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Breastfeeding Intention and Its Association with Postpartum Depression among Mothers Attending the Postnatal Clinic in a Teaching Hospital in Port Harcourt, Nigeria

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Abstract

Postpartum depression (PPD) is a common mental health condition that can affect a mother's motivation, confidence, and ability to sustain breastfeeding practices. This cross-sectional study aimed to determine the prevalence of PPD among mothers attending a postnatal clinic in Port Harcourt, Nigeria, and to examine the association between breastfeeding intention and PPD. A total of 149 postpartum women were recruited using systematic sampling. Data was collected using a semi-structured questionnaire adapted from the Edinburgh Postnatal Depression Scale (EPDS). The prevalence of PPD (EPDS ≥10) was found to be 6.7%. The majority of women (90.6%) expressed a strong intention to breastfeed. No significant association was observed between breastfeeding intention and PPD (p=0.599). However, marital status (p=0.023), average monthly income (p=0.044), and complications during the most recent pregnancy (p=0.037) showed significant associations with PPD. Women who were cohabiting, earning between ₦70,000 and ₦150,000, and those who experienced pregnancy complications had a higher prevalence of depressive symptoms. These findings highlight the importance of incorporating psychosocial and obstetric risk assessment into postnatal care and the need for further research to understand how social factors, economic pressures, and pregnancy experiences shape maternal mental health in the postpartum period.

Keywords: *Breastfeeding Intention, Edinburgh Postnatal Depression Scale, Postpartum Depression, Postnatal Clinic.*

Introduction

Breastfeeding is one of the most natural acts of motherhood; however, the emotional and psychological challenges that accompany childbirth often stand between a mother's intention and her ability to breastfeed successfully. Many women begin pregnancies with firm intentions to breastfeed, but these intentions may become difficult to fulfill once faced with fatigue, mood changes, and the challenges of new motherhood.

Postpartum depression (PPD) is a common but often overlooked mental health condition that can affect a mother's motivation, confidence, and ability to sustain breastfeeding practices, making its early identification an important public health priority. PPD affects a significant proportion of new mothers worldwide and is associated with poor maternal functioning and negative effects on infant care, bonding, and child development. It is most notable during the initial six months postpartum when women are at increased risk for depressive episodes s1]. It is a transient mental health disorder characterized by persistent low mood and energy, loss of interest, anhedonia, sleep and appetite disturbance, accompanied by

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a feeling of sadness, and hopelessness persisting more than two weeks, within 12 months after childbirth [2, 3]. Due to the similarities between symptoms caused by the stress of childbirth and caring for a new child, a postpartum depressive disorder may be missed. It is most notable during the initial six months postpartum when women are at increased risk for depressive episodes and may persist across the first year after childbirth [1]. Also, because of hormonal level derangements, which impair breastmilk production, it has been linked to delayed initiation of breastfeeding and poor maintenance of exclusive breastfeeding [4, 5]. A mother's emotional wellbeing may influence delayed initiation and non-exclusive breastfeeding, which pose major child health challenges [6, 7].

The prevalence of PPD among postnatal mothers varies globally, demonstrating marked geographic differences and variations in social, cultural, and health system factors. In regions with sufficient data, the prevalence of PPD was highest in Southern Africa at 39.96% [8]. High prevalence has also been reported in Southern Asia at 22.32%, South America at 21.71%, and Western Asia at 19.83% [8]. Moderate prevalence rates have been observed in Eastern Europe at 16.62% and Northern Africa at 18.75%, but a much lower value in Western Africa at 13.62 % [8]. In Nigeria, studies have reported findings as high as 35% in Lagos [9], 44.5% in northern Nigeria [10] and 10.7% to 30% in Southeast Nigeria [11] . These varied figures reinforce the value of generating context and location-specific data on the prevalence and pattern of PPD. Also, because PPD is both common and detectable using validated tools such as the Edinburgh Postnatal Depression Scale, estimating local prevalence at six weeks postpartum is important for informing service planning and early intervention [12]. This study examines the relationship between a mother's intention to breastfeed and her development of depressive symptoms in the first 6 weeks postpartum to identify those with a higher risk and inform responsive facility-level postnatal support.

The World Health Organization (WHO) recommends breastfeeding as the best source of infant nutrition, as early initiation and exclusive breastfeeding for the first six months reduce infant illness and support child growth and development [13]. Breastfeeding improves infant immunity and nutrition, while maternal benefits include reduced risk of postpartum hemorrhage and possible positive effects on mood and recovery [14–16] . Breastfeeding intention is the perinatal decision of a mother to breastfeed an infant after childbirth within a varied timeframe [3]. A mother's intention to breastfeed (the plan or decision to breastfeed) strongly predicts the initiation and duration of breastfeeding. Intention can be assessed during through structured retrospective questions in the early postpartum period [17]. Emerging research shows a complex bidirectional relationship between breastfeeding intention and postpartum depressive symptoms: women who intend to breastfeed are often less likely to develop PPD, while PPD may also reduce a mother's ability or confidence to follow through with intended breastfeeding [18]. Researchers investigated the possible link between breastfeeding intention and postpartum depression in a comprehensive longitudinal study of women who were not depressed during pregnancy. In this group, it was found that their chances of developing postpartum depression were lower if they planned to breastfeed [3]. They also found that women who initiated breastfeeding without prior intention were at greater risk of developing postpartum depression. Additionally, it has also been reported that women who failed to breastfeed on their first attempt or never established breastfeeding had an increased chance of developing PPD compared to breastfeeding women [3].

Most Nigerian studies on maternal health focus on breastfeeding practices or the prevalence of postpartum depression, with few

examining breastfeeding intentions during the early postpartum period as an exposure of interest. There is also limited evidence from Rivers State and Port Harcourt that links breastfeeding intention to postpartum depressive symptoms within the early postnatal window. This gap in the literature provides the rationale for a focused examination of breastfeeding intention and depressive symptoms among mothers in Port Harcourt. The University of Port Harcourt Teaching Hospital postnatal clinic serves a largely urban and peri-urban population, making it an appropriate setting for studying maternal mental health and infant feeding practices. Focusing on mothers at approximately six weeks postpartum allows researchers to capture a key period when breastfeeding patterns are already established and early symptoms of postpartum depression are likely to be present. In many tertiary health facilities, including UPTH, breastfeeding counselling is often inconsistent and routine screening for postpartum depression is not yet standard practice. Contextual factors such as socio-economic stress are common in this setting and may influence both feeding practices and maternal mental health. Studying mothers attending UPTH at six weeks postpartum therefore aligns an important epidemiological need with a practical opportunity to inform clinic-level screening, referral, and cohesive breastfeeding support.

The lack of local evidence on breastfeeding intention and postpartum depression often causes poor targeting of postnatal interventions and misses opportunities for early prevention of PPD. This study primarily aims to determine the prevalence of postpartum depression among mothers attending the postnatal clinic at approximately six weeks after delivery. Secondary aims are to determine the level of breastfeeding intention and its association with postpartum depressive symptoms. We hypothesized that mothers with low or no intention to breastfeed would have higher odds of postpartum depression after adjusting for relevant socio-demographic and obstetric factors.

This cross-sectional study conducted at the University of Port Harcourt Teaching Hospital examines the relationship between breastfeeding intention, and maternal mood in the early postpartum period. The study provides a local estimate of postpartum depression prevalence, describes breastfeeding intentions among postpartum mothers, and explores how intention relates to depressive symptoms. The findings are practically relevant for antenatal counselling, early postnatal mental health screening, and referral pathways for mothers who may be at increased risk. While the cross-sectional design limits causal inference and the size of the facility-based sample may affect generalizability, the study offers useful insight into integrated maternal mental health and feeding support within routine postnatal care.

Methods

Study Design and Setting

The study was conducted at the postnatal clinic of the University of Port Harcourt Teaching Hospital (UPTH), Port Harcourt, Rivers State, Nigeria. The hospital is a tertiary facility in River State. The University of Port Harcourt Teaching Hospital (UPTH) in Choba, Port Harcourt, provides medical services to the surrounding communities, including maternal health care such as postnatal care. The UPTH postnatal clinic is run by the obstetrics and gynecology department of the hospital and has its clinic five days a week (specifically Monday to Friday).

This descriptive, cross-sectional study utilizing a quantitative approach recruited eligible mothers within six weeks postpartum who attended the postnatal clinic at UPTH during the study period. Eligible participants were women of reproductive age who had delivered a live infant and were willing to provide informed consent. Mothers previously diagnosed with a major psychiatric disorder,

those with babies having major congenital anomalies, requiring intensive care, or any condition that could influence feeding intention or current feeding behavior were excluded.

Sample Size Calculation and Sampling Technique

Sample size was calculated using the single population proportion formula, assuming an expected postpartum depression prevalence of 8% based on a previous study [19]. With a 95% confidence level and a precision of 5%, the minimum sample size was 113. Because systematic sampling was used in a clinic setting, a design effect of 1.5 was applied, giving a sample size of approximately 170 participants. However, a total of 149 postpartum women were recruited, representing a high response rate.

A semi-structured, pre-tested, and validated interviewer-administered questionnaire was used to assess participants' mental status, adapted from the Edinburgh Postnatal Depression Scale (EPDS) [20, 21], a 10-item standard mental health screening tool. The study tool included four sections: sociodemographic characteristics, obstetric, family, and social factors, followed by the Edinburgh Postnatal Depression Scale (EPDS).

Two female research assistants received one day of training on the study's objective and data collection procedures, with feedback for clarification. The trained research assistants approached women who met the inclusion criteria attending the postnatal clinic, informed about the study, and invited to participate after Informed consent was obtained. Data was collected in September 2025 using the study questionnaire, entered into Microsoft Excel, exported to, and analyzed with IBM SPSS (Statistical Product and Service Solutions) Statistics version 23. Categorical data was summarized with frequencies and percentages, while numerical data was summarized as means +/- standard deviation.

The independent variables in this study are the potential associated factors, while postpartum depression is the dependent or outcome variable. Postpartum depression was measured using the Edinburgh Postnatal Depression Scale (EPDS), and breastfeeding intention was assessed as the intention to breastfeed within the first six weeks postpartum. Prevalence of PPD was calculated as the proportion of women with EPDS scores above a specified cut-off (EPDS ≥12 in this study). Factors associated with postpartum depression was determined using Chi-square and Fisher's exact tests, and the level of significance was set at a p-value of less than 0.05 and a 95% confidence level.

Study Limitations

Being cross-sectional, this study cannot definitively infer causation between intention, practice, and PPD. Self-report of intention and feeding practice may also be subject to recall or social desirability bias. It is worth noting that the EPDS is a screening tool, not a diagnostic tool, and the relatively small sample drawn from a teaching hospital postnatal clinic limits the study's power. This may make it less generalizable to all postpartum mothers in the community.

Results

Of the 170 required participants, 149 were recruited, yielding a response rate of 87.6%. Thus, a total of 149 postpartum women receiving care at the postnatal clinic of the Teaching Hospital in Port Harcourt participated in the study. The respondents were predominantly young to middle-aged adults. The mean maternal age was 29.67 ± 4.96 years, with a range of 16–43 years.

Most respondents were married (139, 93.3%), had completed tertiary education (116, 77.9%), identified as entrepreneurs or traders (58, 38.9%), and reported a modest monthly income of less than ₦70,000 (81, 54.4%). Regarding religion, most women identified as

Christians (148, 99.3%) and of Igbo ethnicity (58, 38.9%). Family structure patterns also showed that most respondents were in monogamous unions (141, 94.6%) (Table 1).

Table 1. Socio-demographic Characteristics of Postpartum Women Attending a Postnatal Clinic in a Teaching Hospital in Port Harcourt

Variables	**Frequency (n=149)**	**Percentage (%)**
Maternal age category		
<25 years	25	16.8
25 – 29years	41	27.5
30 – 34 years	59	39.6
35 – 39years	21	14.1
≥40 years	3	2.0
Marital Status		
Single	2	1.3
Married	139	93.3
Co-habiting	8	5.4
Level of education		
None/primary	*1*	*0.7*
Secondary	*32*	*21.5*
Secondary and below	33	22.1
Tertiary	116	77.9
Employment status		
Student	16	10.7
Unemployed	15	10.1
Employee	40	26.8
Self-employed	20	13.4
Entrepreneur/Trader	58	38.9
Average monthly income (NGN)		
Less than 70,000	81	54.4
70,000 – 150,000	68	45.6
Religion		
Christianity	148	99.3
Islam	1	0.7
Ethnicity		
Igbo	58	38.9
Ikwerre/Etche/Eleme	17	11.4
Ogoni	11	7.4
Ijaw	20	13.4
Other Rivers state tribes	18	12.1
Ibibio/Efik	9	6.0

Other Nigerian tribes	16	10.7
Family/Marriage structure		
Monogamous	141	94.6
Polygamous	8	5.4

SD – Standard deviation, Others (Abua/Odual, Ahoada, Andoni, Egbema, Emuoha, Urhobo, Esan, Hausa, Isoko, Kogi, and Yoruba)

The obstetric profile of the study participants revealed that majority (108, 72.5%) had been pregnant one to two times, reported a history of miscarriage, abortion, or stillbirth (24, 16.1%), whereas 88 (59.1%) had one living child. Concerning pregnancy intentionality, most respondents (140, 94.0%) reported they planned or intentionally conceived the index pregnancy. However, reproductive intentions showed a different pattern as 116 (77.9%) stated that although they became pregnant, they had wanted a baby later. Most women (144, 96.6%) also had no previous pregnancy complications. In terms of future fertility intentions, most reported (115, 77.2%) reported willingness to have another child (Table 2).

Table 2. Obstetric Background of Postpartum Women Attending a Postnatal clinic in a Teaching Hospital in Port Harcourt

Variables	**Frequency (149)**	**Percentage (%)**
Number of times been pregnant (gravidity)		
One – two times	108	72.5
Three – four times	36	24.2
Five or more times	5	3.4
History of pregnancy miscarriage/ abortion/stillbirth		
Yes	24	16.1
No	125	83.9
Number of living children		
1 child	88	59.1
2 – 3 children	52	34.9
4 or more children	9	6.0
Planned pregnancy (willingly/ intentionally got pregnant)		
Yes	140	94.0
No	9	6.0
Intentions about reproduction at the time of conception (for this last pregnancy)		
Wanted a baby later	116	77.9
Wanted no more children	33	22.1
Complications in last obstetric period/pregnancy		
Yes	5	3.4
No	144	96.6
Plan to/willing to have another child		
Yes	115	77.2
No	34	22.8

The distribution of responses to the EPDS items indicates that most postpartum women reported little to no depressive symptoms in the week preceding the survey. Most respondents indicated that they were able to laugh and see the funny side of things as usual (138, 92.6%) and continued to look forward to activities with their usual level of enjoyment (134, 89.9%). Similarly, feelings of undue self-blame were uncommon, with 137 (91.9%) women reporting no such experiences.

Symptoms related to anxiety, panic, or excessive worry were also infrequent. A total of 138(92.6%) women stated they had not felt anxious or worried without reason, and an equal proportion reported no feelings of being scared or panicky. Most women (138, 92.6%) also felt that they were coping as well as they always had, with only minimal reports of reduced coping ability. Indicators of emotional distress such as sleep disturbance from unhappiness, sadness, or crying spells were rare. About 138(92%) women denied difficulty sleeping due to unhappiness, 139, 93.3% had not experienced crying related to unhappiness.

Responses to the self-harm item revealed that the overwhelming majority (138, 92.6%) had never experienced thoughts of harming themselves, Overall, the pattern of responses across all EPDS items suggests low levels of depressive symptoms among the postpartum women in this study population (Table 3).

Table 3. Distribution of Responses to the EDPS Questions (in Assessing Postpartum Depression) among Postpartum Women Attending a Postnatal Clinic in a Teaching Hospital in Port Harcourt

Individual items of the EDPS	**Frequency (n=149)**	**Percentage (%)**
Been able to laugh and see the funny side of things in the last week		
As much as I always could	138	92.6
Not quite so much now	4	2.7
Definitely not so much now	2	1.3
Not at all	5	3.4
Looked forward with enjoyment to things		
As much as I ever did	134	89.9
Rather less than I used to	3	2.0
Definitely less than I used to	7	4.7
Hardly at all	5	3.4
Blamed myself unnecessarily when things went wrong		
No, never (not at all)	137	91.9
Not very often	2	1.3
Yes, some of the time	8	5.4
Yes, most of the time	2	1.3
Been anxious or worried for no good reason		
No, not at all	138	92.6
Hardly ever	7	4.7
Yes, sometimes	3	2.0
Yes, very often	1	0.7
Have felt scared or panicky for no very good reason		
No, not at all	138	92.6
No, not much	9	6.0
Yes, sometimes	2	1.3

Yes, quite a lot (very often)	0	0.0
Things have been getting on top of me		
No, have been coping as well as ever (not at all)	138	92.6
No, most of the time I have coped quite well (occasionally)	9	6.0
Yes, sometimes I haven't been coping as well as usual (often)	2	1.3
Yes, most of the time I haven't been able to cope at all (much more than usual)	0	0.0
Been so unhappy that I've had difficulty sleeping		
No, not at all	138	92.6
Not very often	8	5.4
Yes, sometimes	2	1.3
Yes, most of the time	1	0.7
Have felt sad or miserable		
No, not at all	39	93.3
Not very often	10	6.7
Yes, quite often	0	0.0
Yes, most of the time	0	0.0
Been so unhappy that I've been crying		
No, never	139	93.3
Only occasionally	7	4.7
Yes, quite often	3	2.0
Yes, most of the time	0	0.0
Thoughts of harming myself has occurred to me		
No, never	138	92.6
No, hardly ever	7	4.7
Yes, Sometimes	4	2.7
Yes, quite often	0	0.0

The median EPDS score in this study was 0, with scores ranging from 0 to 16, indicating that at least half of th respondents reported no depressive symptoms in the week preceding the survey.

When categorized into standard clinical classifications, majority of the women (139, 93.3%) had EPDS scores between 0 and 9, which corresponds to no or minimal depressive symptoms. A small proportion (5, 3.4%) had scores between 10 and 12, suggesting mild depressive symptoms. Another 5(3.4%) women scored 13 or higher, meeting the threshold for likely clinically significant depression (Figure 1).

Overall, the findings demonstrate that while postpartum depression was present within the population, its prevalence was low, with only 6.8% of respondents (scores ≥10) showing symptoms consistent with mild to probable postpartum depression.

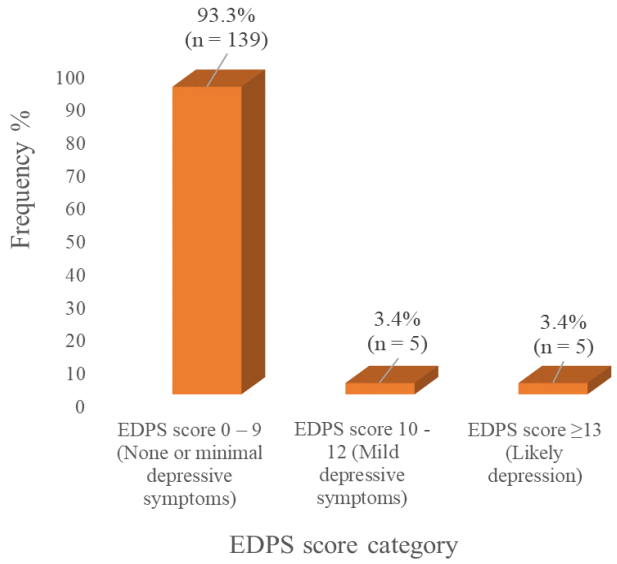

Figure 1. Level of Depression among Postpartum Women Attending a Postnatal Clinic in a Teaching Hospital in Port Harcourt

Based on the EPDS cut-off score of ≥10, 10 out of the 149 postpartum women (6.7%) screened positive for postpartum depressive symptoms. The remaining 139 women (93.3%) had EPDS scores below 10, indicating no postpartum depression. This shows a postpartum depression prevalence of 6.7% in the study population (Table 4).

Table 4. Prevalence of Depression among Postpartum Women Attending a Postnatal Clinic in a Teaching Hospital in Port Harcourt

Postpartum depression (EPDS score ≥10)	**Frequency**	**Percentage**
Yes	10	6.8
No	139	93.3
Total	**149**	**100.0**

Figure 2 below shows that majority (135, 90.6%) of the women expressed a strong intention to breastfeed or were already breastfeeding at the time of the survey.

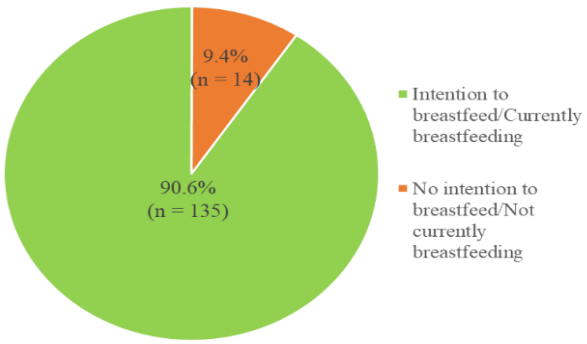

Figure 2. Level of Intention to Breastfeed among Postpartum Women Attending a Postnatal Clinic in a Teaching Hospital in Port Harcourt

About 10 of the women who intended to breastfeed (7.4%), were classified as depressed, while 125 of them (92.6%) were not depressed. The relationship between breastfeeding intention and postpartum depression did not show a significant association (*p = 0.599*). Therefore, in this study, the intention to breastfeed did not relate to the presence of depressive symptoms in the postpartum period (Table 5).

Table 5. Breastfeeding Intention and Depression among Postpartum Women Attending a Postnatal Clinic in a Teaching Hospital in Port Harcourt

Intend to breastfeed/currently breastfeeding infant	**Postpartum depression (EDPS score ≥10)**		
	Yes N = 10 n (%)	**No N = 139 n (%)**	**Total N = 149 n (%)**
Yes	10 (7.4)	125 (92.6)	135 (100.0)
No	0 (0.0)	14 (1000)	14 (100.0
Total	10 (6.7)	139 (93.3)	149 (100.0)

Fisher's exact p-value = 0.599

Table 6 below shows the relationship between socio-demographic characteristics and postpartum depression (EPDS ≥10). Marital status showed a statistically significant relationship with postpartum depression (*p = 0.023*) with women who were co-habiting having the highest proportion of depressive symptoms (3, 37.5%). Average monthly income also showed a significant association with postpartum depression (*p = 0.044*). Women earning between ₦70,000 and ₦150,000 had a higher prevalence of depressive symptoms (8, 11.8%) compared to those earning less than ₦70,000 (2, 2.5%).

Table 6. Socio-demographic Characteristics and Depression among Postpartum Women Attending a Postnatal Clinic in a Teaching Hospital in Port Harcourt

Variables	**Postpartum depression (EPDS score≥10)**			
	Yes N = 10 n (%)	**No N = 139 n (%)**	**Total N = 149 n (%)**	**Fisher's exact test (p-value)**
Maternal age category				
<25 years	3 (12.0)	22 (88.0)	25 (100.0)	2.463
25 – 29years	2 (4.9)	39 (95.1)	41 (100.0)	(0.692)
30 – 34 years	3 (5.1)	56 (94.9)	59 (100.0)	
35 – 39years	2 (9.5)	19 (90.5)	21 (100.0)	
≥40 years	0 (0.0)	3 (100.0)	3 (100.0)	
Marital Status				
Single	0 (0.0)	2 (100.0)	2 (100.0)	**8.640**
Married	7 (5.0)	132 (95.0)	139 (100.0)	**(0.023)***
Co-habiting	3 (37.5)	5 (62.5)	8 (100.0)	
Level of education				
Secondary and below	4 (12.1)	29 (879)	33 (100.0)	No FET value
Tertiary	6 (5.2)	110 (94.8)	116 (100.0)	(0.229)

Employment status				
Student	1 (6.2)	15 (93.8)	16 (100.0)	5.924
Unemployed	3 (20.0)	12 (80.0)	15 (100.0)	(0.124)
Employee	1 (2.5)	39 (97.5)	40 (100.0)	
Self-employed	0 (0.0)	20 (100.0)	20 (100.0)	
Entrepreneur/Trader	5 (8.6)	53 (91.4)	58 (100.0)	
Average monthly income (NGN)				
Less than 70,000	2 (2.5)	79 (97.5)	81 (100.0)	**No FET value**
70,000 – 150,000	8 (11.8)	60 (88.2)	68 (100.0)	**(0.044)***
Religion				
Christianity	10 (6.8)	138 (93.2)	148 (100.0)	No FET value
Islam	0 (0.0)	1 (100.0)	1 (100.0)	(1.000)
Ethnicity				
Igbo	5 (8.6)	53 (91.4)	58 (100.0)	8.994
Ikwerre/Etche/Eleme	2 (11.8)	15 (88.2)	17 (100.0)	(0.071)
Ogoni	3 (27.3)	8 (72.7)	11 (100.0)	
Ijaw	0 (0.0)	20 (100.0)	20 (100.0)	
Other Rivers state tribes	0 (0.0)	18 (100.0)	18 (100.0)	
Ibibio/Efik	0 (0.0)	9 (100.0)	9 (100.0)	
Other Nigerian tribes	0 (0.0)	16 (100.0)	16 (100.0)	
Family/Marriage structure				
Monogamous	10 (7.1)	131 (92.9)	141 (100.0)	No FET value
Polygamous	0 (0.0)	8 (100.0)	8 (100.0)	(1.000)

**Statistically significant (p<0.05) FET – Fisher's exact test*

Table 6 presents the relationship between obstetric factors and postpartum depression among the 149 women assessed. Overall, most obstetric variables showed no statistically significant association with depressive symptoms. However, complications during the most recent pregnancy showed a statistically significant association with postpartum depression ($p = 0.037$) in this study. Among women who experienced complications, only 2 (40.0%) reported depressive symptoms compared with 8 (5.6%) of those without complications.

Table 7. Obstetric Background and Depression among Postpartum Women Attending a Postnatal Clinic in a Teaching Hospital in Port Harcourt

Variables	**Postpartum depression (EPDS score ≥10)**			
	Yes N = 10 n (%)	**No N = 139 n (%)**	**Total N = 149 n (%)**	**Fisher's exact test (p-value)**
Number of times been pregnant (gravidity)				
One – two times	8 (7.4)	100 (92.6)	108 (100.0)	2.688
Three – four times	1 (2.8)	35 (97.2)	36 (100.0)	(0.239)
Five or more times	1 (20.0)	4 (80.0)	5 (100.0)	
History of pregnancy miscarriage/ abortion/stillbirth				
Yes	4 (16.7)	20 (83.3)	24 (100.0)	No FET value
No	6 (4.8)	119 (95.2)	125 (100.0)	(0.056)

Number of living children				
1 child	5 (5.7)	83 (94.3)	88 (100.0)	0.988
2 – 3 children	5 (9.6)	47 (90.4)	52 (100.0)	(0.638)
4 or more children	0 (0.0)	9 (100.0)	9 (100.0)	
Planned pregnancy (willingly/ intentionally got pregnant)				
Yes	9 (6.4)	131 (93.6)	140 (100.0)	No FET value
No	1 (11.1)	8 (88.9)	9 (100.0)	(0.474)
Intentions about reproduction at the time of conception (for this last pregnancy)				
Wanted a baby later	8 (6.9)	108 (93.1)	116 (100.0)	No FET value
Wanted no more children	2 (6.1)	31 (93.9)	33 (100.0)	(1.000)
Complications in last obstetric period/pregnancy				
Yes	2 (40.0)	3 (60.0)	5 (100.0)	**No FET value**
No	8 (5.6)	136 (94.4)	144 (100.0)	**(0.037)***
Plan to/willing to have another child				
Yes	8 (7.0)	107 (93.0)	115 (100.0)	No FET value
No	2 (5.9)	32 (94.1)	34 (100.0)	(1.000)

**Statistically significant (p<0.05) FET – Fisher's exact test*

Discussion

This study examined the prevalence of postpartum depression among mothers within six weeks of delivery, assessed breastfeeding intention during the early postpartum period, and explored the relationship between breastfeeding intention and postpartum depression among women attending a tertiary hospital postnatal clinic in Port Harcourt.

Using an EPDS cutoff of ≥10, this study found a low prevalence of postpartum depression, lower than in many global and regional studies where prevalence estimates vary by population and timing of assessment [22, 23]. Recent meta-analytic evidence indicates particularly high postpartum depression prevalence in sub-Saharan Africa and other low-resource settings [24]. In contrast, other global analyses report lower but still substantial prevalence in some high-income regions and mixed samples, reflecting broad variation in postpartum depressive symptoms internationally [22, 25].

Against this broader background, the prevalence observed in the index study appears relatively low. A few factors may explain this finding. First, the study population consisted of women attending a postnatal clinic at a tertiary health facility, suggesting some degree of access to skilled care and postnatal follow-up, which may be protective against severe psychological distress. Also, regular contact with healthcare providers during the antenatal and postnatal periods may facilitate early reassurance, health education, and informal emotional support, which can mitigate depressive symptoms. Women with more severe mental health challenges may also be less likely to attend routine postnatal clinics, potentially leading to an underestimation of the true prevalence. The fact that this study was conducted in the early postpartum period may have excluded women who developed symptoms in the late postnatal period. Thus, the prevalence reported here should be regarded as a point prevalence rather than a cumulative risk over the first postpartum year. Other explanatory factors include sociocultural factors that may contribute to under-reporting of symptoms and the EPDS tool's susceptibility to social desirability bias in contexts like

Nigeria, where mental health stigma exists. Despite the low prevalence, it implies that a meaningful proportion of mothers attending routine postnatal services experience depressive symptoms that could affect maternal functioning and infant care. This finding reinforces the importance of maintaining mental health screening as part of routine postnatal care, even in settings where prevalence appears relatively low.

The study found that most mothers expressed a strong intention to breastfeed within the first six weeks postpartum. This finding aligns with studies conducted in diverse settings, including the United States [26], Thailand [18], and Sub-Saharan Africa [27], which all report high levels of breastfeeding intention among pregnant and postpartum women. High intention to breastfeed indicates a widespread awareness of breastfeeding benefits and the success of public health messaging promoting breastfeeding as the optimal infant feeding method.

In Nigeria, breastfeeding promotion messages are integrated within antenatal education, child survival programmes, and community health messaging. Mothers are frequently exposed to information emphasizing exclusive breastfeeding as a marker of good maternal care. This social and institutional emphasis may explain the high proportion of women expressing positive breastfeeding intentions in this study. The finding suggests that, at least at the level of intention, most mothers are aligned with recommended feeding practices. However, intention alone does not guarantee sustained breastfeeding practice. While this study focused on intention and its relationship with postpartum depression, previous research has shown that a gap often exists between intention and actual feeding behaviour [28, 29]. Factors such as delivery complications, breastfeeding difficulties, return to work, family influence, and emotional wellbeing may interfere with a mother's ability to fulfil her intended feeding plan [29, 30]. The high level of intention observed in this study therefore represents an important starting point but should not be interpreted as evidence of optimal breastfeeding outcomes without consideration of postnatal support and other contextual barriers. The high levels of breastfeeding intention in this study suggests that antenatal education efforts are effective in shaping positive attitudes toward breastfeeding. However, women need practical and emotional support during the postnatal period to prevent distress when challenges arise with breastfeeding. Health workers should therefore adopt a supportive, non-judgmental approach that validates mothers' efforts and acknowledges individual peculiarities.

Contrary to expectations and finding in other studies [31, 32], this study did not find a statistically significant association between breastfeeding intention and PPD. This lack of association suggests that, in this study, intending to breastfeed was not linked to an increased or decreased likelihood of screening positive for PPD in the early postpartum period.

This finding contrasts with evidence from other studies where unmet breastfeeding intentions have been associated with higher depressive symptom scores [31, 33]. In those studies, mothers who intended to breastfeed but were unable to do so reported greater emotional distress, often characterized by guilt, self-blame, and reduced maternal confidence. Several factors may explain the absence of such an association. This study found a relatively low prevalence of postpartum depression which may have limited the statistical power to detect associations. This limitation is important when interpreting the null finding and suggests that absence of evidence should not be interpreted as evidence of absence. The timing of intention assessment in this study may also be relevant. While breastfeeding intention was assessed retrospectively in the early postpartum period, it is possible that women's reported intentions were influenced by their current feeding experiences. Mothers who encountered

difficulties may have adjusted their stated intentions to align with their current reality, thus reducing observable mismatch between intention and practice. This reporting could have further weakened the apparent association between intention and depressive symptoms. Additionally, the presence of supportive healthcare interactions may have buffered the psychological impact of breastfeeding challenges. In a tertiary care setting, mothers experiencing feeding difficulties may receive reassurance and guidance that reduces self-blame and emotional distress. This support context could weaken the link between unmet intention and postpartum depression that has been observed in less resourced settings. Again, rather than intention alone, factors such as breastfeeding self-efficacy, perceived support, and the emotional meaning attached to breastfeeding success or failure may play a more central role in shaping postpartum mood. Intention may therefore interact with these variables rather than exerting a direct independent effect. Finally, the lack of association between intention and PPD in this study highlights the need for further research that examines mediating and moderating factors. Future studies should explore breastfeeding self-efficacy, social support, and actual feeding experiences as potential pathways connecting intention and maternal mental health.

Marital status showed a statistically significant association with postpartum depression in this study. Women who were co-habiting experienced the highest proportion of depressive symptoms compared with married women in this study, while single women did not experience any depressive symptoms. This pattern aligns with studies [34–36] that emphasize relationship quality and stability, rather than marital status alone, as key determinants of maternal mental health. Previous research has demonstrated that poor partner support, relationship conflict, and instability are strong predictors of postpartum depression [35]. Cohabiting women may face greater uncertainty regarding emotional and financial support, which can increase vulnerability during the postpartum period. In contrast, marriage may confer social legitimacy, economic stability, and structured support networks that protect against depressive symptoms. Single women in this study may not have depressive symptoms because they relied on extended family support or held realistic expectations about parenting roles, but this should be interpreted with caution. This finding stresses the importance of assessing perceived support and relationship dynamics and not necessarily marital labels alone when screening for postpartum depression. Health workers should be trained to explore a woman's relationship context, including partner support, communication, and caregiving involvement, rather than assuming protection or risk based solely on marital status. The findings also implies that women who have limited partner support or cohabiting should receive proactive mental health screening and follow-up in the postnatal period. Health workers should also adopt a non-judgmental approach that avoids reinforcing social stigma related to marital status. Group counselling sessions, peer support groups, and community-based follow-up may be particularly beneficial for women lacking stable partner support. In summary, this observed relationship between marital status and postpartum depression emphasizes the need for postnatal care that accounts for women's social and relationship support.

Average monthly income was significantly associated with postpartum depression in this study, with higher prevalence observed among women earning between ₦70,000 and ₦150,000 compared with those earning less than ₦70,000. This non-linear relationship between income and postpartum depression has been reported in previous studies [37, 38], suggesting that psychological distress does not always increase steadily with decreasing

income. Some Nigerian studies have also reported a relationship between socioeconomic status, economic stressors, employment related pressure and postpartum depression [39–41]. Women in middle-income households may experience competing demands related to paid employment, caregiving responsibilities, and social expectations, which may increase vulnerability to emotional distress during the postpartum period. In contrast, women in lower-income households may rely more heavily on extended family and communal support systems, which can provide practical and emotional assistance that buffers postpartum stress. These findings indicate that postpartum depression screening should consider income-related stressors in a nuanced manner. Screening strategies should avoid assuming that higher income uniformly protects against maternal mental health problems and should instead explore financial pressure, work demands, and available social support when assessing postpartum women.

The occurrence of complications during the most recent pregnancy was associated with postpartum depression in this study, with a higher prevalence of depressive symptoms observed among women who experienced complications compared with those who did not. This finding aligns with recent global and local evidence identifying obstetric complications as an important risk factor for postpartum depression [41–44]. These findings suggest that the relationship between obstetric complications and postpartum depression is consistent across both global and local contexts. Pregnancy complications may contribute as they often generate fear, uncertainty, and heightened concern about maternal or infant survival, which can persist into the postpartum period. Prolonged hospitalization, invasive medical procedures, or emergency interventions may also be experienced as traumatic, undermining a woman's sense of control and safety around childbirth. In addition, complications may interfere with early mother–infant bonding and breastfeeding initiation, further increasing emotional distress during a critical period of psychological adjustment.

Finally, the association observed in this study highlights the importance of proactive mental health screening and follow-up for women who experience complications during pregnancy. Postnatal care services should prioritize these women for early psychological assessment and supportive interventions. In summary, integrating mental health screening into routine postnatal follow-up for women with complicated pregnancies may improve early identification of postpartum depression and facilitate timely referral and support.

Conclusion

In this study, postpartum depression affected a minority of mothers attending a postnatal clinic in Port Harcourt, while breastfeeding intention was high among most participants. No significant association was observed between breastfeeding intention and postpartum depression in this sample. Marital status, average monthly income, and complications during the most recent pregnancy were significantly associated with postpartum depression, with higher prevalence observed among women who were co-habiting, those in the middle-income group, and those who experienced pregnancy complications. These findings highlight the importance of postnatal care approaches that incorporate psychosocial and obstetric risk assessment alongside routine maternal and child health services and underscore the need for further research to better understand how social factors, economic pressures, and pregnancy experiences shape maternal mental health in the postpartum period.

Strengths of the Study

This study focuses on mothers at approximately six weeks postpartum and captures a clinically important window for both

feeding establishment and the emergence of depressive symptoms. The use of validated screening tools, systematic sampling, and a high response rate strengthens the reliability of the findings. In addition, the study provides locally relevant data from a tertiary hospital in Port Harcourt, contributing evidence from an underrepresented setting.

Weaknesses of the Study

The cross-sectional design limits causal interpretation of observed associations. Key variables were self-reported, which may introduce recall and social desirability bias. Because the study was conducted in a single tertiary facility, the findings may not be generalizable to non-facility or rural populations. In addition, the small number of women with depressive symptoms may have reduced power to detect some associations.

Conflict of Interest

The authors declare that there is no competing or conflict of interest.

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Ethical Approval

Ethical approval was obtained from the UPTH Research and Ethics Committee. Written informed consent was obtained from all participants. Data from this study was anonymized and stored securely. Permission was also obtained from the head of the department of obstetrics and gynecology prior to data collection. Eligible mothers were informed about the purpose of the study, the procedures involved, and their right to decline or withdraw from participation at any time without any effect on the care they received. Mothers who screened positive for PPD (based on EPDS) were counselled and referred to appropriate mental health services within UPTH. Participation was voluntary, and non-participation did not affect the care they received.

Data Availability

Data from this study is available on request from the authors.

Author Contribution

- **Chinedu B. Nwadiaru:** Conceptualization, Methodology, Writing–Original Draft, Data Curation, Formal Analysis.
- **Ebenezer O. Daniel:** Writing – Review & Editing, Supervision.
- **Chukwuma Okeafor:** Conceptualization.
- **Justina Alegbeleye:** Conceptualization.

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