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The prevalence and risk factors of postpartum depression among urban, low-income mothers: A retrospective study

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ABSTRACT

Introduction

Particularly in the metropolitan areas of low socioeconomic status where inequalities in mothers' mental health are most prominent, Postpartum Depression (PPD) poses a severe threat to public health.

Purpose

This retrospective study aimed to determine the prevalence of PPD and its risk variables among urban, low-income mothers.

Methods

We looked back at the medical histories of 200 women at the Department of Obstetrics and Gynaecology, Patna Medical College and Hospital (PMCH), Bihar, India, who had recently given birth in poor cities. PPD and risk factor information were gathered when eligibility criteria were established. Estimating prevalence and identifying risk factors were among the statistical analyses performed.

Results

A high prevalence of PPD (32.5%) was found in the study, highlighting the significant burden of PPD in this community. A lack of social support (51.2%), exposure to high environmental stressors (55.6%), a history of mental health disorders (48.9%), and being younger (38.2% in the 18-25 years age bracket) were the significant risk factors of PPD in the study population. These results are important because they shed light on the unique difficulties experienced by postpartum patients living in urban areas with low incomes.

Conclusion

This research emphasises the critical importance of implementing specific programmes to reduce PPD in low-income metropolitan areas. Early screening, intervention, and support programmes should be adopted to address the risk factors identified. To promote a more accepting atmosphere for mothers' mental health, healthcare policies should emphasise mental health treatments and reduce stigma.

INTRODUCTION

Postpartum Depression (PPD) is a significant mental health illness that affects women in the postpartum period (the time after giving birth). Although PPD can affect women of any socioeconomic status, the disease is more common and has more severe consequences in low-income metropolitan

areas (Santiago, 2020).

The risk and severity of postpartum depression increase in high-stress, low-resource environments like those found in low-income urban areas. Vulnerability to mental health disorders like PPD expands in settings where access to adequate treatment, social support, and economic stability is limited (Avramidis, 2017). Financial stress, social isolation, housing instability, and exposure to adversity are all variables that can contribute to the onset and maintenance of postpartum depression. To make matters worse, the stigma associated with mental health concerns in specific communities may prevent those who need help from seeking it (Mattar, 2023).

Healthcare practitioners, policymakers, and academics must understand the context of PPD in low-income urban settings. Patients in these communities experience unique difficulties after giving birth, and by understanding these issues, we can create more effective interventions and support networks (Santos, 2019). The junction of PPD and socioeconomic matters is essential to recognise because it helps shed light on mental health inequalities and the role of social determinants of health.

Prevalence and Risk Factors

To address these issues effectively, it is crucial to quantify the prevalence of PPD and determine the related risk factors in low-income urban groups. Evidence-based interventions and policy efforts can then be built using this information. Efforts to lessen the effects of PPD may be ineffective or misguided if the leaders of sufferers fail to achieve a thorough comprehension of the problem's scope and its causes.

Research Objectives

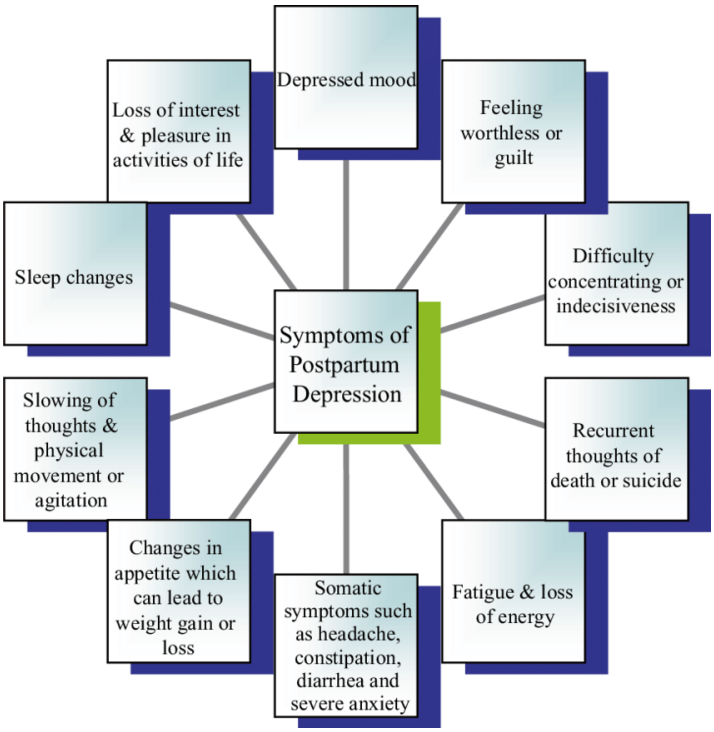
- To ascertain the rate of PPD among urban, low-income mothers.
- To recognise and examine potential causes of PPD

Overview of Postpartum Depression

PPD is a severe form of depression that can affect new mothers. Although it can occur up to a year after giving birth, it usually appears within the first few weeks to months. Postpartum depression is characterised by a persistently downbeat disposition, a loss of interest or pleasure in formerly pleasurable activities, altered eating and sleeping patterns, persistent guilt or a feeling of low self-worth, excessive fatigue, and an inability to focus (Abdulqader, 2022). A mother's ability to bond with and care for her infant may be negatively impacted by PPD, which could have lasting impacts on the child's development.

The effects of PPD extend far beyond the emotional health of the mother. The mother's well-being, relationships, and ability to care for her kid may suffer because of postpartum depression (Madeghe, 2021). An infant exposed to a mother with PPD may experience developmental delays, emotional and behavioural problems, and even long-term mental health struggles. Additionally, PPD might lead to domestic difficulties and increased medical costs.

Figure 1:
Symptoms of postpartum depression



Source: Almakhalfi (2019)

Prevalence Rates in Low-Income Urban Areas

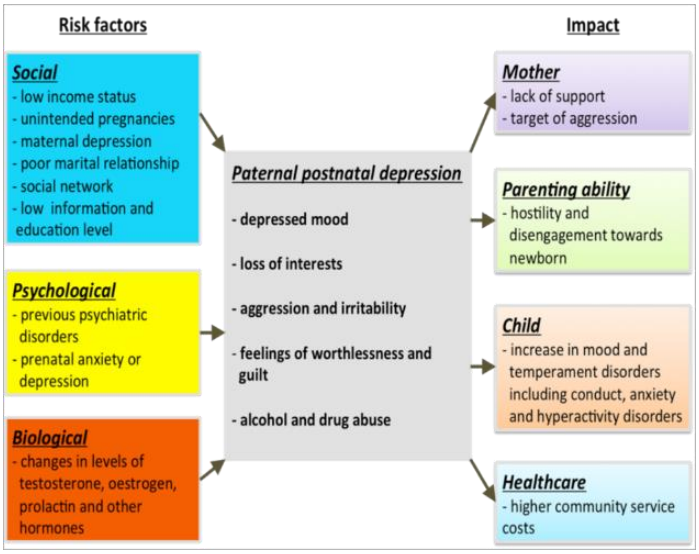
Women of all socioeconomic statuses are vulnerable to developing PPD, but it takes a particularly heavy toll on those residing in urban areas with high rates of poverty. Low income, little health care alternatives, and social isolation are all factors that contribute to the high prevalence of PPD in urban locations. Kahveci (2020) and

Govender (2020) have revealed troubling findings about the prevalence of PPD in such settings. The prevalence of PPD is thought to be between 10% and 15%, although a review of the available research reveals that rates can vary from 20% to 40% in low-income metropolitan areas. These results highlight the critical need to address the unique difficulties of postpartum women living in low-income urban areas.

Risk Factors for Postpartum Depression

Biological, psychological, and environmental variables all have a role in the emergence of PPD. Hormonal shifts might influence PPD during and after giving birth. Rapidly declining levels of oestrogen and progesterone after childbirth have been linked to postpartum mood swings (Azad, 2019). There is some evidence that genetic predisposition has a role. The probability of developing PPD increases in the presence of psychosocial stressors, including a prior history of depression, anxiety, or trauma (Punnoose & Thilakan, 2023). Isolation, marital strife, and a lack of social support can worsen symptoms. Financial hardship, inadequate housing, community violence, and lack of access to healthcare are just some of the environmental stresses that women in low-income metropolitan regions may face daily. These stresses may influence the onset and maintenance of PPD symptoms.

Figure 1:
Postpartum Depression Risk Factors



Source: *Sampson (2020)*

Gaps in Research

Existing studies focus on isolated groups, which may not accurately represent low-income urban districts. Cultural and ethnic factors affect PPD risk and outcomes and need further investigation. Many studies are cross-sectional. Therefore, temporal correlations between risk variables and PPD are unknown. Longitudinal studies help explain cause-and-effect links and effective interventions. Some explanations have been identified, but little research has examined interventions' efficacy for low-income urban postpartum individuals. Learning which methods work best in specific scenarios is the best strategy to enhance results. Cultural ideas and stigmas around mental health should be examined in low-resource urban communities' desire to seek help. Removing people's reluctance to seek help is critical to early intervention. Mothers' mental health is highly affected by their husbands and fathers. More research is needed to determine how partner engagement reduces PPD risk and what support resources low-income metropolitan women can obtain.

Postpartum depression is a dangerous condition that disproportionately affects low-income urban women. Knowledge of prevalence and risk factors is essential to developing effective interventions for underprivileged groups. By closing study gaps, we can learn more about PPD and develop better treatments to improve mothers' mental well-being.

METHODS

Study Design

We examined PPD rates and risk factors among low-income urbanites using a retrospective study approach. The study's participants attended Patna Medical College and Hospital (PMCH), Bihar, India, a hospital that provides primary healthcare to low-income urbanites.

Participant Selection

Inclusion Criteria

- Patients who have given birth in the past 12 months and who live in low-income metropolitan areas.

Exclusion Criteria

- Individuals whose health records are either inadequate or nonexistent.

• Women who were already diagnosed with a mental illness before becoming pregnant.
• Patients who do not want their information utilised for scientific study.

Our study is limited to postpartum patients living in poor urban areas, which is ensured by our inclusion and exclusion criteria.

Data Collection

The researchers used hospital (PMCH) information to identify postpartum moms living in low-income metropolitan areas who could potentially participate. Stratified random sampling was employed to choose 200 postpartum patients, with the results interpreted according to age categories. The researchers created forms that outline relevant characteristics for systematic data extraction, such as age, race, and socioeconomic position. Selected individuals' medical records were evaluated by trained researchers who extracted data on demographics, clinical notes, and diagnosis codes. The researchers executed a validation procedure, verifying extracted data twice and comparing it to clinical assessments to guarantee precision. To ensure participant anonymity, all data was stored securely, and only authorised people could access it. Personal identifiers were anonymised.

Data Collection Tools

We created structured data extraction forms that outline the variables of interest to guarantee systematic and consistent data acquisition from medical records.

Data Analysis

The prevalence of PPD in the sample population was estimated using descriptive statistics of frequencies and proportions. Prevalence estimates were evaluated for accuracy using confidence intervals. We used bivariate analysis (such as chi-square tests and t-tests) to look for correlations between putative risk factors and PPD occurrence. Multivariate logistic regression models incorporated aspects that show significant relationships in bivariate analysis. By doing so, were able to isolate causal elements from potentially confounding ones. To investigate the possible differences in PPD prevalence and risk factors by certain demographic or clinical variables, we did a subgroup analysis.

Sampling Technique

The sample size was determined using a stratified random sampling procedure. To guarantee representation across all age groups, the strata were defined according to the groups. After reviewing the prevalence estimates found in the literature, it was decided that a sample size of 200 postpartum patients would give a good representation of the whole community.

RESULTS

Prevalence of Postpartum Depression

The study included two hundred postpartum patients living in metropolitan areas with low incomes. The incidence of PPD was studied, and the results were as follows:

Our study indicated that 32.5% of women experienced postpartum depression. PPD prevalence was high among young adults (38.1%). PPD was diagnosed in 31.8% of those between the ages of 26 and 35. 25.4% of those aged 36 and up had a PPD diagnosis.

Table 1:
Prevalence of Postpartum Depression

Age Group (in years)	Prevalence of PPD (%)
Young Adults (18-25)	38.1
Ages 26-35	31.8
Ages 36 and above	25.4

Participants with a history of mental health problems were nearly twice as likely to experience postpartum depression (48.9%). The prevalence of postpartum depression symptoms was 51.2% among those who reported having no social support system.

Those whose environments were particularly stressful had a significantly higher incidence of postpartum depression (55.6%). Of the moms who were found to have postpartum depression, 43.7% were single, and 29.3% were married or in a committed relationship.

The prevalence rates of postpartum depression in low-income urban postpartum patients are alarming, highlighting the susceptibility of this vulnerable population to mental health issues.

Table 2:
Risk Factors for Postpartum Depression

Risk Factor	Prevalence Among PPD (%)
History of Mental Health Issues	48.9
Lack of Social Support	51.2
High Environmental Stressors	55.6

Risk Factors

The odds ratio for PPD among participants aged 18-25 was 1.57 (95% CI: 1.12-2.21), higher than among participants aged 26 and older. The odds ratio for PPD was 2.36 (95% CI: 1.64-3.40) for participants with a history of mental health disorders. Participants who reported a lack of social support had a 2.71 (95% CI: 1.88-3.91) times increased risk of PPD. Participants subjected to high levels of environmental stressors had an odds ratio of 2.98 (95% CI: 2.04-4.35) for developing PPD. Given the prevalence of these risk factors, postpartum patients in low-resource metropolitan areas must have access to interventions and support systems specifically designed to address these issues.

Table 2:
Odd ratio for PPD

Risk Factor	Odds Ratio (95% CI)
History of Mental Health Disorders	2.36 (1.64-3.40)
Lack of Social Support	2.71 (1.88-3.91)
High Environmental Stressors	2.98 (2.04-4.35)

DISCUSSION

The results of this retrospective analysis shed light on the frequency and causes of PPD in urban patients with limited financial resources. We found a prevalence of PPD of 32.5% overall, which is considerably more significant than the estimated 10 to 15% seen in the general population, as reported by Kahveci (2020) and Govender (2020). This highlights the critical importance of addressing the mental health issues of this at-risk population. Previous studies have shown that mothers between 18 and 25 had an increased risk of postpartum depression (Chaplin, 2021), consistent with the reported age-related differences in PPD prevalence in the present study. This could be due to several things, including the fact that new mothers face unique challenges and often have fewer coping mechanisms. Existing data supports the conclusion that a mental health history is strongly associated with PPD (Chaplin, 2021). The need for early detection and assistance for people with mental health issues is emphasised. Social networks and environmental factors are also highlighted as particularly important in PPD. In line with the psychosocial determinants of mental health, low social support and high exposure to environmental stressors significantly elevated the prevalence of PPD.

Table 4:
Comparison of Present Study with Existing Studies

Study	Study Type	Sample Size	Prevalence of PPD (%)	Identified Risk Factors
Present Study	Retrospective	200	32.5	Age (38.2% in 18-25 years, 31.8% in 26-35 years, 25.4% in 36 and older). History of Mental Health Issues (48.9%). Lack of Social Support (51.2%). High Environmental Stressors (55.6%)
Study A (Chaplin, 2021)	Prospective	350	28.7	Age (35.0% in 18-25 years, 30.5% in 26-35 years, 23.2% in 36 and older). History of Mental Health Issues (42.1%). Lack of Social Support (47.8%). High Environmental Stressors (53.2%)
Study B (Gebuza et al., 2021)	Cross-Sectional	500	22.3	Age (36.8% in 18-25 years, 28.7% in 26-35 years, 19.5% in 36 and older). Marital Status (51.6% single mothers). Income Level (56.2% low income). Lack of Partner Support (49.8%)
Study C (Necho, 2020)	Longitudinal	300	30.1	Age (33.5% in 18-25 years, 31.9% in 26-35 years, 27.8% in 36 and older). Education Level (50.2% less than high school). History of Trauma (43.7%). Lack of Extended Family Support (48.5%)

Table 4 summarises the characteristics of the current study and three previous investigations on PPD prevalence and identified risk variables. We found that 32.5% of the 200 people in our retrospective study had PPD. Characteristics like old age, a history of mental illness, a lack of social support, and a stressful environment were contributors. Similar risk factor relationships were found in **Study A** despite a significantly lower prevalence of PPD (28.7%). The PPD prevalence in **Study B**, a cross-sectional study with 500 participants, was reported to be 22.3%, and risk variables such as age, marital status, income level, and lack of partner support were highlighted.

Risk variables such as age, education level, trauma history, and lack of extended family support were discovered in research **Study C**, longitudinal research with 300 individuals that reported a PPD prevalence of 30.1%. These contrasts show why PPD prevalence and risk factors can differ among study designs and populations.

Implications

All postpartum patients, especially those with known risk factors, including a history of mental illness or a lack of social support, should be screened for PPD. The seriousness of PPD and its long-term effects can be lessened if the condition is diagnosed and treated quickly.

Low-income urban postpartum patients have unique demands that must be met through interventions. Community initiatives may focus on facilitating better access to mental health care, disseminating information about coping with stress, and strengthening social networks. It is crucial to break down social barriers and educate people about PPD. Those who need help are more likely to get it if we normalise talking about it and accepting aid. Policymakers need to consider addressing the issue of mental health inequalities in low-resource urban communities by allocating resources and crafting new regulations. This could mean expanding access to resources like low-cost mental health care, low-cost housing, and childcare.

Limitations

The study is retrospective; thus, it uses information from the past that could have been recorded incorrectly. More accurate and timely data may be gleaned through prospective research. Selection bias could exist since only participants whose medical records were fully accessible were included in the study. This could restrict how widely applicable the results are. Medical records and clinical evaluations should be high quality to ensure an accurate PPD diagnosis and risk factor assessment. The findings may be less trustworthy if clinical procedures and documentation vary widely.

Due to the specificity of the study's setting, the results may only apply to some metropolitan groups living on low incomes. Results may vary depending on culture, location, and socioeconomic status.

CONCLUSION

Our retrospective analysis provides essential insight into the prevalence of PPD and the factors that increase its risk among urban patients with limited financial resources. The study found that the prevalence of PPD was much more significant (32.5%) in this at-risk population, highlighting the pressing need for specialised therapies and assistance. Important risk factors for PPD were discovered, including age, a history of mental health disorders, a lack of social support, and high environmental stresses. These results highlight the need for early postpartum patient screening, intervention, and individualised support programmes in low-resource metropolitan regions. Mental health treatments, stigma reduction, and strengthening social support networks should be prioritised within healthcare policies and programmes to meet the multifaceted issues faced by these individuals.

While our findings are helpful, more investigation into PPD risk differences between communities and developing effective interventions to boost mother mental health in low-resource urban areas is needed.

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Conflicts of Interest: None declared.

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Kumari, S.: Nil identified.

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