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Assessment of Mental Health of Pregnant and Postpartum Women Attending Antenatal and Postnatal Service in Tertiary Health Institutions in Anambra State.

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ABSTRACT

Background: Pregnancy and the postpartum period are associated with heightened vulnerability to mental health disorders such as depression, anxiety, psychosis, and post-traumatic stress disorder (PTSD). In low- and middle-income settings like Nigeria, these conditions are often underdiagnosed and undertreated due to stigma, poor integration into maternal health services, and limited awareness. This study aimed to assess the mental health status of pregnant and postpartum women attending antenatal and postnatal services in tertiary health institutions in Anambra State, Nigeria.

Methods: This study adopted a cross-sectional analytical design. A total of 310 pregnant and postpartum women attending antenatal and postnatal clinics were recruited from tertiary health institutions in Anambra State. Data were collected using self-report instruments. Data were collected using a structured questionnaire "Assessment of Mental Health of Pregnant and Postpartum Women Questionnaire" developed by the researchers. Data obtained were analyzed using descriptive statistics, and inferential statistics of Independent T-test. Alpha level was set at 0.05.

Results: The findings of this study revealed a high extent of depression ($\bar{x}$ = 2.60), anxiety ($\bar{x}$ = 3.16), psychotic symptoms ($\bar{x}$ = 3.14) as well as post-traumatic stress disorder ($\bar{x}$ = 3.15). There was significant difference in the opinion of pregnant and postpartum women on the extent of occurrence of anxiety disorder (p = 0.047). There were no significant differences in the opinion of pregnant and postpartum women on the extent of occurrence of depression (p = 0.064), psychotic symptoms (p = 0.83) and post-traumatic stress disorder (p = 0.91).

Conclusion: Mental health disorders are prevalent among pregnant and postpartum women in tertiary health facilities in Anambra State, underscoring the need for routine psychological assessment as part of maternal care. Strengthening the capacity of healthcare providers through targeted training in perinatal mental health, alongside integrating mental and physical health services, can improve early detection and management.

Keywords: Maternal Mental Health; Pregnancy; Perinatal Care; Postpartum Depression; Anxiety Disorders.

INTRODUCTION

Pregnancy is a transitional period to motherhood during which expectant mothers experience significant hormonal, emotional, and physical changes. These transitions can result in psychological distress, with some women reporting uncertainty and anxiety as they approach childbirth, particularly those living in poverty or exposed to violence and abuse[1]. The burden of maternal mental health problems in low- and middle-income countries (LMICs) is substantial[2], and these conditions are major contributors to maternal morbidity and mortality. They also have long-term adverse effects on fetal development, birth outcomes, and the health and development of children[3].

Mental health is a fundamental component of overall well-being, influencing emotions, cognition, behaviour, and interpersonal relationships. According to the World Health Organization[4], mental health is "a state of well-being in which the individual realizes his or her abilities, can cope with the normal stresses of life, can work productively and fruitfully, and can contribute to his or her community." However, compromised mental health impairs daily functioning, decision-making, and quality of life[5].

The perinatal period, comprising pregnancy and the first year postpartum, is a particularly vulnerable phase for the onset of mental health disorders such as anxiety and depression. Globally, prevalence rates vary: antenatal depression has been reported at 28.5% in China[6], and 24.5% in Nigeria[7]. Despite the burden, perinatal mental health remains under-recognized in Nigeria. Antenatal care (ANC) and postnatal care (PNC) offer opportunities to integrate mental health screening, yet routine assessments are rarely implemented in tertiary health facilities. As noted by Vogel et al[8], high maternal mortality in Nigeria is partly attributable to poor quality prenatal and postnatal care, with mental health issues often neglected. This gap is worsened by socio-cultural stigma, lack of awareness, domestic violence, and economic challenges that prevent women from seeking help[9].

Anambra State, in southeastern Nigeria, has limited data on the mental health of pregnant and postpartum women. Anecdotal reports and hospital records suggest a high level of psychological distress among women attending tertiary health facilities, but there is no systematic evidence to guide interventions. Understanding the prevalence and associated factors is essential for integrating mental health into maternal services and achieving Nigeria's Sustainable Development Goals on maternal health.

Therefore, this study assessed the mental health of pregnant and postpartum women attending antenatal and postnatal services in tertiary health institutions in Anambra State. Findings are expected to inform evidence-based interventions, strengthen screening protocols, and guide policy in addressing perinatal mental health disorders.

METHODS

Study Design

This study employed a descriptive cross-sectional survey design to assess the mental health of pregnant and postpartum women attending antenatal and postnatal services in tertiary health institutions in Anambra State, Nigeria. Data were collected from two major tertiary facilities, Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi, and Federal Medical Centre (FMC), Onitsha.

Study Population

The study population comprised 1,649 pregnant and postpartum women attending antenatal and postnatal clinics in the selected institutions. Eligible participants were pregnant women in any trimester and postpartum women within six months after delivery who provided informed consent. Women with pre-existing psychiatric diagnoses prior to pregnancy, those critically ill, or those receiving care in private facilities were excluded. A total of 310 participants were recruited for this study. Proportionate stratified sampling determined the number of participants recruited from each facility, and systematic random sampling was then used to select respondents.

Instrument for Data Collection

Data were collected using a self-developed structured questionnaire, the Assessment of Mental Health of Pregnant and Postpartum Women Questionnaire (AMHPPWQ). The tool consisted of two sections:

i. Section A: socio-demographic and obstetric characteristics.

ii. Section B: 40 items assessing depression, anxiety, psychotic symptoms, and post-traumatic stress disorder, rated on a four-point Likert scale (1 = strongly disagree to 4 = strongly agree).

Ethical approval was obtained from the University Ethics Committee, Chukwuemeka Odumegwu Ojukwu University, Anambra, Nigeria. Participants were approached during clinic visits, informed about the study, and assured of confidentiality. Questionnaires were self-administered or researcher-assisted when necessary, and retrieved immediately or via a designated hospital officer.

Data Analysis

Completed questionnaires were coded and analysed using SPSS version 25. Descriptive statistics (mean, standard deviation, frequencies, percentages) were used to summarize data. Independent T-tests, were applied to test hypotheses. Alpha value was set at $p < 0.05$.

RESULTS

The respondents were predominantly within the reproductive age group of 25–31 years (155; 50%), married (50%), and had attained tertiary education (50%). Most were employed in the public sector (50%), while 186 (60%) were pregnant and 144 (40%) were postpartum women (Table 4.1).

The assessment of mental health symptoms revealed a generally high occurrence across all domains. Depression symptoms were reported to a high extent (mean = 2.60), with common manifestations including persistent sadness, anhedonia, fatigue, sleep disturbances, and suicidal ideation. Anxiety disorders also occurred to a high extent (mean = 3.16), with excessive worry, restlessness, irritability, physiological arousal (e.g., palpitations and sweating), and difficulty controlling fear or worry being prominent. Psychotic symptoms were similarly prevalent (mean = 3.14), with respondents indicating experiences of hallucinations, delusional thoughts, disconnection from reality, extreme mood swings, and interpersonal mistrust. Post-traumatic stress disorder was also reported at a high extent (mean = 3.15), characterized by flashbacks, hypervigilance, avoidance behaviors, intrusive thoughts, and emotional detachment.

Independent t-tests showed no significant differences between pregnant and postpartum women ($p > 0.05$) for opinion on the occurrence of depression, psychotic symptoms and post-traumatic stress disorder, indicating that both groups are similarly vulnerable to perinatal mental health challenges. There was, however, a significant difference in the opinion of both groups on the occurrence of anxiety disorders ($p = 0.047$) (Table 6).

DISCUSSION

This study assessed the mental health of pregnant and postpartum women attending antenatal and postnatal services in tertiary health institutions in Anambra State. The findings reveal a notable occurrence of depression, anxiety disorders, psychotic symptoms, and post-traumatic stress disorder (PTSD) within this population, reflecting trends reported in global and regional literature.

The prevalence of depression observed in this study is consistent with reports that antenatal depression is a strong predictor of postpartum depression[10,11]. Factors such as interpersonal stress, societal expectations, and limited screening during antenatal visits may contribute to the burden[12,13]. In resource-limited settings such as Anambra State, inadequate integration of mental health into routine maternal care further compounds the problem.

Similarly, the occurrence of anxiety disorders among participants aligns with previous studies reporting high perinatal anxiety rates, ~20%[14,15]. The association of anxiety with socioeconomic stressors, domestic violence, and weak social support systems[16] may explain the elevated rates in this setting. The frequent co-occurrence of anxiety and depression highlights the

complex interplay of mental health disorders in the perinatal period and emphasizes the need for integrated maternal mental health care.

The presence of psychotic symptoms highlights a critical risk, especially as postpartum psychosis, though rare, can have severe consequences. Consistent with prior reports[17], these symptoms may be influenced by hormonal fluctuations, prior psychiatric history, bereavement, and social isolation[18]. Inadequate screening and poor access to mental health resources in Anambra may contribute to under-detection and late management of such conditions.

The occurrence of PTSD among participants further illustrates the psychological vulnerability associated with traumatic childbirth experiences. Literature indicates that fear of childbirth, obstetric complications, and prior trauma are significant predictors of PTSD[19,20]. The absence of structured psychosocial support in many maternal health services likely increases the risk of untreated PTSD in this population.

CONCLUSION

This study demonstrates that mental health disorders, including depression, anxiety, psychotic symptoms, and post-traumatic stress disorder, are prevalent among pregnant and postpartum women in tertiary health facilities in Anambra State. These findings highlight the critical need to incorporate routine psychological assessment into standard maternal health care. Beyond routine screening, strengthening the capacity of healthcare providers through targeted training in perinatal mental health is essential to ensure early identification and appropriate management of these conditions. Integrating mental and physical health services within antenatal and postnatal care pathways will not only improve maternal wellbeing but also contribute to better neonatal and family health outcomes. Addressing mental health during the perinatal period should therefore be prioritized in policy and practice, particularly in resource-constrained settings such as Anambra State, where the burden of undetected and untreated conditions remains high.

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Table 1: Sociodemographic characteristics of the respondents

	Frequency	Percentage
Age (years)		
18 – 24	46	14.8
25 – 31	155	50
32 – 38	62	20
≥ 39	47	15.2
Marital status		
Single	31	10
Married	155	50
Separated/Divorced	62	20
Widowed	62	20
Educational background		
No formal education	31	10
Primary education	62	20
Secondary education	62	20

Tertiary education	155	50
Employment status		
Public sector	155	50
Private sector	62	20
Self-employed	62	20
Unemployed	31	10
Maternal status		
Pregnant	186	60
Post-partum	144	40

Table 2: Occurrence of depression among the respondents

VHE = Very High Extent; HE = High Extent; LE = Low Extent; VLE = Very Low Extent

Statements	VHE	HE	LE	VLE	Mean	Remark
I often feel persistent sadness or hopelessness.	170	70	60	10	2.74	High extent
I have lost interest in activities I used to enjoy.	150	70	70	20	2.64	High extent
I experience feelings of worthlessness or excessive guilt.	130	70	80	30	2.54	High extent
I feel fatigued or lack energy most of the time.	110	90	70	40	2.51	High extent
I have difficulty sleeping or sleep too much.	190	70	10	40	2.71	High extent
I have experienced sudden changes in my appetite and weight.	110	100	60	40	2.55	High extent
I find it difficult to concentrate or make decisions.	120	100	20	70	2.59	High extent
I have had thoughts of harming myself or suicide.	130	70	80	30	2.55	High extent
Average mean					2.60	High extent

Table 3: Occurrence of anxiety disorder among the respondents

Statements	VHE	HE	LE	VLE	Mean	Remark

I frequently experience excessive worry about my pregnancy or baby.	160	70	60	20	3.19	High extent
I often feel restless, tense, or nervous.	200	50	40	20	3.38	High extent
I experience sudden and unexplained feelings of panic.	180	50	60	20	3.25	High extent
I feel irritable or easily annoyed.	158	52	60	40	3.05	High extent
I have difficulty relaxing, even when I have the opportunity.	190	70	10	40	3.32	High extent
My heart races, I sweat, or I tremble when I am anxious.	210	10	50	40	3.25	High extent
I avoid certain situations out of fear or worry.	120	100	20	70	2.87	High extent
I find it difficult to control my thoughts of fear or worry.	150	40	80	40	2.96	High extent
Average Mean					3.16	High extent

VHE = Very High Extent; HE = High Extent; LE = Low Extent; VLE = Very Low Extent

Table 4: Occurrence of psychotic symptoms among the respondents

Statements	**VHE**	**HE**	**LE**	**VLE**	**Mean**	**Remark**
I have had unusual thoughts or beliefs that others do not share.	140	70	70	30	3.03	High extent

I hear voices or see things that others cannot.	200	50	40	20	3.38	High extent
I sometimes feel disconnected from reality.	180	60	65	5	3.33	High extent
I have difficulty distinguishing between what is real and what is not.	158	52	60	40	3.05	High extent
I experience extreme mood swings.	200	60	10	40	3.35	High extent
I feel like someone is watching or controlling me.	210	10	50	40	3.25	High extent
I have had aggressive or violent thoughts or behaviors.	120	100	20	70	2.87	High extent
I find it hard to trust people, even my loved ones.	130	50	90	40	2.87	High extent
Average Mean					3.14	High extent

VHE = Very High Extent; HE = High Extent; LE = Low Extent; VLE = Very Low Extent

Table 5: Occurrence of post-traumatic stress disorder among the respondents

Statements	**VHE**	**HE**	**LE**	**VLE**	**Mean**	**Remark**

I have experienced traumatic or distressing events related to my pregnancy or childbirth.	120	100	60	30	3.00	High extent
I frequently have flashbacks or nightmares about past traumatic experiences.	210	40	40	20	3.40	High extent
I avoid places, people, or activities that remind me of distressing events.	150	50	70	40	3.00	High extent
I feel emotionally numb or detached from loved ones.	160	50	80	20	3.13	High extent
I experience sudden outbursts of anger or irritability.	200	60	10	40	3.35	High extent
I am constantly on high alert or easily startled.	210	10	50	40	3.26	High extent
I have trouble concentrating due to intrusive distressing memories.	170	80	20	40	3.22	High extent
I struggle with persistent negative thoughts about myself or the world.	130	50	90	40	2.87	High extent
Average Mean					3.15	High extent

VHE = Very High Extent; HE = High Extent; LE = Low Extent; VLE = Very Low Extent

Table 6: Independent T-test for difference in occurrence of mental health symptoms between pregnant and postpartum women

		95% CI			
	Mean Diff. ± SD	**Lower**	**Upper**	**t**	**p-value**
Depression	0.091 ± 0.052	-0.035	0.047	0.322	0.064
Anxiety disorder	0.057 ± 0.028	-0.024	0.091	0.725	0.047
Psychotic symptoms	0.187 ± 0.017	-0.0144	0.058	0.215	0.83
PTSD	0.071 ± 0.057	-0.474	0.087	0.115	0.091