



Assessment of Awareness of Risk Factors for Puerperal Psychosis among Pregnant Women Attending the Antenatal Unit at Abubakar Tafawa Balewa University Teaching Hospital, Bauchi

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Abstract: Postpartum psychosis (PPP) is a severe mental health disorder characterized by the acute onset of psychotic symptoms such as delusions, hallucinations, and mood disturbances shortly after childbirth. Although it affects 1-2 per 1,000 women globally, its impact is particularly severe in low-resource settings like Nigeria, where cultural stigma, limited mental health infrastructure, and low awareness lead to under diagnosis and poor outcomes. This study aimed to assess the awareness of puerperal psychosis among pregnant women attending the Antenatal Care (ANC) unit at Abubakar Tafawa Balewa University Teaching Hospital (ATBUTH) in Bauchi, Nigeria. A descriptive survey design was employed, and data were collected from 129 respondents selected via simple random sampling, using a structured questionnaire. The results indicated that while a majority (71.32%) of respondents had heard of postpartum psychosis, there was a significant deficit in detailed knowledge. Only 56.53% could accurately define it as a severe mental disorder post-childbirth, and misconceptions about causes and symptoms were common. Key risk factors such as sleep deprivation, family history of bipolar disorder, and impaired mother-infant bonding were correctly identified by most. For prevention, respondents strongly endorsed educational programs, postnatal screening for high-risk women, frequent ANC visits, family support, and ensuring adequate rest. The study concludes that despite basic recognition of PPP, profound knowledge gaps persist among pregnant women in this setting. It underscores the urgent need for integrated, educational interventions during antenatal care and the routine inclusion of mental health screenings to facilitate early identification, management, and ultimately, improved maternal and infant outcomes in Northern Nigeria.

Keywords: Postpartum psychosis awareness; Maternal mental health; Nigeria; Puerperal psychosis risk factors; Antenatal knowledge assessment.

Introduction

Postpartum psychosis (also known as puerperal psychosis) is a term that covers a group of mental illness with a sudden onset of psychotic symptoms following

childbirth. The clinical onset is rapid, with the symptoms presenting as early as the first 2 to 3 days postpartum and the majority of episodes developing within the first 2 weeks after delivery (J. Michalczyk et al., 2023). The most severe symptoms last from 2 to 12 weeks and

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recovery takes 6 months to a year (Neilson, 2021). Globally, mental health disorders pose a significant public health challenge, particularly among women of reproductive age. Among these, postpartum psychosis (PPP), also known as puerperal psychosis, is a rare but severe psychiatric condition that affects 1–2 per 1,000 women after childbirth (Reid et al., 2022).

This condition can have far-reaching consequences on a woman's mental health, family dynamics, and infant care. Manifestations of postpartum psychosis include delusions, hallucinations, mood swings, and cognitive disturbances. These symptoms can escalate rapidly, posing risks of self-harm, infanticide, or harm to other family members, it is estimated annually in the United States and are complicated by some form of postpartum mood disorders (Perry et al., 2021). Despite its rarity, PPP demands immediate medical intervention due to its life-threatening potential. Early recognition, coupled with targeted awareness, is crucial in mitigating the devastating outcomes associated with this psychiatric emergency. In high-income countries, studies have extensively documented the burden of postpartum psychosis, offering insights into its epidemiology and management. For instance, research from the United States reveals that about 20% of postpartum psychiatric hospitalizations are attributed to PPP (Toor et al., 2024). While effective treatments such as mood stabilizers, antipsychotic medications, and electroconvulsive therapy (ECT) are available, a significant barrier to managing the condition is delayed diagnosis due to stigma and a lack of awareness among women and healthcare providers (Olivé-Mas et al., 2025). Moreover, the risk of recurrence in subsequent pregnancies is alarmingly high, with 50–80% of affected women experiencing relapses (Bergink et al., 2025). These statistics underscore the urgent need for comprehensive education and preventive measures to address the global burden of PPP. In Africa, the burden of postpartum psychosis is exacerbated by socioeconomic and cultural factors. Mental health disorders are often misunderstood, and traditional beliefs may lead to the stigmatization of affected individuals. According to (Coo et al., 2021), the prevalence of postpartum mental health disorders, including psychosis, is significantly higher in low- and middle-income countries (16–20%) compared to high-income settings.

Factors such as poverty, lack of social support, and limited access to mental health services contribute to the high burden of PPP in Africa. Research from South Africa made a representative sample of nearly 750,000 first-time mothers, utilizing data from the South African hospital discharge registry. The findings revealed that 892 women were hospitalized for psychosis within 90 days postpartum, corresponding to a rate of 1.2 cases per

1,000 births. Notably, approximately half of these hospitalizations were due to psychiatric illnesses, including psychosis. Furthermore, the study demonstrated that maternal age significantly influenced the risk of developing psychosis. Women over 35 years old were twice as likely to develop psychosis compared to those aged 19 or younger (Rizzo et al., 2022)

According to (Ademiliyu et al., 2022), factors such as low socioeconomic status, marital conflict, and lack of spousal support significantly increase the risk of PPP among Nigerian women. Despite the existence of psychiatric facilities in tertiary hospitals, awareness about maternal mental health remains low among the general population and healthcare workers. Many women with PPP are misdiagnosed or go untreated, leading to severe complications, including impaired mother-infant bonding and family breakdown. A national survey on maternal mental health revealed that up to 12.5% of psychiatric hospital admissions of women in Nigeria occur during the postpartum period (Toor et al., 2024). These statistics call for urgent action to improve awareness, early detection, and treatment of postpartum psychosis in Nigeria. Bauchi State, like many northern Nigerian regions, faces unique challenges, including limited access to specialized healthcare, a high burden of poverty, and cultural norms that may hinder mental health discussions (Ademiliyu et al., 2022). Furthermore, maternal mental health is often overlooked in antenatal and postnatal care programs, despite its critical role in maternal and child health outcomes (Chilaka & Muriithi, 2021).

Women living in rural and semi-urban communities frequently experience limited access to accurate information regarding postpartum mental health disorders. Many of these women tend to interpret psychological symptoms experienced after childbirth as spiritual disturbances or as normal consequences of the postpartum period. Such misconceptions contribute to low levels of awareness and understanding of serious mental health conditions, including puerperal psychosis. As a result, affected women often delay seeking professional medical help. This delay in intervention can exacerbate the severity of the condition and negatively affect recovery outcomes. In many cases, families also lack the necessary knowledge to recognize early warning signs, further complicating timely treatment (Chauhan & Potdar, 2022).

The absence of early detection places both the mother and the infant at increased risk of adverse health outcomes. Maternal morbidity associated with untreated puerperal psychosis can include self-harm, impaired functioning, and long-term psychological distress. Infant morbidity may arise from compromised caregiving, neglect, or unsafe maternal behaviors during psychotic episodes. Puerperal psychosis is a severe

psychiatric condition that requires immediate medical attention. The disorder often manifests suddenly and may progress rapidly if not properly managed. Therefore, understanding its etiology and risk factors is essential for prevention and early intervention. Knowledge of predisposing factors such as a history of mental illness, hormonal changes, and psychosocial stressors can aid in identifying high-risk individuals. Early recognition of signs and symptoms, including hallucinations, delusions, mood instability, and confusion, is critical for prompt diagnosis. Timely treatment has been shown to significantly reduce the severity and duration of psychotic episodes. In some cases, early detection and intervention can prevent the development of a major psychotic episode, as reported by (Anke & Skjelstad, 2025). Effective management of puerperal psychosis typically involves a combination of pharmacological and psychosocial interventions. Education and awareness among pregnant women play a vital role in improving health-seeking behavior. Adequate knowledge empowers women to recognize abnormal symptoms and seek appropriate care without delay. Antenatal care provides a strategic opportunity for delivering mental health education to expectant mothers.

Integrating mental health awareness into routine antenatal services can improve early identification of postpartum psychiatric disorders. It is therefore essential that pregnant women possess sufficient knowledge and understanding of puerperal psychosis. Such awareness is crucial for promoting maternal mental health following childbirth (Radley et al., 2021). This study, therefore, focuses on assessing the level of knowledge regarding causes and risk factors of puerperal psychosis among pregnant women. Additionally, the study evaluates awareness of signs and symptoms, effects, as well as treatment and prevention strategies among pregnant women attending the antenatal clinic at Abubakar Tafawa Balewa University Teaching Hospital, Bauchi.

Method

Study Design

The research study used is descriptive survey design. This design is a systematic and un-bias investigation which is concerned with the collection of data for the purpose of describing and interpreting existing condition the way they are.

Research Setting

The area of the study is Abubakar Tafawa Balewa University Teaching Hospital (ATBUTH) Bauchi. It is located in the Dan Iya ward of Bauchi metropolis from the north western part of the town, from Wunti market.

The hospital provides a wide range of medical services, including: medical, surgical, diagnostic, out-patient, rehabilitative and support services to a catchment of definite population. It has a functional Accident and Emergency Unit that provides 24-hour emergency services all year round. The multi-disciplinary approach to service, making it the best point of call for a number of subjects including; pediatrics, general medicine and surgery, obstetrics and gynecology, laboratory services, radiology, HIV/STI services, Intensive Care Unit, ophthalmology, dietetics, physiotherapy, psychiatry, and many more.

Target Population

The target population for this study comprises all pregnant women attending Antenatal Care Unit in Abubakar Tafawa Balewa University Teaching Hospital (ATBUTH) Bauchi during the period of study. The estimated population size obtained during the period of the study is 194 pregnant women per visit in a weeks based on the hospital record (2024) .

Sampling Technique

The sampling technique used is simple random sampling technique it will be used to ensure equal opportunity to respondents involved in the study that is pregnant women attending Antenatal Care Unit at ATBUTH Bauchi during the period of study. The simple random sampling technique is a type of probability sampling technique in which each member of the subset has an equal opportunity of being chosen. It's meant to be an unbiased representation of a group (Parsaeian et al., 2021).

Instruments for Data Collection

An adapted close ended questionnaire was used, the questionnaire contain four sections. **Section A:** Socio-demographic data Contains data/profile of respondents; **Section B:** Contains questions on knowledge and understanding of postpartum psychosis; **Section C:** Contains questions on Risk factors associated with postpartum psychosis; **Section D:** Contains questions on Preventive measures of postpartum psychosis.

Validity of the Instrument

The questionnaire was subjected for face and content validity by the supervisor and the members of research committee in order to determine whether or not, the instrument can elicit the required information.

Reliability of the Instrument

In this study reliability was established using test re-test method, the instrument was reliable after repeated administration to the sample.

Methods of Data Collection

An adapted questionnaire was distributed to the pregnant women attending Antenatal Care Unit at ATBUTH Bauchi during the period of study, to respond to the mentioned questions in the questionnaire. The respondents were given time to provide the required information, the questionnaire was collected back through the same means.

Methods of Data Analysis

Data was collected and analyzed using a descriptive statistical method and illustrated by tables and expressed in percentages.

Result and Discussion

Table 1. One hundred and twenty nine(129) respondents answered the questionnaire, however, the age of the respondent were mostly between 15-20 years and 21-25 years constituting about 43.41% and 33.33%

respectively of the total respondents and (15.50%) were between 26-30 years and only (7.75%) respondents were 31 and above. According to the findings, majority of the respondents were Muslim, accounting for 91 respondents with percentage of (70.54%) while (29.46%) were Christians (Peral-Cabrera et al., 2026; Walsh & Langdon, 2025).

Most of the respondents 74 and 36 had Secondary and Tertiary education constituting about 57.36% and 27.91%, while (6.20%) had Primary education and (8.53%) had no formal education. Majority of the respondents accounting for 56.59% were Hausa, while (26.36%) were Fulani, 9.30% were Yoruba and only (7.75%) were from other tribes with (70.54%) of the respondents been married, 17.83% divorced with (6.98%) single and (4.65%) others. Most of the respondents 46 and 35 were business owner and other occupations constituting about (35.66%) and (27.13%), while (22.48%) are farmers and (14.73) are civil servant (Maabreh et al., 2026).

Table 1. Socio demographic Data

Variables	Frequency	Percentage (%)
Age		
15-20yrs	56	43.41%
21-25yrs	43	33.33%
26-30yrs	20	15.50%
31- Above	10	7.75%
Religion		
Christianity	38	29.46%
Islam	91	70.54%
Others	0	0%
Educational Background		
Primary	8	6.20%
Secondary	74	57.36%
Tertiary	36	27.91%
Others	11	8.53%
Tribe		
Hausa	73	56.59%
Fulani	34	26.36%
Yoruba	12	9.30%
Others	10	7.75%
Marital Status		
Single	9	6.98%
Married	91	70.54%
Divorced	23	17.83%
Others	6	4.65%
Occupation		
Farmer	29	22.48%
Civil servant	19	14.73%
Business owner	46	35.66%
Others	35	27.13%

From Table 2, the findings indicate that a majority of the respondents had prior awareness of postpartum psychosis. Specifically, 71.32% of the respondents reported that they had heard about postpartum

psychosis, while 28.68% indicated no prior knowledge of the condition (Isah et al., 2025; Sumarni & Minarti, 2025). This level of awareness suggests a moderate dissemination of information regarding postpartum

mental health among the study population. Among respondents who were aware of postpartum psychosis, more than half (56.53%) accurately described it as a severe mental disorder occurring after childbirth. This demonstrates that a substantial proportion of respondents possessed an appropriate conceptual understanding of the condition. However, a notable proportion still held misconceptions about its nature. Regarding the timing of occurrence, 68.22% of the respondents indicated knowledge of when postpartum psychosis occurs.

The majority of these respondents (45.45%) believed that the condition typically develops within the first 24 hours following childbirth. This perception reflects partial awareness of the postpartum onset period of the disorder. Awareness of signs and symptoms was also relatively high among respondents. Overall, 69.77% of the participants reported that they knew the signs and symptoms of postpartum psychosis. Among those respondents, 72.22% correctly identified major symptoms such as hallucinations, anxiety, panic,

depression, self-harm, and suicidal ideation. This finding indicates a reasonable level of understanding of the clinical manifestations of the disorder. Nevertheless, some respondents misattributed physical symptoms to the condition. In terms of management, 72.87% of the respondents were aware that postpartum psychosis can be managed medically. This reflects a positive attitude toward biomedical treatment approaches (Aqeeli et al., 2025; Gari et al., 2025).

The majority of these respondents (85.11%) preferred hospital-based management involving drugs and counselling. However, a smaller proportion of respondents supported non-medical approaches. Specifically, 8.51% favored traditional medicine, while 4.25% believed management through market fruits and vegetables was appropriate. Only 2.13% of respondents agreed with home-based care involving charms and food. These findings highlight both encouraging levels of awareness and persistent misconceptions regarding the management of postpartum psychosis (Emikpe et al., 2025; Hussin, 2025).

Table 2. Knowledge and Understanding of Puerperal Psychosis

Variables	Frequency	Percentage%
Have you ever heard of postpartum psychosis?		
(a) Yes	92	71.32%
(b) No	37	28.68%
Total	129	100%
If yes, describe postpartum psychosis best from your understanding:		
Mental illness caused by fever and diarrhea during childbirth	15	16.30%
Mental condition that affects women in labor	25	27.17%
Severe mental disorder where thought and emotions are impaired after childbirth	52	56.53%
Total	129	100%
Do you know when postpartum psychosis occur during pregnancy?		
(a) Yes	88	68.22%
(b) No	41	31.78%
Total	129	100%
If yes, when does postpartum psychosis occur?		
Conception to birth	10	11.36%
Birth to 24 hours	40	45.45%
Birth to 6 weeks postpartum	30	34.09%
6-12 weeks postpartum	8	9.10%
Total	129	100%
Do you know any signs or symptoms of postpartum psychosis?		
(a) Yes	90	69.77%
(b) No	39	30.23%
Total	129	100%
Anxiety, Hallucinations, Panic, Depression, Self-harm and Suicidal ideation	65	72.22%
Fever, Malaise and Headache	15	16.67%

Vaginal bleeding, loss of appetite	10	11.11%
Total	90	100%
Do you know postpartum psychosis can be managed medically?		
(a) Yes	94	72.87%
(b) No	35	27.13%
Total	129	100%
If yes, how best can post postpartum psychosis be managed?		
Hospital, Drugs and Counselling	80	85.11%
Home, Charms and Food	2	2.13%
Traditional Medicine, Herbal & Water	8	8.51%
Market, Fruit and Vegetable	4	4.25%
Total	129	100%

Table 3 shows that the majority of the respondents agreed with the statements related to puerperal psychosis. Most respondents acknowledged that sleep deprivation during the puerperium is a trigger for puerperal psychosis, with a mean score of 4.06. Similarly, respondents agreed that puerperal psychosis can lead to impaired bonding between the mother and child, also with a mean score of 4.06 (Furman et al., 2025). Family history of bipolar disorder was likewise recognized as a significant risk factor, with a mean score of 3.90 (Panolan, 2025; Yousaf et al., 2025). These

findings indicate a relatively good level of awareness of the major causes and effects of puerperal psychosis among the respondents. In contrast, respondents showed lower levels of agreement with misconceptions related to the condition (Shahzad et al., 2025). Taking antenatal medications during pregnancy was largely disagreed with as a cause of postpartum psychosis, with a mean score of 2.70. Likewise, consuming protein-rich foods such as eggs during pregnancy was least agreed upon as a cause, with a mean score of 4. (Laufer & Mun, 2025; Rajah et al., 2025).

Table 3. Risk Factors Associated with Puerperal Psychosis

Variable	Frequency	Mean	Remark
Sleep deprivation during peuperium is one of the triggers of postpartum psychosis			
(a) Strongly agree	55	4.06	Accepted
(b) Agree	45		
(c) Neutral	15		
(d) Disagree	10		
(e) Strongly Disagree	4		
Total	129		
One of the implications of puerperal psychosis is impaired bonding between mother and child			
(a) Strongly agree	60	4.06	Accepted
(b) Agree	40		
(c) Neutral	15		
(d) Disagree	10		
(e) Strongly Disagree	4		
Total	129		
Family History of bipolar disorder or related psychotic disorder is an associated risk factor of puerperal psychosis			
(a) Strongly agree	50	3.9	Accepted
(b) Agree	50		
(c) Neutral	14		
(d) Disagree	10		
(e) Strongly Disagree	5		
Total	129		

Taking antenatal medications during pregnancy is one of the major cause of puerperal psychosis			
(a)) Strongly agree	20		
(b) Agree	30	2.7	Rejected
(c) Neutral	25		
(d) Disagree	35		
(e) Strongly Disagree	19		
Total	129		

Taking proteins like egg during pregnancy predisposes you to risk of postpartum psychosis			
(a) Strongly agree	5	2.4	Rejected
(b) Agree	20		
(c) Neutral	40		
(d) Disagree	30		
(e) Strongly Disagree	34		
Total	129		

Table 4, shows that majority of respondents (85.27%) believe that enhancement of educational and awareness programs on postpartum psychosis can serve as a prevention to puerperal psychosis. Similarly, 82.95% agreed that postnatal screening of women at high risk is an effective preventive strategy (Celewicz et al., 2023; Momeni et al., 2023). Frequent ANC visit and family

support were recognized by 86.82% as preventive measures, while 84.50% agreed that educating expectant mothers and their families about the symptoms can also play a vital role in prevention. Lastly, 83.72% of respondents affirmed that ensuring adequate sleep and rest can also help prevent postpartum psychosis (Celewicz et al., 2023; K. Michalczyk et al., 2023).

Table 4. Preventive Measures for Postpartum Psychosis

Variables	Frequency	Percentage%
Enhancement of educational and awareness programmes on postpartum psychosis can serve as a prevention to postpartum psychosis		
(a) Yes	110	85.27%
(b) No	19	14.73%
Total	129	100%
Postnatal Screening of Women at High risk can also prevent the occurrence of postpartum psychosis		
(a) Yes	107	82.95%
(b) No	22	17.05%
Total	129	100%
Frequent ANC visit and support from family members prevent the occurrence of postpartum psychosis		
(a) Yes	112	86.82%
(b) No	17	13.18%
Total	129	100%
Educating expectant mothers and families about the symptoms of puerperal psychosis like confusion, hallucination and mood swings can also prevent the occurrence of puerperal psychosis		
(a) Yes	109	84.40%
(b) No	20	15.50%
Total	129	100%

Ensuring adequate sleep and rest can prevent the occurrence of postpartum psychosis		
(a) Yes	108	83.72%
(b) No	21	16.28%
Total	129	100%

Research question 1: what level of knowledge and understanding of puerperal psychosis do pregnant women attending ANC unit at Abubakar Tafawa Balewa University Teaching Hospital Bauchi have? The research findings of this study discovered that more than 3/4 of the respondent don't have good knowledge and understanding of puerperal psychosis, this was supported by studies conducted by (Ademiliyu et al., 2022; Gracious & Augustina, 2024) Where he employed a cross-sectional survey design which surveyed 255 pregnant women attending ANC at Obafemi Awolowo University Teaching Hospital in Nigeria, found that only 20% of respondent demonstrated a good understanding of the causes and risk factors associated with puerperal psychosis (Ogundare et al., 2025).

Research Question 2: what are the risk factors associated with puerperal psychosis among pregnant women attending ANC unit at Abubakar Tafawa Balewa University Teaching Hospital Bauchi? The study identifies several risk factors contributing to puerperal psychosis among the pregnant women attending ANC at ATBUTH including family history of bipolar disorder, family history of related psychotic disorder, and sleep deprivation during puerperium, impaired bonding between mother and child. These findings are consistent with a systematic review by (Gilden et al., 2021; Rommel et al., 2021) Which outline key risk factors including history of bipolar disorder demographic factors like young maternal age, particularly among those aged 15-19, as well as prim parity (first time mothers) and psychosocial stressors in which he said that conflictual relationship or lack of communication can heighten the feeling of anxiety and depression among new mothers and that further complicates motherhood and lead to puerperal psychosis .

Research Question 3: in what ways can postpartum psychosis be prevented among pregnant women attending ANC unit at Abubakar Tafawa Balewa University Teaching Hospital Bauchi? According to the findings me most of the women said that enhancement of educational programs on postpartum psychosis can serve as a prevention, majority said postnatal screening, frequent antenatal visit and educating expectant mothers and families about symptoms of postpartum psychosis can prevent the occurrence this finding is supported by the study conducted by (Cecerska-Heryć et al., 2023; E. Michalczyk et al., 2023) Which says effective prevention of postpartum psychosis should

focus on early identification and intervention strategies which include screening programs, educational intervention and support systems (Garbowski et al., 2023).

Conclusion

This study explored the knowledge, risk factors, and preventive measures related to puerperal (postpartum) psychosis among pregnant women attending the antenatal clinic at Abubakar Tafawa Balewa University Teaching Hospital, Bauchi.

The findings revealed that a significant proportion of the respondents lack adequate knowledge and understanding of puerperal psychosis. Additionally, several risk factors such as sleep deprivation, family history of psychotic disorders, and impaired bonding between mother and child were identified as key contributors.

Despite the low level of awareness, the study highlighted that many of the respondents recognized the importance of preventive strategies, including antenatal education, postnatal screening, and family support. These insights underscore the need for enhanced maternal mental health education and structured support systems within antenatal care services. Ultimately, addressing puerperal psychosis requires a multifaceted approach that combines awareness creation, early detection, family involvement, and professional medical intervention.

Strengthening these aspects in maternal healthcare services is essential for safeguarding the mental well-being of mothers and ensuring healthy outcomes for both mothers and their infants.

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Author Contributions

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Conflicts of Interest

The authors declare no conflict of interest.

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