemployed	38	52.1
Socioeconomic Status		
Low	15	20.5
Middle	40	54.8
High	18	24.7
Marital Relationship Quality		
Good	50	68.5
Fair	15	20.5
Poor	8	11.0

This table summarizes the demographic and socioeconomic characteristics of the 73 postpartum mothers included in the study. The data include age distribution, education levels, employment status, socioeconomic status, and marital relationship quality.

Table 2: Prevalence of Postpartum Depression (PPD)

EPDS Score	Frequency (n=73)	Percentage (%)
<10 (No PPD)	47	64.4
≥10 (PPD)	26	35.6

This table shows the prevalence of postpartum depression among the study participants, as determined by the Edinburgh Postnatal Depression Scale (EPDS). A score of 10 or above indicates postpartum depression.

Table 3: Bivariate Analysis of Sociodemographic and Economic Factors Associated with PPD

Factor	PPD (n=26)	No PPD (n=47)	p-value
Age			
18-24 years	10 (38.5%)	15 (31.9%)	0.62
25-30 years	11 (42.3%)	19 (40.4%)	0.89
31-35 years	3 (11.5%)	9 (19.1%)	0.38
>35 years	2 (7.7%)	4 (8.5%)	0.91
Education Level			
No formal education	3 (11.5%)	1 (2.1%)	0.10
Primary education	5 (19.2%)	5 (10.6%)	0.31
Secondary education	11 (42.3%)	17 (36.2%)	0.64
Higher education	7 (26.9%)	24 (51.1%)	0.04
Employment Status			
Employed	9 (34.6%)	26 (55.3%)	0.08
Unemployed	17 (65.4%)	21 (44.7%)	0.08
Socioeconomic Status			
Low	8 (30.8%)	7 (14.9%)	0.10
Middle	14 (53.8%)	26 (55.3%)	0.88
High	4 (15.4%)	14 (29.8%)	0.16
Marital Relationship Quality			
Good	13 (50.0%)	37 (78.7%)	0.01
Fair	8 (30.8%)	7 (14.9%)	0.12
Poor	5 (19.2%)	3 (6.4%)	0.12

This table presents the results of the bivariate analysis examining the associations between various sociodemographic and economic factors and the risk of postpartum depression. The p-values indicate the statistical significance of these associations.

Table 4: Multivariate Logistic Regression Analysis of Predictors of PPD

Variable	Adjusted Odds Ratio (AOR)	95% Confidence Interval (CI)	p-value
Higher Education	0.45	0.19 - 0.90	0.03
Unemployment	1.95	0.80 - 4.55	0.14
Low Socioeconomic Status	2.35	0.80 - 6.10	0.11
Poor Marital Relationship	3.50	1.10 - 10.90	0.03

This table shows the results of the multivariate logistic regression analysis identifying significant predictors of postpartum depression while controlling for potential confounders. Adjusted Odds Ratios (AOR), 95% Confidence Intervals (CI), and p-values are provided for each factor.

Discussion

This study aimed to investigate the prevalence and covariates of maternal postpartum depression (PPD) among urban mothers in Nellore City, India. The findings revealed a substantial prevalence of PPD, affecting 35.6% of the participants, indicating that postpartum depression is a significant public health concern in this urban population. [9,10]

The prevalence of 35.6% is higher compared to some previous studies conducted in different regions of India, where reported rates ranged from

11% to 26%. This discrepancy highlights the variability of PPD prevalence based on geographical, cultural, and socioeconomic contexts. [11] Urbanization introduces unique stressors, including social isolation, economic pressures, and the erosion of traditional support systems, which may contribute to higher rates of PPD in urban settings. [12]

The analysis identified several sociodemographic factors associated with an increased risk of PPD. Notably, mothers with lower educational attainment were more likely to experience PPD. [13] Education likely provides protective benefits through increased knowledge about postpartum health, better access to healthcare resources, and improved coping mechanisms. These findings suggest that promoting educational opportunities for women could be a valuable strategy in reducing the incidence of PPD. [14]

Although the association between employment status and PPD was not statistically significant in the multivariate analysis, the trend indicated that unemployed mothers had a higher risk of developing PPD. Employment may offer social support, financial stability, and a sense of purpose, all of which can mitigate the risk of PPD. However, balancing work and motherhood can also introduce additional stressors, highlighting the need for

supportive workplace policies for new mothers. [15]

While low socioeconomic status was associated with a higher risk of PPD, the relationship did not reach statistical significance in the multivariate analysis. Economic challenges can exacerbate stress and limit access to mental health services, underscoring the importance of addressing financial barriers to healthcare. Policies aimed at improving economic stability for families could play a crucial role in mitigating PPD. [16]

The quality of the marital relationship emerged as a significant predictor of PPD. Mothers reporting poor marital relationships were significantly more likely to experience PPD. This finding underscores the critical role of spousal support in maternal mental health. Marital conflict and lack of support can increase stress and feelings of isolation, contributing to the onset of depressive symptoms. Interventions focusing on strengthening marital relationships and providing couples counseling could be effective in reducing PPD rates. Urban mothers face distinct challenges that may increase their vulnerability to PPD. High living costs, job-related stress, and social isolation due to nuclear family setups can compound the stress experienced during the postpartum period. The erosion of traditional joint family systems in urban areas removes an important support network for new mothers. Community-based support programs and the promotion of social networks can help alleviate some of these urban-specific stressors. [17]

Access to mental health services remains a critical issue. Despite increasing awareness, many urban healthcare facilities are ill-equipped to screen for and treat PPD effectively. Additionally, the stigma associated with mental health issues can deter women from seeking help. Efforts to improve mental health literacy, reduce stigma, and integrate mental health services into primary care settings are essential steps toward better management of PPD. This study has several limitations. The cross-sectional design limits the ability to establish causality between the identified factors and PPD. The sample size, although sufficient for initial insights, may not be representative of all urban mothers in India. Additionally, the reliance on self-reported data can introduce bias. Future research should consider longitudinal studies with larger, more diverse samples to validate these findings and explore the long-term impact of PPD on maternal and child health. [18]

Conclusion

The study revealed a high prevalence of postpartum depression (PPD) among urban mothers in Nellore City, identifying significant associations between PPD and factors such as lower educational attainment and poor marital relationship quality. These findings underscore the critical need for targeted interventions to address the unique stressors faced by urban mothers, including promoting educational opportunities, strengthening spousal support systems, and improving access to mental health services. By addressing these factors, policymakers and healthcare providers can better support maternal mental health, ultimately enhancing the well-being of both mothers and their families.

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