Original Research Article

An Observational Study of Postpartum Anxiety and Its Associated Risk Factors

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Abstract:

Background: The postpartum period is associated with significant psychological vulnerability, and anxiety disorders during this phase are increasingly recognized as important contributors to adverse maternal and neonatal outcomes. Despite its high prevalence, postpartum anxiety remains underdiagnosed, particularly in resource-limited settings. Early identification of anxiety and associated risk factors is essential for comprehensive postnatal care.

Objectives: To assess the severity of postpartum anxiety among postnatal women using the Perinatal Anxiety Screening Scale (PASS) and to examine its association with selected socio-demographic, obstetric, and neonatal factors.

Materials and Methods: A hospital-based observational study was conducted among postnatal women admitted to a tertiary care teaching hospital. Data were collected using a structured proforma and medical record review. Postpartum anxiety was assessed using the Perinatal Anxiety Screening Scale (PASS). Based on PASS scores, participants were categorized as asymptomatic (0–20), mild to moderate anxiety (21–41), or severe anxiety (≥42). Associations between anxiety severity and variables such as age, socioeconomic status, family pattern, gravidity, mode of delivery, history of abortions, pregnancy-related complications, and NICU admission were analyzed using descriptive statistics.

Results: Most participants were asymptomatic, while a substantial proportion exhibited mild-to-moderate anxiety; severe anxiety was relatively uncommon. Higher anxiety severity was observed among women belonging to lower socioeconomic status, primigravida mothers, and those who underwent cesarean delivery. NICU admission of the newborn showed a strong association with increased anxiety severity, with a majority of these mothers experiencing mild-to-moderate or severe anxiety. A history of previous abortions, particularly multiple abortions, and pregnancy-related complications were also associated with higher anxiety levels.

Conclusion: Postpartum anxiety is a common but under-recognized mental health condition influenced by multiple socio-demographic, obstetric, and neonatal factors. Routine screening using validated tools such as PASS during the postnatal period can facilitate early identification of high-risk mothers. Integrating mental health assessment and psychosocial support into standard postnatal care may significantly improve maternal well-being and overall postnatal outcomes

Keywords: Postpartum anxiety; Perinatal Anxiety Screening Scale (PASS); Postnatal women; Maternal mental health; Obstetric factors; NICU admission; Cesarean section; Socioeconomic status.

Introduction

The postpartum period is a vulnerable phase in a woman's life, characterized by profound physiological, psychological, and social adjustments. While mild emotional fluctuations are considered normal after childbirth, persistent or excessive anxiety can interfere with maternal functioning, infant care, breastfeeding practices, and mother–infant bonding [1,2]. Postpartum anxiety (PPA) has been reported to be more prevalent than postpartum depression, yet it remains under-recognized and underdiagnosed due to symptom overlap with normal postnatal experiences such as fatigue, sleep disturbance, and emotional lability [3]. Globally, the prevalence of postpartum anxiety varies widely, ranging from 10% to 30%, depending on the population studied, screening tools used, and timing of assessment [4,5]. Indian studies have also demonstrated a

substantial burden of postpartum anxiety, particularly among women with low socioeconomic status, limited social support, and adverse obstetric outcomes [6,7]. Several maternal and obstetric factors such as primigravida, operative delivery, previous pregnancy loss, neonatal complications, and NICU admission have been shown to increase the risk of anxiety in the postnatal period [8–10].

Postpartum anxiety has important clinical implications. Untreated anxiety is associated with impaired maternal–infant bonding, reduced breastfeeding initiation and continuation, increased risk of postpartum depression, and adverse cognitive and emotional outcomes in children [11–13]. Early identification of anxiety symptoms and recognition of high-risk groups are therefore essential components of comprehensive postnatal care.

Despite its clinical significance, data on postpartum anxiety and its associated factors remain limited in many hospital-based Indian settings.

The present study was undertaken to assess the severity of postpartum anxiety among postnatal women and to examine its association with selected socio-demographic, obstetric, and neonatal factors using data derived from the uploaded study tables.

Materials and Methods:

Study Design and Setting: A hospital-based observational study was conducted in the Department of Obstetrics and Gynaecology of a tertiary care teaching hospital. The study included postnatal women admitted during the immediate postpartum period.

Study Population: Women who had delivered a live newborn and were willing to participate were included in the study. Women with a known history of major psychiatric illness prior to pregnancy or those unwilling to provide consent were excluded.

Data Collection:

Data were collected using a pre-designed structured proforma through face-to-face interviews and review of medical records.

The proforma included information on maternal age, socioeconomic status, family pattern, gravidity, and mode of delivery, history of previous abortions, pregnancy-related or postpartum complications, and neonatal outcomes including NICU admission.

Postpartum anxiety assessment was carried out using the Perinatal Anxiety Screening Scale (PASS), a validated instrument specifically designed for use in perinatal women.

The PASS consists of 31 items assessing anxiety symptoms across four domains: acute anxiety and adjustment, general worry and specific fears, perfectionism/control/trauma, and social anxiety. Each item is scored from 0 (not at all) to 3 (almost always), with a total possible score ranging from 0 to 93.

Based on PASS scoring, participants were categorized into three severity groups: asymptomatic (score 0–20), mild to moderate anxiety (score 21–41), and severe anxiety (score ≥42). The scale was administered in the local language to ensure comprehension. For participants who were unable to read, the questionnaire was administered by interview while maintaining uniformity of assessment.

Statistical Analysis: Data were entered into Microsoft Excel and analyzed using appropriate statistical software. Categorical variables were expressed as frequencies and percentages.

Results

Table 1: Age-wise distribution of study participants according to severity of symptoms

Age Group	Asymptomatic N (%)	Mild-Moderate N (%)	Severe N (%)
21-23	6(85.7)	1(14.3)	0(0)
24-26	49(80.32)	12(19.67)	2(3.1)
27-29	57(79.2)	14(19.4)	1(1.4)
≥30	43(74.1)	14(24.1)	1(1.8)

The majority of participants were aged between 24 and 29 years. Mild-to-moderate anxiety was observed across all age groups, with a slightly higher proportion among women aged ≥30 years. Severe anxiety was uncommon and did not show a clear age-related trend.

Table 2: Association between socioeconomic status and severity of symptoms among study participants

Socioeconomic Status	Asymptomatic N (%)	Mild-Moderate N (%)	Severe N (%)
Lower	84(75)	26(23.2)	2(1.8)
Middle	40(83.3)	8(16.7)	0(0)
Upper	31(77.5)	7(17.5)	2(5)

Women belonging to the lower socioeconomic group showed a higher prevalence of mild-to-moderate anxiety compared to those from middle and upper socioeconomic classes. Severe anxiety was observed more frequently in women from lower and upper socioeconomic strata.

Table 3: Distribution of symptom severity according to family pattern

Family Pattern	Asymptomatic N (%)	Mild-Moderate N (%)	Severe N (%)
Joint	69(76.7)	18(20)	3(3.3)
Nuclear	86(78.2)	23(20.9)	1(0.9)

Both joint and nuclear family patterns demonstrated a similar distribution of anxiety severity. However, severe anxiety was marginally higher among women residing in joint families.

Table 4: Association of gravidity with severity of symptoms

Gravida	Asymptomatic N (%)	Mild-Moderate N (%)	Severe N (%)
Primi	88(73.3)	29(24.2)	3(2.5)
Multi	67(83.8)	12(15)	1(1.2)

Primigravida women exhibited a higher proportion of mild-to-moderate and severe anxiety compared to multigravida women, suggesting increased psychological vulnerability during the first pregnancy.

Table 5: Mode of delivery in relation to severity of symptoms

Mode of Delivery	Asymptomatic N (%)	Mild-Moderate N (%)	Severe N (%)
LSCS	47(67.1)	21(30)	2(2.9)
Vaginal	108(83.1)	20(15.4)	2(1.5)

Women who underwent lower segment cesarean section had a higher prevalence of mild-to-moderate anxiety compared to those who delivered vaginally. Severe anxiety was also slightly more common following cesarean delivery.

Table 6: Distribution of symptom severity according to NICU admission status

NICU Admission	Asymptomatic N (%)	Mild-Moderate N (%)	Severe N (%)
YES	8(40)	9(45)	3(15)
NO	147(81.7)	32(17.8)	1(0.5)

NICU admission of the newborn showed a strong association with anxiety severity. A substantial proportion of mothers whose babies required NICU care experienced mild-to-moderate or severe anxiety, whereas the majority of mothers without NICU admission were asymptomatic.

Table 7: Association between previous abortion history and severity of symptoms

Previous Abortions	Asymptomatic N (%)	Mild-Moderate N (%)	Severe N (%)
No Abortion	111(85.4)	18(13.8)	1(0.8)
Single	34(75.6)	10(22.2)	1(2.2)
Multiple	10(40)	13(52)	2(8)

An increasing trend in anxiety severity was noted with a history of previous abortions. Women with multiple abortions showed the highest proportion of severe anxiety, followed by those with a single abortion.

Table 8: Relationship between pregnancy-related complications and severity of symptoms

Complication during/following Pregnancy	Asymptomatic N (%)	Mild-Moderate N (%)	Severe N (%)
YES	1(4.8)	20(95.2)	0(0)
NO	154(86)	21(11.7)	4(2.3)

Women who experienced complications during or following pregnancy predominantly exhibited mild-to-moderate anxiety, highlighting the psychological impact of adverse obstetric events.

Discussion

The present hospital-based observational study highlights postpartum anxiety as a significant mental health concern influenced by multiple socio-demographic and obstetric factors. The predominance of mild-to-moderate anxiety observed in this study is consistent with earlier reports indicating that subclinical anxiety symptoms are more common than severe forms in the postpartum period [4,14]. Lower socioeconomic status emerged as an important determinant of postpartum anxiety in this study. Financial stress, limited access to healthcare resources, and reduced social support may contribute to heightened psychological distress among women from disadvantaged backgrounds [6,15]. Similar associations have been reported in both Indian and international studies [7,16].

Primigravida women demonstrated higher anxiety levels compared to multigravida women, a finding supported by previous research suggesting that lack of prior childbirth experience and increased fear regarding infant care contribute to postpartum anxiety [8,17]. The association between cesarean

delivery and higher anxiety severity observed in this study aligns with earlier studies that reported increased psychological stress following operative delivery due to surgical recovery, pain, and delayed mobilization [9,18].

NICU admission of the newborn showed one of the strongest associations with anxiety severity. Maternal concern regarding neonatal survival, prolonged mother–infant separation, and uncertainty about outcomes are well-documented contributors to postpartum anxiety [10,19]. This finding underscores the need for psychological counselling and support for mothers of NICU-admitted neonates. A history of previous abortions, particularly multiple pregnancy losses, was associated with higher anxiety severity. Prior adverse reproductive experiences may heighten fear and emotional vulnerability during the postpartum period, as reported in earlier studies [20,21].

Overall, the findings emphasize the multifactorial nature of postpartum anxiety and highlight the importance of integrating routine mental health screening into postnatal care, especially for women with identifiable risk factors.

Conclusion:

Postpartum anxiety is a common yet under-recognized condition among postnatal women. The present study demonstrates significant associations between anxiety severity and factors such as low socioeconomic status, primigravidity, cesarean delivery, previous abortions, pregnancy-related complications, and NICU admission. Early identification of high-risk mothers and incorporation of mental health screening into routine postpartum care can facilitate timely intervention.

Strengthening psychosocial support services, particularly for vulnerable groups, may substantially improve maternal mental health outcomes and overall postnatal well-being.

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