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ORIGINAL ARTICLE

Assessing Postpartum Depression in Bauchi State-Nigeria: A Study on the Prevalence and Risk Factors in Primary Healthcare Settings

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Keywords

Post-Partum;

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ABSTRACT

Background: Postpartum depression (PPD) is a major public health issue that often goes undiagnosed, negatively impacting mothers, families, and infant development. Understanding its prevalence and associated risk factors is crucial for effective screening and intervention.

Objectives: This study assessed the prevalence of PPD and identified its risk factors among mothers attending immunization clinics in selected primary healthcare centres in Bauchi State, Nigeria.

Methods: A cross-sectional study was conducted from December 2023 to November 2024 among women of reproductive age. Participants were selected through a multistage sampling technique. The Edinburgh Postnatal Depression Scale (EPDS) was used to assess PPD. Data was analysed using SPSS version 25.0. Ethical clearance was obtained for the study

Results: The study included 262 postpartum women aged 18-48 (mean age 30.9 ± 7.0 years). The majority (83.3%) had completed secondary and/or tertiary education. The prevalence of PPD was 43.4%. The strongest predictors were family conflict and lack of spousal and family support during pregnancy. Women experiencing family conflict had a six-fold increased risk of PPD (aOR = 6.5, 95% CI = 2.3–18.4). Lack of spousal support increased the risk by 2.3 times (aOR = 2.3, 95% CI = 1.0–4.8), while lack of family support tripled the risk (aOR = 3.5, 95% CI = 1.6–7.7).

Conclusion: The high PPD prevalence underscores the need for routine screening in postnatal care. Early identification of risk factors and targeted interventions can help prevent and manage PPD, improving maternal and child health outcomes.

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INTRODUCTION

Postpartum depression (PPD) is a subtype of depression that occurs in women after childbirth, affecting their emotional well-being and maternal-infant bonding. It is a common mental health disorder, with a global prevalence

estimated to range from 10% to 20%.[1] Postpartum depression (PPD) not only impacts the mother's health but also influences the overall family dynamics and the infant's development.[1]

Risk factors associated with PPD are multifactorial, encompassing individual, socio-demographic, and psychosocial factors.[2] PPD, the most frequent complication of childbirth, affects approximately 10-15% of mothers worldwide.[2] Prevalence rates increase to 40% for mothers whose infant is admitted to the neonatal intensive care unit.[2] PPD can affect maternal and child health across the life course and predispose future generations to a myriad of developmental, psychosocial, and physical challenges.[3] The effects of postpartum depression (PPD) on the mother, her marital relationship and her children make it important to diagnose, treat and prevent.[3]

Untreated postpartum depression (PPD) can have adverse long-term effects. For the mother, the episode can be the precursor of chronic or recurrent depression. For her children, a mother's ongoing depression can contribute to emotional, behavioural, cognitive and interpersonal problems in later life.[3] Studies have shown that children with depressed mothers may exhibit long-term deficits affecting them from infancy into school age, including inhibited speech development and a weak mother-child relationship due to the mother's lack of interaction with the infant.[4] These issues may arise early in life.

Diagnosis and treatment interventions for post-natal illnesses are imperative for the health and well-being of the mother and child. In Nigeria, studies have shown varying prevalence rates of PPD between and within regions. For instance, 21.8% and 23% prevalence estimates were reported from North Central and Southwestern Nigeria, respectively.[5,6] Other studies have shown an even higher increase in the risk of depression about the 8th week after childbirth.[7]

In northern Nigeria, PPD has been reported to have a higher prevalence rate of 44.5% in clinical settings compared to the global average of 10-15%.[7] In comparison, 30.6% were reported in southeastern Nigeria, and a prevalence of 14.6% of women attended postnatal clinics in western Nigeria.[6,7] It has been reported that 1 in 6 mothers suffer postpartum depression, which is the leading cause of suicide among postpartum women in Nigeria.[7]

Bauchi State, located in northeastern Nigeria, has a population of over 6 million.[7] The region faces numerous socioeconomic challenges, including limited access to healthcare services, gender disparities, and cultural practices that might influence the prevalence and risk factors associated with PPD. However, research on postpartum depression in Bauchi State is scarce, making it essential to conduct a study that focuses specifically on assessing PPD prevalence and risk factors within selected primary healthcare settings.

This study aims to fill the research gap by examining the prevalence and risk factors of PPD among women attending primary healthcare facilities in Bauchi State. The findings will help

develop targeted interventions, screening protocols, and resource allocation strategies to address PPD within the region.

The study included 262 postpartum women aged 18-48 (mean age 30.9 ± 7.0 years). Slightly more than half (52.2%) were over 30 years old. The majority (83.3%) had completed secondary and/or tertiary education. Most participants (55.3%) were employed in the informal sector, and a similar proportion (62.3%) reported an income of less than 10,000 Naira. The vast majority (86.4%) were married. Most women (75.9%) were multi-gravid. Most multi-gravid women (72.3%) reported their last pregnancy was planned, as did 40 (23.1%) primi-gravid women. Most women (82.5%) reported no pregnancy complications. Vaginal delivery was more common (64.9%) than Cesarean section (35.1%). Small percentages of women reported complications during delivery (7.5%), postpartum (8.8%), or for the neonate (8.8%). There was a near-even split between male (50.4%) and female (49.6%) births, with a small number of twin births (3.5%). Most births (96.1%) resulted in a live, healthy child.

METHODOLOGY

Study Area

Bauchi State, located in northeastern Nigeria, has a varied climate, with a longer rainy season in the south (April–October) and a shorter one in the north (June–September). The study was conducted in Primary Healthcare Centres across the state's three senatorial zones.

The present study utilized a cross-sectional design, recruiting a representative sample of women who recently gave birth and attended primary healthcare facilities in Bauchi State. Data was collected through structured interviews, incorporating the Edinburgh Postnatal Depression Scale (EPDS) as the screening tool for postpartum depression symptoms. The Edinburgh Postnatal Depression Scale (EPDS) has been widely used and validated in various cultural settings.[8]

Study sites

The study was conducted in selected Primary Healthcare Centres (PHCs) across multiple Local Government Areas (LGAs) in Bauchi State. These PHCs were chosen using a multistage sampling technique to ensure representativeness across the three senatorial districts. The selected facilities provide maternal and child health services, making them suitable for identifying postpartum women and assessing their mental health and well-being.

Study design

The study used a cross-sectional descriptive study design.

Study Population

Participants included postpartum women who had recently given birth and were within the first year postpartum, between the ages of 18 and 45, and must have been accessing the selected primary healthcare services in Bauchi State.

Exclusion criteria applied to women with a prior diagnosis of a mental health condition such as depression or anxiety, those unable to

communicate effectively in the study's language or with cognitive impairments that would prevent participation. Women carrying multiples (twins, triplets) or experiencing serious pregnancy complications were also excluded, as these conditions require specialized care and could introduce confounding factors.

The study involved a sample size of 262 postpartum women from Bauchi State. The diverse sample represents different demographic characteristics and socioeconomic backgrounds within Bauchi State.

Table 1: The Association of socio-demographic Variables with postpartum depression

Variable	Postpartum Depression		Unadjusted OR [95% CI]
Group	**No (N = 129)**	**Yes (N = 133)**	**p Value**
Age			
≤30 years	57 (44.5%)	61 (45.9%)	0.123
≥30 years	72 (55.5%)	72 (54.1%)	
Education			
Primary and Intermediate	29 (22.5%)	37 (27.8%)	0.372
Secondary and above	100 (77.5%)	96 (72.2%)	
Occupation			
Non-working	63 (48.5%)	67 (50.4%)	0.894
Working	66 (51.5%)	66 (49.6%)	
Income			
≤10,000 Naira	74 (57.4%)	81 (60.9%)	0.80
>10,000 Naira	55 (42.6%)	52 (39.1%)	
Marital Status			
Married	127 (98.4%)	127 (95.5%)	0.24
Divorced	2 (1.6%)	6 (4.5%)	
Smoker			
Yes	2 (1.6%)	4 (3.0%)	0.789
No	127 (98.4%)	129 (97.0%)	

* Fisher's exact test

Sample Size Determination

The sample size was calculated using Fisher's formula for estimating the minimum sample size for cross-sectional studies

$$n = \frac{Z^2PQ}{d^2}$$

Where: n = minimum sample size

Z = 1.96 is the standard normal deviation corresponding to a 95% confidence interval on the normal distribution curve obtained from the Z-table.

P = prevalence from a previous study conducted in Northern Nigeria.[8] = 21.8% = 0.218

Q = complementary probability. q = 1-p = 1-0.218 = 0.782

d = degree of precision of 5%, i.e. 0.05

Thus, by substituting these values into the formula:

$$N = \frac{(1.96)^2 \text{ X } 0.218 \text{ X } 0.782}{(0.05)^2}$$

$$\text{Therefore, } N = \frac{3.8416 \text{ X } 0.218 \text{ X } 0.782}{0.0025} = 262$$

The minimum sample size for the study was 262 participants.

Sampling Technique

Multistage Sampling Approach

Stage 1: Selection of Local Government Areas (LGAs) Across the Three Senatorial Districts

The study employed a multistage sampling technique to ensure a representative selection of LGAs across the three senatorial districts. In the first stage, a comprehensive list of all LGAs within the districts was compiled. Simple random sampling by balloting was then used to select a specified number of LGAs from each district. This process involved writing the names of all LGAs on separate pieces of paper, shuffling them in a container, and randomly drawing the required number of LGAs. By using this method, the study ensured an unbiased and representative selection across the geopolitical zones.

Stage 2: Selection of Primary Healthcare Centres (PHCs) within the Selected LGAs

A comprehensive list of all operational Primary Healthcare Centres (PHCs) was obtained within each selected LGA. A predetermined number of PHCs were then selected using simple random sampling by balloting. This approach ensured that all PHCs had an equal chance of inclusion, enhancing the generalizability of the study's findings across different LGAs.

Stage 3: Selection of Postpartum Women from Each PHC

At each selected PHC, a list of eligible postpartum women meeting the study's inclusion criteria was compiled. Then, random sampling by balloting was conducted, where each woman's name was written on a piece of paper, shuffled, and drawn randomly to ensure fairness. To determine the number of participants from each PHC, proportionate stratified sampling was applied, ensuring a balanced representation across the facilities.

Stage 4: Proportionate Allocation of Sampled Participants Across PHCs (Stratified Sampling Approach)

Each selected PHC was treated as a stratum to ensure proportionate representation in the study. The number of participants sampled from each PHC was determined based on the proportion of postpartum women accessing services in that facility relative to the total number of eligible women across all selected PHCs. This stratified sampling with proportional allocation allowed facilities with more postpartum women to contribute a correspondingly larger number of participants, reducing selection bias and enhancing statistical power.

Method of Data Collection

Data collection involved gathering demographic information and assessing postpartum depression (PPD) symptoms using a validated screening tool. Demographic data included participants' age, education level, marital status, occupation, and socioeconomic status. To assess postpartum depression (PPD), the Edinburgh Postnatal Depression Scale (EPDS) was utilized as a validated screening tool.

Table 2: Association of Obstetric Factors with Postpartum Depression

Variable	Postpartum Depression		Unadjusted OR [95% CI]
Group	**No (N = 129)**	**Yes (N = 133)**	**p Value**
Gravida			
Primi	38 (29.5%)	17 (12.8%)	0.03
Multi	91 (70.5%)	116 (87.2%)	
Whether Pregnancy was Planned			
Yes	75 (58.1%)	63 (47.4%)	0.25
No	54 (41.9%)	70 (52.6%)	
Complication in Pregnancy			
Yes	27 (20.9%)	51 (38.3%)	0.12
No	102 (79.1%)	82 (61.7%)	
Gestational Diabetes			
Yes	14 (10.9%)	22 (16.5%)	0.48
No	115 (89.1%)	111 (83.5%)	
Mode of Delivery			
Normal	86 (66.7%)	77 (57.9%)	0.52
Caesarean Section	43 (33.3%)	56 (42.1%)	
Complication During Delivery			
Yes	8 (6.2%)	35 (26.3%)	0.41
No	121 (93.8%)	98 (73.7%)	
Postpartum Complication			
Yes	10 (7.8%)	38 (28.6%)	0.53
No	119 (92.2%)	95 (71.4%)	
Neonatal Complication			
Yes	9 (7.0%)	41 (30.8%)	0.27
No	120 (93.0%)	92 (69.2%)	
Twin Delivery			
Yes	6 (4.7%)	6 (4.5%)	0.28
No	123 (95.3%)	127 (95.5%)	
Pregnancy Outcome			
Live	126 (97.7%)	127 (95.5%)	0.07
Not Live	3 (2.3%)	6 (4.5%)	
Sex of Child			
Male	61 (47.3%)	71 (53.4%)	0.27
Female	68 (52.7%)	62 (46.6%)	

Developed in 1987 by John Cox, Jeni Holden, and Ruth Sagovsky at the University of Edinburgh, the EPDS is a widely recognized self-report questionnaire designed to screen for postpartum depression (PPD). It consists of 10 items addressing emotions and experiences commonly associated with depression, each scored on a scale of 0 to 3. The total score ranges from 0 to 30, where higher scores indicate greater severity of depressive symptoms and a higher likelihood of postpartum depression.

This study also collected data on known postpartum depression (PPD) risk factors, including prior mental health history, social support, stressful life events, and cultural beliefs or practices related to childbirth and motherhood. Additionally, data on maternal health outcomes were gathered, focusing on physical recovery, breastfeeding, mother-infant bonding, and overall psychological well-being.

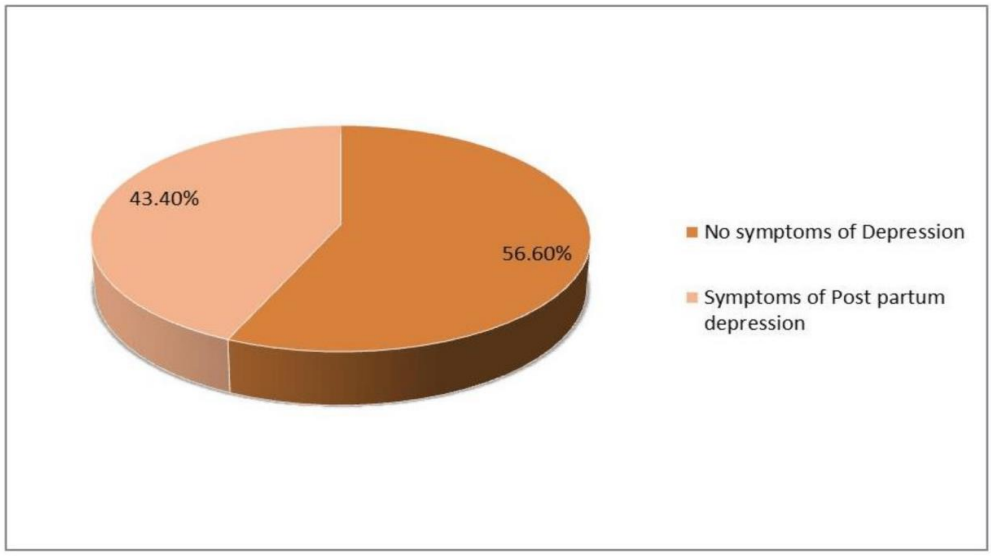

Figure 1: The proportion of respondents with postpartum depression

Data Analysis

Data entry and analysis were conducted using the statistical software package SPSS version 25.0.[7] Categorical data were analyzed and presented as frequencies and percentages. In contrast, continuous data were expressed as mean ± standard deviation. Univariate analysis involved summarizing the distribution of variables using frequency tables. Bivariate analysis was performed using the Chi-square test or Fisher's exact test to assess the association between various risk factors and postpartum depression. Multiple logistic regression analysis was conducted using only the significant independent variables from the bivariate analysis. A p-value of less than 0.05 was considered statistically significant. Adjusted odds ratios from the multiple logistic regression were reported with a 95% confidence interval.

Ethical consideration

Ethical clearance was obtained from the Health Research Ethics Committee (HREC) of the Bauchi State Ministry of Health, with registration number (BSMOH/HREC/104/2023) and approval number NREC/040/11/19B/2021/0104. Written informed consent was obtained from each participant aged 18 years and above before enrolment in the study.

RESULTS

Socio-Demographic Characteristics

The study included 262 postpartum women aged 18–48 years (mean 30.9 ± 7.0 years), with 52.2% over 30 years old. The majority (83.3%) had completed secondary or tertiary education, most participants (55.3%) were employed in the informal sector, and 62.3% reported an income below 10,000 Naira. Marriage was predominant (86.4%), and 75.9% of the women were multi-gravid. Among multi-gravid women, 72.3% had planned pregnancies, compared to 23.1% of primi-gravid women. (Table 1)

Table 3: Association of Psychosocial Characteristics with Postpartum Depression

Variable	Postpartum Depression		Unadjusted OR [95% CI]
Group	**No (N = 129)**	**Yes (N = 133)**	**p Value**
Psychiatric Disease			
No	126 (97.7%)	113 (85.0%)	0.024
Yes	3 (2.3%)	20 (15.0%)	
Family History of Psychiatric Disease			
No	121 (93.8%)	110 (82.7%)	0.003
Yes	8 (6.2%)	23 (17.3%)	
Existing Family Conflict			
No	122 (94.6%)	89 (66.9%)	<0.001
Yes	7 (5.4%)	44 (33.1%)	
Past Family Conflict			
No	100 (77.5%)	101 (75.9%)	0.001
Yes	29 (22.5%)	32 (24.1%)	
Support by Spouse			
No	17 (13.2%)	40 (30.1%)	<0.001
Yes	112 (86.8%)	93 (69.9%)	
Support by Family			
No	14 (10.9%)	39 (29.3%)	<0.001
Yes	115 (89.1%)	94 (70.7%)	
Living with Spouse Only			
No	50 (38.8%)	45 (33.8%)	0.189
Yes	79 (61.2%)	88 (66.2%)	

Obstetric and Delivery Characteristics

Most of the women (82.5%) reported no pregnancy complications, and vaginal delivery (64.9%) was more common than Caesarean section (35.1%). Delivery complications (7.5%), postpartum complications (8.8%), and neonatal complications (8.8%) were relatively low. Births were nearly evenly distributed between male (50.4%) and female (49.6%) infants, with 3.5% being twin births. Overall, 96.1% of deliveries resulted in a live, healthy child.

Psychiatric and Psychosocial Factors

A small proportion of participants (5.3%) reported a postpartum psychiatric condition, while 11.8% had a family history of psychiatric disorders. Family conflict was common, with 17.1% experiencing current conflicts and 31.6% reporting past conflicts. Less than half (41.7%) lived with their spouse. Although the majority received support from their spouses (75%) and families (76.8%) during pregnancy, a substantial minority, of 25% and 23.2%, respectively, lacked such support.

Figure 2: Percentage distribution of postpartum depression cases by time since delivery

Prevalence and Timing of Postpartum Depression (PPD)

Using the Edinburgh Postnatal Depression Scale (EPDS), 43.4% of participants screened positive for depressive symptoms. The highest proportion of PPD cases (46%) occurred within the first two months postpartum, with rates gradually decreasing over time.

Factors Associated with PPD

PPD was more prevalent among older women, those with higher education, and unemployed women. Among obstetric factors, only multi-gravidity was significantly associated with PPD (cOR = 2.0, 95% CI 1.1, 3.8; p = 0.03), while other factors such as planned pregnancy, pregnancy outcome, child's sex, delivery mode, complications, twins, and gestational diabetes showed no significant association. Several psychosocial factors were strongly linked to PPD, including existing psychiatric illness (cOR = 4.2, 95% CI 1.1, 5.9; p = 0.024), family history of psychiatric illness (cOR = 3.5, 95% CI 1.5, 8.6; p = 0.003), current family conflict (cOR = 8.3, 95% CI 3.5, 19.8; p < 0.001), past family conflict (cOR = 2.6, 95% CI 1.4, 4.6; p = 0.001), lack of spousal support (cOR = 4.4, 95% CI 2.3, 8.5; p < 0.001), and lack of family support during pregnancy (cOR = 5.3, 95% CI 2.6, 10.6; p < 0.001).

Predictors of PPD (Multivariate Analysis)

After adjusting for other factors, three key variables remained significant independent predictors of PPD: existing family conflict (aOR = 6.5, 95% CI 2.3, 18.4), lack of spousal support during pregnancy (aOR = 2.3, 95% CI 1.0, 4.8), and lack of family support during pregnancy (aOR = 3.5, 95% CI 1.6, 7.7).

Table 4: Multivariate Logistic Regression Analysis for the Predictors of Postpartum Depression

Variable	No PPD (N = 129)	Yes PPD (N = 133)	aOR*	95% CI	p value
Psychiatric Disease	126 (97.7%)	113 (85.0%)	Reference	-	-
	3 (2.3%)	20 (15.0%)	3.53	[0.74,16.7]	0.543
Family History of Psychiatric Disease	121 (93.8%)	110 (82.7%)	Reference	-	-
	8 (6.2%)	23 (17.3%)	1.80	[0.63,5.1]	0.675
Existing Family Conflict	122 (94.6%)	89 (66.9%)	Reference	-	<0.001
	7 (5.4%)	44 (33.1%)	6.5	[2.34,18.4]	
Past Family Conflict	100 (77.5%)	101 (75.9%)	Reference	-	0.891
	29 (22.5%)	32 (24.1%)	0.82	[0.37,1.8]	
Support by Spouse	17 (13.2%)	40 (30.1%)	2.3	[1.2,4.8]	<0.001
	112 (86.8%)	93 (69.9%)	Reference	-	
Support by Family	14 (10.9%)	39 (29.3%)	3.5	[1.6,7.7]	<0.001
	115 (89.1%)	94 (70.7%)	Reference	-	
Gravida	38 (29.5%)	17 (12.8%)	Reference	-	-
	91 (70.5%)	116 (87.2%)	0.26	[0.21,1.8]	0.345

* aOR-Adjusted Odd Ratio

DISCUSSION

Postpartum depression (PPD) is a significant public health problem affecting women of reproductive age, with long-term consequences for both mother and child. Untreated PPD negatively impacts parenting, maternal bonding, and the infant's emotional, cognitive, and behavioural development. Early diagnosis is crucial for effective intervention, as mothers often fail to recognize their symptoms, making it essential for healthcare providers to screen for depression in postpartum women.[8] Hence, this study on postpartum depression among Bauchi State women would help in informing the current situation of the community and health care providers.

In this study, the prevalence of postpartum depression (PPD) was 43.4% among postpartum women in Bauchi State, Nigeria. This finding aligns with reports from other African studies, where the prevalence of PPD ranges from 17.6% to 51%.[8, 9, 10, 11, 12] Globally, PPD prevalence varies between 10% and 33%,[13, 14, 15, 16] influenced by cross-cultural and social factors.[17, 18] In India, factors such as poor living conditions, family disputes, financial crises, a higher number of children, and limited work opportunities contribute to PPD.[19,20] Similarly, urban, low-income, and married mothers in North America and the Midwest experience different risk factors and higher rates of PPD compared to their more affluent counterparts.[21,22]

In Nigeria, significant variations exist in the prevalence of postpartum depression, which ranges from 14- 38.5%.[23, 24, 25, 26] In northern Nigeria, postpartum depression has been reported to have a prevalence rate of 44.5% in clinical settings, compared to the general worldwide average of 10-15%. In comparison, 30.6% were reported in southeastern Nigeria, while a prevalence of 14.6% of women attended

postnatal clinics in the western region of Nigeria.[25,26]

Maternal health during pregnancy and some obstetric factors increase the risk of the development of postpartum depression.[27] Studies in Northern Nigeria report that mothers who experience poor health during pregnancy, premature delivery, unplanned pregnancies, developing postnatal complications, and depression.[27, 28, 29]

Studies have shown that psychosocial factors that increase mothers' risk for postpartum depression include prior history of depression, family history of depression, lack of family support, marital conflict, stressful life events, involvement in violent relationships, and traumatic experiences.[29,30,31,32] In our study, several psychosocial factors were significantly associated with postpartum depression (PPD), aligning with previous research. A prior history of psychiatric illness (cOR = 4.2, 95% CI 1.1, 5.9; p = 0.024) and a family history of psychiatric disorders (cOR = 3.5, 95% CI 1.5, 8.6; p = 0.003) increased the risk of PPD. Family conflict emerged as a major risk factor, with both current (cOR = 8.3, 95% CI 3.5, 19.8; p < 0.001) and past conflicts (cOR = 2.6, 95% CI 1.4, 4.6; p = 0.001) showing strong associations. Additionally, lack of spousal support (cOR = 4.4, 95% CI 2.3, 8.5; p < 0.001) and lack of family support during pregnancy (cOR = 5.3, 95% CI 2.6, 10.6; p < 0.001) were significant contributors to PPD.

Multivariate analysis confirmed that existing family conflict (aOR = 6.5, 95% CI 2.3, 18.4), lack of spousal support (aOR = 2.3, 95% CI 1.0, 4.8), and lack of family support during pregnancy (aOR = 3.5, 95% CI 1.6, 7.7) were independent predictors of PPD. These findings reinforce the well-documented impact of psychosocial stressors—such as marital conflict, poor support systems, and family instability—on maternal mental health, emphasizing the need for targeted interventions to support postpartum women in vulnerable situations.

Research from Northern Nigeria consistently reported stressful life events and traumatic experiences, such as current family conflict, a non-supportive spouse, and a non-supportive family during pregnancy, as predictors of postpartum depression.[32, 33, 34, 35]

In summary, a primary strength of this study is its robust methodology, which integrates both community- and facility-based data collection, offering a more comprehensive representation of PPD prevalence. The application of standardized diagnostic criteria enhances the reliability of the findings. However, limitations include the potential for recall bias in self-reported depressive symptoms and underreporting due to social stigma. Furthermore, the cross-sectional design restricts causal inferences, highlighting the necessity for longitudinal studies. This study highlights the substantial burden of PPD in Nigeria and emphasizes the need for targeted interventions. Regional variations in prevalence suggest that sociocultural and economic factors significantly influence maternal mental health. Incorporating mental health screening into

routine postnatal care and increasing community awareness could improve early detection and management. Policymakers should prioritize maternal mental health by including PPD screening in postnatal care protocols and training healthcare workers in mental health management. Future research could explore longitudinal patterns of PPD, its long-term impacts on maternal and child health, and the effectiveness of community-based interventions in reducing its prevalence.

CONCLUSION

This study reveals a high prevalence of postpartum depression (PPD) among mothers in Bauchi State, Nigeria, highlighting the critical role of social and familial support in maternal mental health. Routine PPD screening should be integrated into postnatal care, with healthcare workers trained in early detection and management. Community awareness programs and family-centered interventions can help reduce stigma and strengthen support systems. Policymakers should incorporate maternal mental health services into existing healthcare programs, while future research should explore long-term impacts and effective community-based interventions. Strengthening collaborations among healthcare providers, community leaders, and policymakers is essential for improving maternal and child health outcomes.

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