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PSYCHOSOCIAL FACTORS ON POSTPARTUM DEPRESSION AMONG PREGNANT WOMEN IN MAKURDI LOCAL GOVERNMENT AREA

Agbo Odeh Hillary, Iorhule Anthony Terwase & Abeda Benjamin
Department of Psychology
Rev. Fr. Moses Orshio Adasu University,
P.M.B 102119 Makurdi, Benue State, Nigeria

ABSTRACT

This study examined psychosocial factors as predictors of postpartum depression among women in Makurdi Local Government Area. A cross-sectional survey design was adopted for the study. The participants consisted of 384 postpartum women who had recently delivered their babies and were attending postnatal clinics in selected hospitals within Makurdi Local Government Area of Benue State. The participants' ages ranged from 18 to 27 years. Data were collected using the Postpartum Depression Questionnaire (PDQ), Anxiety Questionnaire (AQ), Stress Scale (SS), and Marital Satisfaction Scale (MSS).Four hypotheses were tested using simple linear regression and standard multiple regression analyses. The results revealed that anxiety significantly predicted postpartum depression among postpartum women in Makurdi Local Government Area [$R = .032$, $R^2 = .061$, $F(1, 382) = 11.409$, $p < .01$]. The second hypothesis showed that stress significantly predicted postpartum depression [$R = .082$, $R^2 = .098$, $F(1, 382) = 12.633$, $p < .01$]. The third hypothesis revealed that marital satisfaction significantly predicted postpartum depression [$R = .732$, $R^2 = .536$, $F(1, 382) = 141.814$, $p < .01$]. Furthermore, the fourth hypothesis indicated that anxiety, stress, and marital satisfaction jointly and significantly predicted postpartum depression [$R = .199$, $R^2 = .039$, $F(3, 380) = 8.261$, $p < .01$].The study concluded that anxiety, stress, and marital satisfaction are significant predictors of postpartum depression among postpartum women in Makurdi Local Government Area. Based on these findings, it was recommended that clinical psychologists should play a central role in the screening, diagnosis, and management of postpartum depression. In addition, community-based mental health interventions should be developed, with emphasis on accessible and affordable psychological services for women in the postnatal period.

Keywords: Postpartum depression, anxiety, stress, marital satisfaction, psychosocial factors

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Introduction

Postpartum depression (PPD) is increasingly recognized as a major public health concern, affecting not only mothers but also their children and families. Depression is a widespread and rapidly growing mental health condition that affects individuals across all demographic groups, with nursing mothers being particularly vulnerable. It is characterized by persistent low mood, loss of interest or pleasure, reduced energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration. Depression often co-occurs with symptoms of anxiety (World Health Organization [WHO], 2023). According to the WHO (2023), mental health conditions such as depression can become chronic or recurrent, leading to significant impairments in daily functioning. In severe cases, depression may result in suicide. Globally, nearly 800,000 people die by suicide each year, which translates to one death every 40 seconds, and for every death, more than 20 individuals attempt suicide. Depression manifests in different forms, particularly distinguishing between individuals with and without a history of manic episodes. Life events such as workplace stress, pregnancy, and the challenges associated with caring for a newborn can trigger depressive episodes. Postpartum depression refers to a range of mood disorders that occur after childbirth. It is considered a complication associated with childbirth, with causes varying across individuals. Although its symptoms are similar to those of general depressive disorders, PPD is distinguished by its timing and context. Common symptoms include loss of appetite, insomnia, intense irritability, fatigue, mood swings, lack of joy, and, in severe cases, intrusive thoughts of self-harm or harm toward the baby. If left untreated, PPD can persist for several months or longer (Wala et al., 2018). Mothers experiencing PPD often report overwhelming sadness, anxiety, and exhaustion, which can impair their ability to care for themselves and their infants (American Psychiatric Association [APA], 2013; Postpartum Support International, 2023). Untreated PPD has far-reaching consequences. It negatively affects maternal mental and physical health and can impair child development. Research indicates that PPD increases the risk of future depressive episodes and disrupts parenting behaviors, which may affect the child's cognitive and physical development (Waqas et al., 2023). Depressed mothers may struggle to bond with their infants, potentially leading to developmental and behavioral challenges. Maternal depression within the first year postpartum has been linked to behavioral problems in children, including aggression, hyperactivity, and early signs of depression by age three (Waqas et al., 2023). Additionally, women with PPD are at higher risk of comorbid conditions such as obsessive-compulsive disorder (Sadock et al., 2015).

Globally, approximately 10–20% of new mothers experience postpartum depression, although the actual prevalence may be higher due to underreporting and reluctance to seek help (APA, 2013; Shorey et al., 2021). In Nigeria, mental illness is often interpreted through spiritual or cultural lenses, which contributes to stigma, underreporting, and reduced utilization of mental health services. Although the prevalence of mental illness in Nigeria is comparable to that in Western countries, coping strategies and help-seeking behaviors differ significantly (Ifeagwazi et al., 2022). Furthermore, psychiatric consultations tend to increase after childbirth, largely due to affective disorders such as depression, with women generally being more vulnerable than men (Howard et al., 2022). Among the

major predictors of PPD is anxiety. Empirical studies indicate that maternal anxiety significantly increases the risk of developing postpartum depression (Dennis et al., 2022). Concerns about the baby's health, fear of congenital abnormalities, and doubts about caregiving abilities can contribute to heightened anxiety and subsequent depressive symptoms (Upadhyay et al., 2022). Fairbrother et al. (2021) report that approximately 11% of new mothers experience panic-related symptoms, including nervousness, shortness of breath, chest pain, and persistent fear. Some mothers also experience intrusive thoughts and compulsive behaviors related to the safety of their infants. Although distressing, these thoughts are typically recognized by mothers as irrational and rarely lead to harmful actions (Postpartum Support International, 2023).

Stress is another significant predictor of postpartum depression. Stress refers to situations in which individuals perceive that they lack sufficient resources to cope with environmental demands (Yim et al., 2021). During pregnancy and childbirth, stressors such as unplanned pregnancies, medical complications, and fear of delivery can increase the risk of PPD. However, postnatal stressors including sleep deprivation, infant care demands, persistent crying, and the challenge of balancing work and family responsibilities are often more powerful predictors of postpartum depression (Shorey & Chan, 2020). Anxiety also plays a critical role in both the onset and severity of PPD. Women with elevated anxiety levels during pregnancy or shortly after childbirth are particularly vulnerable. Persistent worries about the baby's health, fear of inadequacy, and concerns about new responsibilities can lead to emotional exhaustion and depressive symptoms (Dunkel Schetter & Tanner, 2012). Biologically, anxiety activates the hypothalamic-pituitary-adrenal (HPA) axis, resulting in increased cortisol levels. During the postpartum period, when hormonal fluctuations are already pronounced, elevated cortisol can disrupt emotional regulation and increase susceptibility to depression (Yim et al., 2015). Furthermore, anxiety and stress contribute to postpartum depression through cognitive, behavioral, and biological pathways. Anxiety may lead to intrusive thoughts, disrupted sleep, poor nutrition, and reduced self-care, all of which worsen mental health (Wenzel et al., 2005). It can also result in social withdrawal, increasing feelings of isolation and helplessness key features of depression (Fairbrother et al., 2016). Studies suggest that approximately 20% of postpartum women experience both anxiety and depression simultaneously, complicating diagnosis and treatment (Fairbrother et al., 2016; Ross & McLean, 2006). Chronic stress, influenced by hormonal changes, financial pressures, relationship difficulties, and childcare responsibilities, further elevates cortisol levels and disrupts emotional stability (Waqas et al., 2023; O'Hara & Wisner, 2014; Yim et al., 2021). In the Nigerian context, cultural expectations and limited mental health support systems intensify stress, thereby increasing the risk of postpartum depression and hindering effective mother-infant bonding (Ifeagwazi et al., 2022; Upadhyay et al., 2022).

Statement of the Problem

Complications arising from childbirth have become increasingly concerning, especially as the reasons behind these complications vary significantly from one expectant mother to another. This situation has taken a worrisome dimension in recent times and has drawn the attention of researchers, health practitioners, and policy makers alike.

A particularly alarming issue is the increasing incidence of postpartum depression (PPD), a mental health disorder that affects thousands of women annually following childbirth. Evidence from health reports indicates that many women experience postpartum depression of varying intensities, including loss of appetite, insomnia, fatigue, intense irritability, mood swings, lack of joy in life, and in severe cases, suicidal ideation or thoughts of harming the baby. If left untreated, postpartum depression can persist for several months or longer, significantly affecting the mother's well-being and the healthy development of the newborn. In the Makurdi metropolis, anecdotal and clinical observations suggest that many pregnant women are experiencing multiple challenges both physical and psychological before and after childbirth. These challenges are exacerbated by psychosocial stressors such as anxiety, elevated stress levels, and marital dissatisfaction, all of which can heighten the risk of postpartum depression. Despite the growing concerns, there remains limited empirical research in the study area to systematically examine how these psychosocial factors contribute to postpartum depression. Therefore, this study seeks to investigate the influence of psychosocial factors metropolis, specifically anxiety, stress, and marital satisfaction on postpartum depression among pregnant women in Makurdi local government Area with the aim of providing evidence-based insights for preventive and interventional strategies.

Aim and Objectives

The aimed of this study is to examine the psychosocial factors as predictors of postpartum depression among pregnant women in Makurdi local Government Area. Specifically, the objectives were to:

i. examine anxiety as predictor of postpartum depression among pregnant women in Makurdi local government Area.
ii. investigate stress as predictors of postpartum depression among pregnant women in Makurdi local Government Area.
iii. explore marital satisfaction as predictors of postpartum depression among pregnant women in Makurdi local Government Area.
iv. Determine anxiety, stress and marital satisfaction as joint predictors of postpartum depression among pregnant women in Makurdi local Government Area.

LITERATURE REVIEW

Postpartum Depression

Postpartum Depression (PPD) is a serious mental health condition that affects a significant number of women following childbirth, and it has received growing attention in recent years due to its implications for maternal and infant well-being. According to Stewart and Vigod (2019), PPD is a subtype of major depressive disorder that occurs within the first few weeks to months after delivery, often characterized by feelings of persistent sadness, emotional withdrawal, fatigue, low energy, and a diminished interest in activities that once brought joy. This condition is more severe and long-lasting than the commonly experienced "baby blues" and can significantly interfere with a mother's ability to care for herself and her infant. Similarly, Shorey, Chee, and Ng (2022) defined postpartum depression as a mood disorder that manifests through emotional and psychological symptoms such as anxiety, irritability, guilt, and even suicidal ideation, affecting the mother's bonding with the newborn and overall family functioning. In a more clinical

framing, the American Psychiatric Association (2022) described PPD as a form of major depressive episode with peripartum onset, noting that the symptoms may begin during pregnancy or within four weeks after delivery and include marked functional impairment, changes in appetite and sleep, and recurrent thoughts of death. These modern definitions emphasize that PPD is not merely a hormonal reaction but a complex interplay of biological, psychological, and social factors that require early diagnosis and appropriate intervention.

Anxiety

Anxiety may be defined as apprehension, tension, or uneasiness that stems from the anticipation of danger, which may be internal or external (Diagnostic and Statistical Manual of Mental Disorders, 1980). Although some definitions distinguish between fear as being an emotional reaction to a real and consciously recognized threat and anxiety as being a fear response when reality does not justify such a response, it is important to remember that the manifestations of anxiety and fear in the body are the same. Since 2 to 4% of the general population has been estimated to experience sufficient symptoms of anxiety to be classified as having an anxiety disorder, it is extremely important that careful inquiry for the presence of anxiety be made. Anxiety is a feeling of fear, dread, and uneasiness that can cause physical symptoms such as sweating, restlessness, tension, and a rapid heartbeat (American Psychological Association [APA], 2023). It often serves as a normal reaction to stress, helping people cope with challenges like difficult problems at work, upcoming tests, or important decisions by providing a boost of energy or focus (Mayo Clinic, 2023). However, for individuals with anxiety disorders, these feelings are persistent and can become overwhelming rather than temporary (National Institute of Mental Health [NIMH], 2022). Anxiety is essentially the emotional experience of worry or fear in response to perceived threats or uncertainty. While small amounts of anxiety can be beneficial helping keep us safe and alert excessive or prolonged anxiety can distort reality and become debilitating (CDC, 2023). When anxiety starts interfering with everyday activities or causes panic in non-stressful situations, it is important to seek professional support (Anxiety and Depression Association of America [ADAA], 2023). Anxiety is a natural human response to stress or perceived danger, often linked to the body's 'fight or flight' mechanism, which prepares us to respond quickly to threats (Harvard Health Publishing, 2021). Although most people experience anxiety occasionally, its intensity and frequency vary greatly among individuals (APA, 2023).

Stress

According to (WHO, 2022) defined as a state of worry or mental tension caused by a difficult situation. Stress is a natural human response that prompts us to address challenges and threats in our lives. Everyone experiences stress to some degree. The way we respond to stress, however, makes a big difference to our overall well-being. Stress affects both the mind and the body. A little bit of stress is good and can help us perform daily activities. Too much stress can cause physical and mental health problems. Learning how to cope with stress can help us feel less overwhelmed and support our mental and physical well-being (WHO, 2022).“Stress” has been dubbed the “Health Epidemic of the 21st Century” by the World Health Organization and is estimated to cost American businesses up to $300 billion a year. The effect of stress on our emotional and physical health can be devastating. Ina recent USA study, over 50% of individuals

felt that stress negatively impacted work productivity. Between 1983 and 2009, Stress levels increased by 10–30% among all demographic groups in the USA. Aristotle, Hippocrates and the other Ancients were aware of stress and its adverse effects. However, Claude Bernard was the first formally to explain how cells and tissues in multicelled organisms might be protected from stress. One of the world's greatest physiologists, Bernard, working in Paris during the second half of the 19th century, first pointed out (1859) that the internal medium of the living organism is not merely a vehicle for carrying nourishment to cells. Rather, "it is the fixity of the milieu intérieur which is the condition of free and independent life." That is, cells are surrounded by an internal medium that buffers changes in acid-base, gaseous (O2 and CO2) and ion concentrations and other biochemical modalities to minimize changes around biologically determined set-points, thereby providing a steady state. Fifty years later, Walter Bradford Cannon, working at Harvard, suggested the designation homeostasis (from the Greek homoios or similar and stasis or position) for the coordinated physiological processes that maintain most of the steady states in the organism. Cannon popularized the concept of homeostasis in his 1932 book "Wisdom of the Body." Cannon, also coined the term fight-or-flight to describe an animal's response to threats. The concept of fight-or-flight, also called the acute stress response, proposes that animals react to threats with a general discharge of the sympathetic nervous system, priming the animal for fighting or fleeing. This response was later recognized as the first stage of a general adaptation syndrome (GAS) first postulated by Hans Selye to be a universal stress response among vertebrates and other organisms (Demetriou, & Vineis, 2015).

Empirical Review

Anxiety and Postpartum Depression

Okeahialam and Esangbedo (2018) examined the prevalence of anxiety and postpartum depression among 309 nursing mothers attending two tertiary health institutions in Enugu, Southeast Nigeria. Using the Hospital Anxiety and Depression Scale (HADS) and the Index of Marital Satisfaction (IMS), the study found that 33.3% of participants experienced postpartum depression, while 31.1% reported symptoms of anxiety. Furthermore, 22% of the mothers had comorbid anxiety and depression. The study highlighted that poor marital relationships, especially a lack of emotional communication and confiding between partners, were significantly linked to the coexistence of both anxiety and depressive symptoms. The researchers concluded that anxiety and postpartum depression often co-occur and are significantly influenced by interpersonal dynamics, particularly marital dissatisfaction. When new mothers feel emotionally unsupported or experience conflict in their relationships, they are more likely to suffer both anxiety and depression, complicating their adjustment to motherhood and increasing psychological distress. They recommended integrating mental health screening for both anxiety and depression into routine postnatal check-ups. Special attention should be given to marital counseling and couple-based interventions that promote effective communication and emotional support. Training of maternity care providers to recognize signs of emotional distress beyond physical postpartum complications was also emphasized as a necessary step in improving maternal mental health outcomes.In conclusion, these Nigerian studies underscore that anxiety is a significant yet often under-recognized component of

postpartum depression. While it may not always be reported independently, its co-occurrence with depression exacerbates the challenges new mothers face during the postpartum period. The psychological well-being of mothers is closely tied to partner support, marital satisfaction, and the broader social environment, all of which are common areas of concern for anxiety. Recommendations for practice and research include the need for longitudinal studies that investigate the transition from antenatal anxiety to postpartum depression. Healthcare systems should adopt comprehensive screening tools that assess both anxiety and depression. Maternity care providers should be trained to offer not only clinical support but also emotional and psychosocial assistance. Community-based mental health interventions that encourage family involvement and support networks should be prioritized in maternal healthcare policies in Nigeria.

Seyhan et al. (2020) determined the psychosocial risk factors that may increase the risk of developing postpartum depression (PPD) symptoms in the antenatal period at postpartum 6–8 weeks. This study was a prospective longitudinal design, in which women completed questionnaire measures both at the third trimester of pregnancy and 6–8 weeks after birth. The present study was conducted in the women's clinic of a Medical Faculty Hospital in the Central Anatolia region of Turkey between March 15 and August 15, 2019. A total of 245 pregnant women in the third trimester were included in the study. Data were collected using a sociodemographic and obstetric data collection form, Pregnancy Psychosocial Health Assessment Scale, Perceived Stress Scale, Hospital Anxiety and Depression Scale, and Edinburgh Postnatal Depression Scale. Forty-four (18%) of the 245 women had scores above the cut-off point (>13) in EPDS. Being subjected to violence from husband or another male member of the family during pregnancy, having problems in marriage, depression, anxiety, and high levels of perceived stress affect the risk of developing PPD by 55% ($\chi^2 = 101.034$, $P < 0.001$). It was observed that those who scored low on the psychosocial health scale, those who experienced unplanned pregnancy, those with pregnancy that was not wanted by the husband, those who were emotionally abused, and those who experienced a sad event in their families were more sensitive to PPD symptoms. Psychosocial health, perceived stress, and psychosocial risk factors, such as depression and anxiety, during pregnancy are important determinants of postpartum depressive symptoms. Catala et al. (2024) analyzed (Aim 1) if there is an association between maintaining breastfeeding for 4 months after delivery and postpartum depression (n = 160) and (Aim 2) what sociodemographic, obstetric and psychosocial factors are associated to the presence of postpartum depression among the women who continue to breastfeed for 4 months after delivery (n = 81). A total of 160 women who initiated exclusive breastfeeding within an hour of childbirth participated for Aim 1. For Aim 2, a total of 81 of these same participants, specifically those who continued breastfeeding 4 months after giving birth, constituted the final sample. For Aim 2, a prospective design was used, which included four stages. During the first trimester of pregnancy, pregnancy worries, extroversion and neuroticism, external locus of control and psychiatric symptoms were assessed. In the third trimester of pregnancy, psychiatric symptoms were assessed again. Immediately after childbirth, the initiation of exclusive breastfeeding was recorded, and four months after childbirth, both postpartum depression

scores and the continuation of breastfeeding were assessed. Likewise, different sociodemographic and obstetric variables were assessed, including age, type of delivery, pain during and after delivery, among others. In relation to Aim 1, no statistically significant associations were found between postpartum depression and the continuation of breastfeeding four months after childbirth. In relation to Aim 2, the presence of postpartum depression among the women who continued to breastfeed was associated to higher scores on neuroticism, pregnancy worries, external locus of control and anxiety and depression during both trimesters, as well as with lower extraversion scores. The results of binary logistic regression showed that, of the above variables, anxiety during the third trimester was the strongest predictor. It seems as though it would be necessary to assess psychosocial risks to be able to prevent postpartum depression and therefore improve mothers' wellbeing during breastfeeding.

Dennis and Falah-Hassani (2019) examined the impact of antenatal anxiety on postpartum outcomes. Out of 358 studies, 13 met the criteria for primary analyses. Antenatal anxiety was strongly associated with PPD up to 10 months postpartum odds ratios ranged from 2.45 to 4.42 at different postpartum intervals. Notably, this correlation remained significant even after controlling for prenatal depression. Beyond mental health, antenatal anxiety was linked with a 37% decrease in likelihood of breastfeeding. These results indicate that anxiety during pregnancy is a strong independent predictor of PPD, pointing to the importance of early mental health screening and support during the antenatal period. In another study by Dennis et al. (2017) conducted a systematic review and meta-analysis focusing on Low- and Middle-Income Countries (LMICs). Reviewing 203 studies with over 100,000 perinatal women, the pooled prevalence of generalized anxiety disorder (GAD) was 18.8% (CI: 16.1%–21.7%). PTSD and adjustment disorders were also common. Importantly, anxiety disorders in LMICs were almost as prevalent as perinatal depression (about 25%), yet they remained underrecognized and under-treated. This evidence supports the notion that anxiety is a critical but frequently overlooked risk factor for PPD in resource-limited settings, necessitating culturally adapted screening and treatment programs.

Diaz et al. (2025) aimed to identify factors associated with postpartum anxiety and to assess its prevalence.A cross-sectional study was carried out with women in the postpartum period in Spain. To measure attachment (VAMF bonding and VAMF attachment), the Maternal- Child Bond and Attachment - VAMF tool was used. Purpose sampling method was used to collect data from postpartum and postnatal consultations in medical centers. Sociodemographic and obstetric variables, anxiety level (GAD-7), risk of intimate partner violence (WAST), and risk of postpartum depression (EPDS) were obtained. Odds ratios (ORs) and adjusted odds ratios (AORs) with their respective 95% confidence intervals (CIs) were calculated. A total of 820 women participated, 36.1% (296) experienced mild anxiety, 8.5% (70) moderate anxiety, and 2.7% (22) severe anxiety. Key risk factors for anxiety included higher EPDS scores (adjusted odds ratio, AOR=1.68; 95% CI: 1.55–1.81), smoking (AOR=1.97; 95% CI: 1.01–3.82), a history of mental health issues (AOR=1.77; 95% CI: 1.13–2.79), and challenges related to the baby's health (AOR=2.70; 95% CI: 1.34–5.47). Additionally, a high-risk score on the WAST was linked to increased anxiety

(AOR=1.53; 95% CI: 1.01–2.31). Conversely, protective factors included a positive mother–baby bonding score (AOR=0.90; 95% CI: 0.85–0.96) and a monthly income of 1000–1999 € (AOR=0.55; 95% CI: 0.31–0.95). For moderate to severe anxiety, a high EPDS score remained a notable risk factor (AOR=1.35; 95% CI: 1.26–1.44), while positive bonding (AOR=0.92; 95% CI: 0.85–0.98), higher income (>2000 €) (AOR=0.35; 95% CI: 0.15– 0.80), and favorable treatment by healthcare providers significantly reduced anxiety risk (AOR=0.21; 95% CI: 0.07–0.70).The prevalence of anxiety in women after childbirth is high. Depression, poor bonding, and economic status are factors that influence the onset of postpartum anxiety. Angarath et al. (2021) identified risk factors for postpartum depression and anxiety, before, during and after pregnancy. The study used data from 1406 mothers of the intervention arm of the Post-Up study. Risk factors were collected at 3 weeks and 12 months postpartum. Depression and anxiety symptoms were measured in the first month postpartum by the Edinburgh Postnatal Depression Scale (EPDS) and 6-item State-Trait Anxiety Inventory (STAI-6), respectively. Study used stepwise logistic regression to identify relevant risk factors. Of the mothers, 8.0% had EPDS-scores ≥9 and 14.7% STAI-6-scores ≥42. Factors associated with higher risk of depression were: foreign language spoken at home, history of depression, low maternal self-efficacy and poor current health of the mother. No initiation of breastfeeding was associated with lower risk of depression no breastfeeding at 3 weeks postpartum increased the risk. Factors associated with higher risk of anxiety were: higher educational level, history of depression, preterm birth, negative experience of delivery and first week postpartum, excessive infant crying, low maternal self-efficacy, low partner support and poor current maternal health. The shared and separate risk factors for postpartum depression and anxiety may help professionals in identifying mothers at increased risk and provide opportunities for preventive interventions and treatment.

Stress and Postpartum Depression

Ogunyemi and Adebayo (2021) conducted a cross-sectional study at two tertiary hospitals in Ibadan, Nigeria, to assess the impact of maternal stress on postpartum depression among 280 nursing mothers. The researchers used the Perceived Stress Scale (PSS) and the Edinburgh Postnatal Depression Scale (EPDS) to assess psychological stress and depressive symptoms, respectively. Findings revealed that 38.2% of participants reported moderate to high levels of stress, and 32.5% exhibited symptoms of postpartum depression. The study further found a significant positive correlation between stress levels and the severity of depressive symptoms ($p < 0.01$). The stressors most commonly reported were financial strain, lack of sleep, and caregiving responsibilities without adequate support. The study concluded that stress is a major predictor of postpartum depression among Nigerian mothers. High perceived stress shortly after childbirth significantly increases the likelihood of developing PPD, especially in women who lack coping resources or social support. The researchers recommended routine psychological evaluation during antenatal and postnatal care to identify high-stress individuals early. They also advocated for government and healthcare agencies to provide emotional health education and stress management training to new mothers and caregivers. Strengthening family and community support systems was also emphasized as a way to buffer stress and reduce PPD risk.

Eze and Ugochukwu (2020) explored the relationship between environmental stressors and postpartum depression in Enugu State, Nigeria, among 320 postpartum women attending immunization clinics. The researchers utilized structured questionnaires that assessed daily stressors such as overcrowded living conditions, noise, inadequate nutrition, and poor sanitation. EPDS scores indicated that 29.4% of mothers had mild to severe symptoms of postpartum depression. Regression analysis showed that environmental stressors significantly predicted depressive symptoms ($R^2 = 0.41$, $p < 0.05$). Women exposed to multiple environmental stressors were two times more likely to report depressive symptoms than those with stable home environments. The authors concluded that harsh environmental conditions contribute significantly to the emotional burden of new mothers and increase the risk of postpartum depression. The continuous exposure to environmental stress without relief makes emotional recovery after childbirth difficult for mothers living in underserved communities. They recommended targeted public health interventions to improve maternal living conditions, especially in low-income areas. This includes the provision of better housing, sanitation, and social welfare support to reduce stress-inducing circumstances for new mothers. Policymakers were urged to integrate maternal mental health assessments into primary healthcare services, particularly in densely populated urban and semi-urban areas. Guintivano et al. (2018) conducted a comprehensive study in the United States to investigate the biological and psychological predictors of postpartum depression, with a particular focus on maternal stress. The study, published in The American Journal of Psychiatry, followed 482 pregnant women from the third trimester through 12 weeks postpartum. Using cortisol levels, perceived stress scales, and the Edinburgh Postnatal Depression Scale (EPDS), the researchers found that women who experienced elevated cortisol levels and reported high stress during pregnancy were significantly more likely to develop postpartum depression ($p < 0.001$). The findings highlight the interaction between stress hormones and emotional regulation in the postpartum period. The authors concluded that biological stress reactivity, when coupled with environmental stressors, plays a major role in the onset of PPD. Early identification of stress biomarkers and psychological stress indicators during pregnancy can serve as predictive tools for postpartum depression. They recommended routine prenatal screening for stress and cortisol levels, along with targeted interventions such as mindfulness therapy, stress reduction training, and prenatal counseling to reduce the burden of PPD.

Norhayati et al. (2015) conducted a meta-analysis involving studies from Malaysia, Indonesia, and Thailand, focusing on the role of maternal stress in developing postpartum depression in Southeast Asia. The study reviewed 15 articles involving over 7,000 postpartum women. Across the region, financial hardship, cultural expectations, and low social support were identified as major stressors. The pooled data revealed that maternal stress increased the odds of postpartum depression by 2.75 times (95% CI: 1.89–4.01). Additionally, women who lacked support from spouses or in-laws were particularly vulnerable to depressive symptoms in the first three months postpartum. The study concluded that cultural and socioeconomic stressors significantly influence postpartum mental health in Southeast Asia. The stress associated with fulfilling traditional gender roles without adequate support exacerbates

emotional strain in new mothers. The authors recommended culturally sensitive mental health interventions, greater involvement of spouses and family in postnatal care, and increased public health awareness about postpartum emotional disorders in rural and urban communities. Antwi et al. (2022) conducted a hospital-based cross-sectional study in Accra, Ghana, to investigate the relationship between maternal stress and postpartum depression among 370 postpartum women within 12 weeks after delivery. Using the Perceived Stress Scale (PSS) and the Edinburgh Postnatal Depression Scale (EPDS), the researchers found a significant correlation between high levels of stress and depressive symptoms. Approximately 26% of the participants exhibited symptoms of PPD, and stress was identified as a strong predictor ($p < 0.01$). Additional stressors included financial challenges, lack of partner support, and unmet childbirth expectations. The study concluded that elevated perceived stress significantly increases the risk of developing postpartum depression. Women with little or no support from partners and family were particularly vulnerable. The authors recommended integrating stress assessments into routine postnatal care, expanding mental health services in maternity wards, and involving partners in maternal care education to enhance emotional support. Nteziryayo et al. (2020) conducted in the Eastern Province of Rwanda, Nteziryayo and colleagues examined the prevalence of stress and postpartum depression among 410 women within six months of childbirth. Using the Depression Anxiety Stress Scales (DASS-21) and EPDS, the study found that 21.5% of respondents showed depressive symptoms, while 35% experienced high stress levels. Factors associated with stress and PPD included unplanned pregnancies, domestic violence, and lack of emotional support from spouses or community members. The study concluded that psychosocial stress, particularly from intimate partner violence and social isolation, is a significant factor in postpartum depression in Rwanda. Traditional gender norms and stigma around mental illness also hindered help-seeking behavior.

The authors recommended nationwide awareness campaigns to reduce the stigma associated with postpartum mental health. They also suggested training community health workers to provide basic mental health screening and support for new mothers, especially in rural areas.

Marital Satisfaction and Postpartum Depression

Kiani et al. (2010) determined the relationship between marital satisfaction during pregnancy and postpartum depression. In this longitudinal co relational study, 100 pregnant women between 37-42 weeks of pregnancy without depression who referred to health center in Astara city in 2006, were sampled. Information about marital satisfaction was gathered during pregnancy using marital satisfaction Questionnaire. Postpartum depression was assessed by Edinburgh Postnatal Depression scale at 15th and 30th days postpartum. Data was analyzed using Chi-square, Man-Whitney, T-student test and General linear model, using SPSS11.5 software. Marital satisfaction during the last month of pregnancy was in a negative correlation with postpartum. Mean of marital satisfaction score demonstrated significant statistical difference in depressed and not depressed groups. Conclusion: Marital satisfaction is a predisposing factor of postpartum depression. Assessing pregnant women's marital satisfaction and providing proper interventions during pregnancy is suggested

to reduce the rate of postpartum depression. Jaclyn et al. (2028) assessed the prevalence of PPD and anxiety, and to investigate their relationship with marital satisfaction in low-risk women in Enugu, Southeastern Nigeria. A cross-sectional study of 309 randomly selected nursing mothers at two tertiary health institutions. Socio-demographic Questionnaire, Hospital Anxiety and Depression Scale, and Index of Marital Satisfaction (IMS) were used to collect data on demography, anxiety and depression and marital relationship respectively. All statistical tests were performed at a significant level of 0.05. The age range of the respondents was 20–46 years; mean and s.d. was 29.65 and ± 4.87, respectively, and most of them were graduates of tertiary educational institutions (74.1%). The prevalence of post-partum anxiety was 31.1% and of PPD was 33.3%. Marital dissatisfaction was observed in 39.5% (122) of the respondents who were mothers. Those with co-morbid depression and anxiety (22.0%) had worse marital dissatisfaction. The strongest correlation with depression and anxiety was item 12 of IMS ('feel that my partner doesn't confide in me'). There was a high prevalence of marital dissatisfaction, PPD and anxiety among nursing mothers in Enugu, but with low detection rate. The effects of PPD and anxiety on the mother, her marital relationship and her infant make them essential conditions for early diagnosis, prevention and treatment**.** Paddy et al. (2021) identify the psychosocial determinants of postpartum depression and maternal well-being among mothers in the Accra metropolis. Materials and Method: A sample of 205 postnatal women between the ages of 15 -39 years and are 4 - 12 weeks old postpartum was drawn from 37 Military Hospital, Accra. Employing a sequential explanatory approach, participants were administered the Depression, Anxiety and Stress Scale (DASS-21), Multidimensional Scale of Perceived Social Support (MSPSS), Marital Adjustment Test (MAT), and the Edinburgh Postnatal Depression Scale (EPDS). The study revealed that 14.1% of postnatal women in the Accra metropolis are at risk of developing PPD. A significant model emerged, [$R2 = 0.488$, $F(7, 197) = 26.86$, $\rho < 0.05$] and this was predicted by anxiety, stress and marital dissatisfaction among couples. On the other hand, results from Interpretive Phenomenological Analysis (IPA) of participants' in-depth information revealed inadequate social support and dissatisfaction in marriage account for mothers' at-risk behaviour of developing PPD; which impacts on maternal well-being. It is concluded that PPD is patent among postnatal women and psychosocial variables contribute a significant role in their experience of mental health problems following childbirth. This, in effect, requires attention from health professionals for holistic healthcare. The implications of these outcomes are discussed concerning mental healthcare delivery, the general public, and stakeholders in the health sector.

Hypotheses

This study sought answers to the following hypotheses

i. Anxiety will significantly predict postpartum depression among pregnant women in Makurdi local government Area.
ii. Stress will significantly predict postpartum depression among pregnant women in Makurdi local government Area.
iii. Marital satisfaction will significantly predict postpartum depression among pregnant women in Makurdi local government Area.
iv. There will be a significant joint prediction of anxiety, stress, and

marital satisfaction on postpartum depression among pregnant women in Makurdi local government Area.

METHODS

Design

This study used a cross-sectional survey design. A cross-sectional survey collected data to make inferences about a population of interest at a single point in time. This design allowed for the collection of data through questionnaires or personal interviews from members of an identified population. It was considered appropriate for this study because it enabled the researcher to make generalizations about the population by selecting and studying a sample of women who had recently given birth in Makurdi Local Government Area. The data collection process involved the use of a structured questionnaire to examine the psychosocial factors associated with postpartum depression among postpartum women in the study area.

Population of the Study

The study population comprised 384 postpartum women receiving postnatal care in selected hospitals within Makurdi Local Government Area, Benue State, including BSUTH, FMC, First Fertility Hospital, Bishop Murray Memorial Hospital, General Hospital Makurdi, and other facilities providing postnatal services. These women were within six weeks postpartum, registered at postnatal units, and willing to participate, representing a critical period for assessing and understanding postpartum depression.

Participants

The participants for this study were 384 postpartum women who have recently delivered their babies and are attending postnatal clinics in selected hospitals within Makurdi Local Government Area of Benue State. The age distribution shows that most participants were 18–27 years, 154(40.1%), followed closely by those aged 28–37 years, 150(38.1%). The least represented group was 38 years and above, 80 (20.8%). This indicates that the majority of postpartum women attending postnatal clinics in Makurdi are relatively young, primarily within the reproductive age range. All participants were female, 384(100%), which aligns with the study focus on postpartum women. This ensures that the findings are specific to women who have recently delivered. The respondents were predominantly Tiv, 178(46.4%), followed by Idoma, 90 (23.4%). Igede participants accounted for 26 (6.7%), while other tribes made up 66 (17.2%). This shows a majority representation from the Tiv ethnic group, reflecting the demographic composition of Makurdi and surrounding areas. The religious distribution indicates that Christianity, 368(93.4%), was the most practiced religion, while Islam, 16(4.2%), was minimally represented. This suggests that the sample is predominantly Christian, consistent with the local population's religious profile. Most participants accessed postnatal care at Benue State University Teaching Hospital Makurdi, 211(55.0%), followed by Federal Medical Centre Makurdi, 119 (31.0%). Fewer women attended First Fertility Hospital, 31(8.1%), and Bishop Murray, 23 (6.0%). This indicates that public tertiary hospitals serve as the main postnatal care centers for women in the area, while private or specialized hospitals cater to a smaller proportion.

Sampling Technique

The study employed a multistage sampling technique to select postpartum women in

Makurdi Local Government Area. First, hospitals with functional antenatal and postnatal units such as BSUTH, FMC, First Fertility Hospital, Bishop Murray Memorial Hospital, and General Hospital Makurdi were purposively selected. Next, the total sample size was proportionally allocated to each hospital based on their postnatal attendance. Finally, convenience sampling was used to recruit eligible postpartum women (aged 18 and above, within six weeks of delivery, able to consent) as they attended postnatal clinics, until the target sample size for each facility was reached. This approach ensured accessibility to respondents while capturing data from multiple healthcare settings.

Instruments

Postpartum Depression Questionnaire

Postpartum depression was measured using Edinburgh Postnatal Depression Scale (EPDS) developed by Cox, Holden, and Sagovsky (1987) is one of the most widely recognized and evaluated instruments for screening postpartum depression. The scale was originally developed by Cox, Holden, and Sagovsky in 1987, with the initial development process described earlier by Cox et al. in 1986. Initially, the EPDS consisted of 13 items, six of which were adapted from pre-existing psychological assessment tools. However, the final validated version includes 10 items, and was tested using a sample of 84 postpartum women. Each item on the scale asks the respondent about their emotional state over the previous seven days. Responses are scored on a four-point Likert scale ranging from 0 to 3, with higher scores indicating greater severity of depressive symptoms. The total score ranges from 0 to 30. In the original validation study, a cut-off score of 10 was suggested, which yielded a sensitivity of 86%, specificity of 78%, and a positive predictive value of 73%. This cutoff has proven effective in identifying most cases of potential postpartum depression. The EPDS is not a diagnostic tool but serves as an efficient and reliable screening instrument to identify women who may require further evaluation or support regarding their mental health during the postpartum period. Each item is scored 0–3. The maximum total score is 30. A cutoff score of 10 or more is often used to identify women who may be experiencing postpartum depression, although this threshold may vary by setting.

Anxiety Questionnaire

This study used Adult Anxiety scale developed by Spence and Essau (2001). The scale has 15-items The AAS-15 correlated strongly with both the BDI and BAI. The lower correlation of the BAI than the BDI may reflect the content of the BAI which is heavily focused on somatic symptoms of anxiety rather than subjective feelings of anxiety associated with DSM-IV anxiety disorders. The AAS-15 showed good internal consistence of the AAS-15 was Cronbach alpha =.88. The AAS-15 correlated significantly with both the BAI and BDI (.64, $p<.001$) and factor structure suggesting that it may offer promise as a tool for the assessment of anxiety in adults that takes into account symptoms of three of the dimensions of anxiety namely social anxiety, panic and generalized anxiety disorders with 4-likert scale rated from 0 to 3 (never; sometimes; often; always).Scoring: Items scored 0 (never); 1 (sometimes); 2 (often); 3 (always) Total score = sum of items 1 to 15 Generalized anxiety score= sum of Items 6, 3,9,4,12 Social anxiety score = sum of items 10,15,14,1,7 Panic score = sum of items 2,13, 5, 11, 8.

Stress Scale

In this study stress was measured using the Perceived Stress Questionnaire (PSQ) by

Levenstein et al. (1993). Perceived stress questionnaire has consisted of 30 items, the PSQ was developed as an instrument for assessing the stressful life events and circumstances that tend to trigger or exacerbate disease symptoms. With stress bearing significantly on the quality and consistency of the sleep cycle (1), the PSQ is a potentially valuable tool for evaluating the underlying causes of sleep disturbances. The scale is specifically recommended for clinical settings, though it has been employed in research studies as well. The scale is a self-report, pencil-and-paper measure requiring between 10 and 15 min for completion. Developers Levenstein and colleagues conducted a psychometric evaluation of the scale and found an internal consistency ranging from 90 to .92 and a test–retest reliability of .82. Results of the PSQ correlated highly with trait anxiety and with scores on Cohen's Perceived Stress Scale. Scoring: In order to complete the PSQ, respondents receive one of two sets of scoring instructions: the general questionnaire queries stressful feelings and experiences over the course of the previous year or two, while the recent questionnaire concerns stress during the last month. Respondents indicate on a scale from 1 ("almost never") to 4 ("usually") how frequently they experience certain stress-related feelings. Higher scores indicate greater levels of stress. A total score is found by tallying each item (questions 1, 7, 10, 13, 17, 21, 25, and 29 are positive and are scored according to the directions accompanying the scale). A PSQ index can be found by subtracting 30 from the raw score and dividing the result by 90, yielding a score between 0 and 1.

Marital Satisfaction Scale

This study used ENRICH Marital Satisfaction Scale developed in (1983-1985).The EMS Scale is a 15-item scale comprising the Idealistic Distortion (5 items) and Marital Satisfaction scales (10 items). The instrument has 4-Likert scale starting from 1=Strongly disagree, 2=moderately disagree, 3=neither agree nor disagree, 4=moderately agree, 5=Strongly agree. Each of the 10 Marital Satisfaction items represents one of the areas of the marital relationship assessed by the full-length ENRICH Inventory (e.g. communication or sexual relationship). Thus, the EMS Scale provides a 1-item sampling of the 10 dimensions of marital satisfaction found to be most important by Fournier (1983), whose conclusions about the important domains of marital satisfaction provide an indication of the content validity of the EMS Scale. The EMS Scale was evaluated for internal consistency and test-retest reliability. Cronbach's alpha revealed an internal reliability of .86.

Scoring: The positive and negative signs to the left of each item indicate whether the item should be scored in a positive or negative direction. Items scored in a negative direction would be reverse-scored (i.e., if it is marked 5, it would be scored 1: if it is marked 4, it would be scored 2: a 3 remains unchanged). 2. Items 1, 4, 6, 9, and 13 constitute the Idealistic Distortion scale. The remaining items are in the Marital Satisfaction scale. 3. Individual raw scores for the Marital Satisfaction and Idealistic Distortion scales are calculated by first reverse-scoring the negative items and then summing the appropriate items for each scale.

Procedure for Data Collection

Before the instrument was administered, all ethical principles guiding psychological research involving human participants was strictly observed. A formal letter of introduction was obtained from the Department of Psychology to authorize and support the researcher's fieldwork activities.

The researcher will then visit selected hospitals in Makurdi Local Government Area, including Benue State University Teaching Hospital (BSUTH), Federal Medical Centre (FMC) Makurdi, First Fertility Hospital, Bishop Murray Memorial Hospital (St. Theresa Hospital), and other healthcare facilities offering antenatal and postnatal care. Permission was sought from hospital management and relevant departments (maternity units) to conduct the study within their premises. Following approval, the researcher will approach eligible postpartum women (i.e., women who have recently given birth) in the postnatal wards or outpatient clinics. Participants were informed about the purpose of the study, and their voluntary participation, confidentiality, and right to withdraw at any time was clearly communicated. Informed consent was obtained from each participant before the administration of questionnaires. The instruments were administered individually, with the researcher providing clear instructions and clarification where necessary. Questions and concerns raised by participants were addressed politely and thoroughly. The responses provided by the women formed the data used for the subsequent analysis and presentation of findings.

Data Analysis

Data collected from the respondents were analyzed using the descriptive statistics, such as frequencies and percentages, were used to analyze the demographic information obtained from the respondents while hypothesis 1, 2, and 3 was tested using simple linear regression. Hypothesis 4: was tested using standard multiple regression analysis via Statistical Package for the Social Sciences (SPSS), version 21.

RESULTS

Hypothesis 1: This hypothesis stated that anxiety will significantly predict postpartum depression among pregnant women in Makurdi local government Area. This hypothesis was tested using regression analysis and the result is presented table 1.

Table 1: Simple linear regression analysis showing that anxiety significantly predicted postpartum depression among pregnant women in Makurdi Local Government Area

DV	Predictor(s)	R	R^2	F	Df	β	t	P
Postpartum depression	Constant	.032	.061	11.409	1, 392		25.129	<.01
	Anxiety					**.032**	**3.640**	**<.01**

The result from Table 1 revealed that anxiety significantly predicted postpartum depression among pregnant women in

Makurdi Local Government Area [R = .032, R^2 = .061, F(1, 392) = 11.409, p < .01]. Examination of the regression coefficient indicated that anxiety had a positive effect on postpartum depression (β = .032, t = 3.640, p < .01), suggesting that higher anxiety levels were associated with higher levels of postpartum depression. Anxiety accounted for 6.1% of the variation in postpartum depression [R^2 = .061]. Based on this finding, hypothesis one was accepted.

Hypothesis 2: This hypothesis stated that personality traits will significantly predict drug abuse among undergraduate students of Rev. Fr. Moses Orshio Adasu University Makurdi. This hypothesis was tested using

regression analysis and the result is presented table 2.

Table 2: Simple linear regression analysis showing that stress significantly predicted postpartum depression among pregnant women in Makurdi Local Government Area

DV	Predictor(s)	R	R^2	F	df	β	t	P
Postpartum Depression	Constant	.082	.098	12.633	1, 392		23.900	<.01
	Stress					.082	9.623	<.01

The result in Table 2 showed that stress significantly predicted postpartum depression among pregnant women in Makurdi Local Government Area [R = .082, R^2 = .098, F(1, 392) = 12.633, p < .01]. Examination of the regression coefficient indicated that stress had a positive effect on postpartum depression (β = .082, t = 9.623, p < .01), suggesting that higher stress levels were associated with higher levels of postpartum depression. Stress accounted for 9.8% of the variation in postpartum depression [R^2 = .098]. Based on this finding, hypothesis two, which stated that stress would significantly predict postpartum depression among pregnant women in Makurdi Local Government Area, was accepted.

Hypothesis 3: This hypothesis stated that marital satisfaction will significantly predict postpartum depression among pregnant women in Makurdi local government Area. This hypothesis was tested using regression analysis and the result is presented table 3.

Table 3: Simple linear regression analysis showing that marital satisfaction significantly predicted postpartum depression among pregnant women in Makurdi Local Government Area

DV	Predictor(s)	R	R^2	F	df	β	t	P
Postpartum Depression	Constant	.732	.536	141.814	1, 383		10.414	<.01
	Marital Satisfaction					-.732	-11.909	<.01

The result showed that marital satisfaction was a significant predictor of postpartum depression [R=.732, R^2=.536, F(1, 383)=141.814, p<.01]. Examination of the regression coefficient indicated that marital satisfaction had a negative prediction on postpartum depression (β =-.732, t=-11.909, p<.01), suggesting that higher marital satisfaction was associated with lower levels of postpartum depression among the respondents. Based on this finding, hypothesis three was accepted.

Hypothesis 4: This hypothesis stated that there will be a significant joint prediction of anxiety, stress, and marital satisfaction on postpartum depression among pregnant women in Makurdi local government Area. This hypothesis was tested using multiple regression analysis and the result is presented table 4.

Table 4: Multiple regression analysis showing the joint prediction of anxiety, stress, and marital satisfaction on postpartum depression among pregnant women in Makurdi Local Government Area

DV	Predictor(s)	R	R^2	F	df	β	t	P
Postpartum Depression	Constant	.199	.039	8.261	3, 38		6.456	<.01
	Anxiety					.246	1.781	<.01
	Stress					.057	1.358	<.01
	Marital Sat.					.044	2.323	<.01

The result in Table 4 showed that anxiety, stress, and marital satisfaction jointly predicted postpartum depression among pregnant women in Makurdi Local Government Area [R=.199, R^2 = .039, F(3, 381)=8.261, p<.01]. Examination of the regression coefficients indicated that anxiety (β =.246, t = 1.781, p<.01), stress (β = .057, t = 1.358, p< .01), and marital satisfaction (β = .044, t=2.323, p<.01) each contributed to the prediction of postpartum depression. Together, these three variables accounted for 3.9% of the variation in postpartum depression [R^2=.039]. Based on this finding, the hypothesis was accepted.

Discussion of Findings

Hypothesis One: It was stated that anxiety would have a significant prediction on postpartum depression among pregnant women in Makurdi Local Government Area. This hypothesis was tested using simple linear regression analysis, and the result indicated that anxiety significantly predicted postpartum depression among pregnant women in the study area. This implies that higher levels of anxiety were associated with increased levels of postpartum depression among the
respondents. The study found that anxiety significantly predicted postpartum depression among pregnant women in Makurdi LGA. Higher anxiety levels were associated with increased depressive symptoms. This aligns with findings by Adeyemo et al. (2020) and Okeahialam & Esangbedo (2018) in Nigeria, Seyhan et al. (2020) internationally, and Dennis & Falah-Hassani (2019), all of whom reported that anxiety during pregnancy is a strong predictor of postpartum depression. Additional support comes from studies by Diaz et al. (2025) and Angarath et al. (2021), which highlighted psychosocial and demographic factors influencing postpartum anxiety and depression.

Hypothesis Two: It was stated that stress would significantly predict postpartum depression among pregnant women in Makurdi Local Government Area. This hypothesis was tested using simple linear regression analysis, and the result indicated that stress significantly predicted postpartum depression among pregnant women in the study area. This implies that higher levels of stress contributed to increased levels of postpartum depression among the respondents.

Stress was found to significantly predict postpartum depression, with higher stress levels contributing to increased depressive symptoms. This is consistent with Nigerian studies by Ogunyemi & Adebayo (2021) and Eze & Ugochukwu (2020), which identified financial strain, caregiving responsibilities, and environmental stressors as major contributors to PPD. Internationally, Guintivano et al. (2018) showed biological stress markers, like elevated cortisol, increase PPD risk, while Norhayati et al.

(2015) found maternal stress heightened PPD odds in Southeast Asia.

Hypothesis Three: It was stated that marital satisfaction would significantly predict postpartum depression among pregnant women in Makurdi Local Government Area. This hypothesis was tested using simple linear regression, and the result revealed that marital satisfaction significantly predicted postpartum depression among pregnant women in the study area. This implies that higher marital satisfaction was associated with lower levels of postpartum depression among the respondents. The study revealed that marital satisfaction significantly predicted postpartum depression, with higher satisfaction associated with lower depressive symptoms. This supports previous research, including Ugarriza & Brown (2019), Akanni & Oduaran (2021) in Nigeria, and Al Dallal & Grant (2012), all emphasizing that low spousal support and marital dissatisfaction are major psychosocial risk factors, whereas marital satisfaction acts as a protective factor against PPD.

Hypothesis Four: It was stated that there would be a significant joint prediction of anxiety, stress, and marital satisfaction on postpartum depression among pregnant women in Makurdi Local Government Area. This hypothesis was tested using multiple regression analysis, and the result revealed that anxiety, stress, and marital satisfaction significantly and jointly predicted postpartum depression among pregnant women in the study area. This implies that the combined influence of psychological factors (anxiety and stress) and relational factors (marital satisfaction) contributes to the likelihood of experiencing postpartum depression.

Anxiety during pregnancy heightens worry, tension, and restlessness, which can persist into the postpartum period and increase the risk of depression. High levels of stress, whether financial, social, or health-related, can overwhelm a woman's coping mechanisms, creating emotional exhaustion that facilitates the onset of depressive symptoms after childbirth. When anxiety and stress co-occur, their effects are magnified, making women more vulnerable to postpartum depression.

Marital satisfaction serves as an important relational buffer in this context. Low marital satisfaction, characterized by conflict, lack of emotional support, or neglect, removes an essential source of emotional security for postpartum women, increasing their susceptibility to depression. Conversely, high marital satisfaction can mitigate the effects of anxiety and stress, providing emotional stability, practical support, and reassurance, which together protect against the development of depressive symptoms.

The findings underscore the importance of considering both psychological and relational factors jointly, rather than in isolation, when assessing postpartum depression risk. This aligns with previous research that demonstrates the interplay of psychosocial stressors and relational support in shaping maternal mental health outcomes (Dennis & Ross, 2006; Paddy et al., 2021). Clinically, these results highlight the need for holistic interventions that address anxiety and stress management during pregnancy, while also promoting healthy marital relationships to reduce postpartum depression risk among women in Makurdi Local Government Area.

Conclusion

Based on the findings of this study, the following conclusions were drawn:

i. Anxiety was found to significantly predict postpartum depression

among pregnant women in Makurdi Local Government Area. This indicates that higher levels of anxiety are associated with increased vulnerability to postpartum depression.

ii. Stress significantly predicted postpartum depression among pregnant women in the study area, suggesting that elevated stress levels during pregnancy contribute to the onset of depressive symptoms after childbirth.

iii. Marital satisfaction also significantly predicted postpartum depression, implying that low levels of marital satisfaction increase the likelihood of developing postpartum depression, while higher marital satisfaction may serve as a protective factor.

iv. There was a significant joint prediction of anxiety, stress, and marital satisfaction on postpartum depression among pregnant women in Makurdi Local Government Area. This highlights that the interaction of psychological and relational factors collectively explains postpartum depression better than any single factor alone.

Recommendations

Based on the findings and conclusions of this study, the following recommendations were made:

i. Clinical psychologists should play a central role in screening, diagnosis, and intervention for pregnant women at risk of postpartum depression. Specialized psychological services such as cognitive-behavioral therapy (CBT), stress management training, and anxiety reduction techniques should be incorporated into antenatal and postnatal care, while psychoeducational programs should also be designed to raise awareness among pregnant women about the signs and risks of anxiety, stress, and poor marital satisfaction in relation to postpartum depression.

ii. The study recommends that routine screening for anxiety, stress, and marital satisfaction should be integrated into maternal health services. Nurses, midwives, and doctors should collaborate with psychologists to provide counseling, stress reduction strategies, and referral pathways for women in need of specialized care.

iii. The study also recommends that government and health authorities in Benue State should strengthen maternal mental health policies by including psychological assessment and support services in maternal and child healthcare.

iv. Community-based mental health interventions should be developed, with emphasis on accessible and affordable psychological services for pregnant women.

v. Husbands and family members should be sensitized to the importance of emotional support and healthy marital relationships in preventing postpartum depression.

vi. Couple-based interventions, such as marital counseling and family therapy, should be encouraged to foster supportive relationships during pregnancy.

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