Adebayo Y.O.; Akinremi T.I.; Owolodun B.; Quadri J.A.; Okoh E. 2025. "A comparative study on knowledge, attitudes, and practices of exclusive breastfeeding of lactating mothers attending a private and public hospital in Ibadan, Nigeria." *World Nutrition*, *16*(4), December, 140–149. https://doi.org/10.26596/wn.2025164140-149

Research

A comparative study on knowledge, attitudes, and practices of exclusive breastfeeding of lactating mothers attending a private and public hospital in Ibadan, Nigeria

Yetunde Omotola Adebayo[1]; Tobi Israel Akinremi[2,*]; Babatunde Owolodun[3]; Jelili Akorede Quadri[2]; Ene Okoh[1]

[1] Department of Nutrition and Dietetics, College of Health Sciences, Bowen University, Iwo, Osun State, Nigeria., [2]Department of Nutrition and Dietetics, Faculty of Food and Consumer Sciences, Ladoke Akintola University of Technology, Ogbomoso, Oyo State, Nigeria., [3]Swiss Tropical and Public Health Institute, University of Basel, Switzerland

Keywords: breastfeeding, knowledge, attitude, practice, KAP, lactating mothers.

https://doi.org/10.26596/wn.2025164140-149

World Nutrition 2025;16(4):140-149

Background

Breastfeeding is essential for infant health and survival. In 2023, only 29% of mothers of infants 0-6 months old in Nigeria exclusively breastfed their infants prior to the survey, despite a high percentage (95%) who initiated breastfeeding early. Various nutrition interventions have been implemented to improve mothers' knowledge, attitudes, and practices (KAP) regarding exclusive breastfeeding. However, there is little data on exclusive breastfeeding KAP among mothers attending public and private hospitals in the Ibadan North Local Government Area, the focus of this study.

Objective

To compare the knowledge, attitudes, and practices of exclusive breastfeeding among mothers attending public and private hospitals in Ibadan.

Methods

A descriptive cross-sectional study conducted between February and March 2023 at Adeoyo Maternity Teaching Hospital (public) and Vine Branch Medical Centre (private) Ibadan. Total outpatient population sampling was used to recruit 160 lactating mothers (80 per hospital) at the immunization clinics. Information on mothers' breastfeeding KAP was obtained using a semi-structured, interviewer-administered questionnaire. Knowledge was categorized as poor (0-7) or good (8-15); practice as poor (0-3) or good (4-7); and attitude as negative (0-8) or positive (9-17). Data were analysed using SPSS version 20.0. Descriptive and inferential statistics such as chi-square tests, Fischer's Exact test, t-tests, and regression were used.

Results

Mean ages were 31.4±4.2 and 29.9±5.45 years at private and public hospitals, respectively. Most (91.2%) private hospital mothers had a tertiary education, unlike the public hospital (51.2%). We found good EBF knowledge among respondents in both hospitals (97.5%). A significant relationship was observed between hospital type and breastfeeding attitudes and practices. Poor breastfeeding practices were more prevalent at the private hospital (50.0%) than at the public hospital (30.0%). A statistically significant association was also found between Breastfeeding knowledge, marital status, occupation, breastfeeding attitude, and educational level.

Conclusions

High EBF knowledge was observed, but this did not consistently translate into attitudes or practices. Intervention should focus on approaches for converting knowledge into effective practice.

*Corresponding author: akinremi.israel007@gmail.com

INTRODUCTION

Breastfeeding is one of the most cost-effective practices for child health and survival (North et al. 2022; Rana et al. 2020; Imdad et al. 2011; WHO/UNICEF, 2003). During the first six months of life, children, particularly newborns, face significant risk of morbidity and mortality, when exclusive breastfeeding (EBF) is essential to reduce both long- and short-term health complications (Likhar and Patil, 2022; North et al. 2022; WHO/UNICEF, 2003).

EBF also reduces risk of sudden infant death syndrome, diabetes mellitus, overweight, and malocclusion (Ogbo et al. 2018; Holtzman and Usherwood, 2018; Victora et al. 2016). Additionally, EBF has also been shown to offer some protective benefits to the mother, such as a decreased risk of cardiovascular, neurological, and oncological metabolic disorders, as well as postpartum haemorrhage in adulthood (Schwarz and Nothnagle, 2015)

Despite the considerable health advantages, adherence to EBF falls well below WHO recommendations (FMoHSW et al. 2024; Roberts et al. 2013).

Within sub-Saharan Africa, the practice of EBF among babies 0-6 months of age ranges from 23.7% to 56.5% (Issaka et al. 2017; Hanson et al. 2013). This rate is well below the 2030 global target of 70% (WHO, 2023). In Nigeria, the proportion of infants exclusively breastfed was 29% in 2018 and 2023, according to the Nigeria Demographic and Health Surveys (FMoHSW et al. 2024).

Breastfeeding practices are influenced by a myriad of factors that encompass sociodemographic factors, maternal knowledge, attitudes, socio-cultural and psychological factors, knowledge levels, and child-related considerations (Adeola et al. 2022; Asemahagn, 2016; Chale et al. 2016; Onah et al. 2014).

In addition, other factors such as antenatal care attendance, mode of delivery, family influence, cultural and religious values, as well as poor hospital practices and policies also often tend to affect EBF practices negatively (Atimatiac and Adam, 2020; Walters et al. 2016). Although several Nigerian studies have examined general determinants of breastfeeding, very few have investigated how the contrasting organisational structures of public and private hospitals shape mothers' breastfeeding decisions. Moreover, it remains uncertain whether mothers attending public outpatient clinics receive different breastfeeding support or demonstrate different EBF practices compared to those using private facilities, where service quality, counselling approaches, and patient profiles often diverge. This study aims to assess and compare the knowledge, attitudes, and practices of EBF among mothers attending outpatient clinics at a public and a private hospital in Ibadan North Local Government Area (LGAs).

MATERIALS AND METHODS

STUDY AREA

This study was carried out in Ibadan, a city with more than 6 million people living in its metropolitan area. The research was conducted in two hospitals: Adeoyo Maternity Hospital, a government-owned hospital, and Vine Branch Medical Centre, a private hospital, both in Ward 3 of the southern part of the Ibadan metropolis, as shown in Figure 1.

STUDY DESIGN AND STUDY POPULATION

This was a cross-sectional study conducted from February to March 2023. The study population included all lactating mothers attending the postnatal clinic at either hospital whenever it was held over a two-month period.

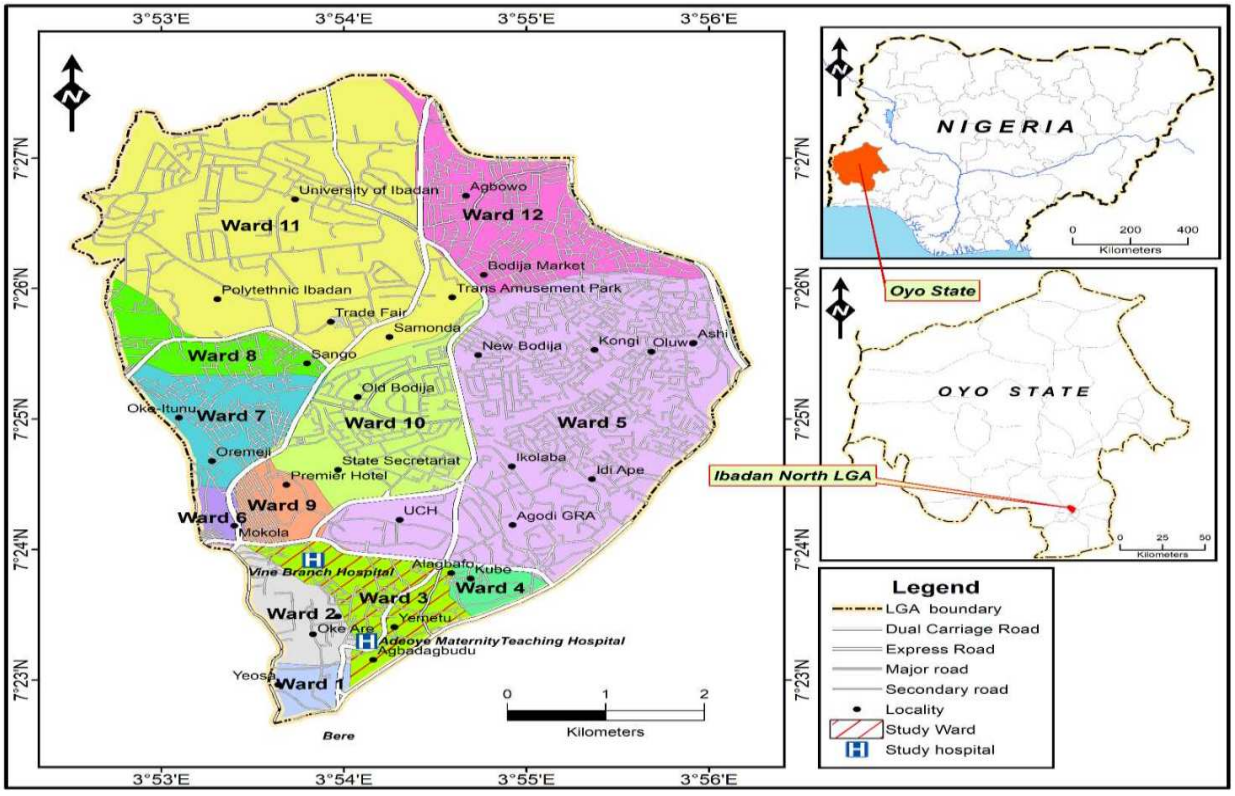


Figure 1: Map showing the study area and the location of the hospitals

DATA COLLECTION TOOLS AND PROCEDURES

A semi-structured interviewer-administered questionnaire was used to obtain information on sociodemographic characteristics (mother's age, ethnicity, religion, income, marital status, mother's educational level, and occupation), breastfeeding knowledge, breastfeeding practices, and breastfeeding attitudes. A total of 15 true/false breastfeeding knowledge questions were assigned as correct (=1) or incorrect (=0) and summed up. The breastfeeding knowledge scale was categorized as poor knowledge (0-7) and good knowledge (8-15).

The IOWA 17-item positive/negative breastfeeding attitude scale was used to assess the mothers' breastfeeding attitudes (Abdulahi et al. 2020). The responses were summed up and categorized as negative attitude (0-8) and positive attitude (8-17). A 7-item yes/no scale was used to assess the breastfeeding practices of the mothers. Each of the responses was summed up and categorized as poor practice (0-3) or good practice (4-7)

DATA ANALYSIS

The collected data were entered, cleaned, and analysed using Statistical Package for Social Science (SPSS) version 27. Descriptive statistics, including frequencies and percentages, were used to summarize variables and displayed in tables. A chi-squared test was used to analyse the association between mothers' knowledge, practice, and attitudes in the private hospital vs. the public hospital. A t-test was used to assess significant differences in the mean scores for breastfeeding knowledge, attitudes, and practices between mothers in both hospitals. Analysis was carried out at 95% confidence interval for the significance test.

ETHICAL CONSIDERATION

Ethical approval was obtained from the Bowen University Teaching Hospital (BUTH) Research Ethics Committee with Registration no. NHREC/12/04/2012 and approval no. BUTH/REC-734. An approval letter was also received from both Adeoyo Maternity Hospital and Vine Branch Medical Centre, Ibadan, Oyo State, Nigeria. The objective of the research was also explained to the respondents, and voluntary consent was obtained from each respondent prior to the commencement of the study.

RESULTS

Table 1 presents the sociodemographic characteristics of the respondents by type of healthcare facility. Statistically significant differences were observed between private and public hospital groups in age, sex of child, religion, ethnicity, monthly salary, education level, and occupation.

Table 1: Sociodemographic characteristics of the respondents

Variables	Private n = 80	Public n = 80	Total N = 160	X^2	P-value
	Number (%)	Number (%)			
Age (years)					
20 – 29	27 (33.8)	42 (52.5)	69 (43.1)	9.32	.01
30 – 39	50 (62.5)	31 (38.8)	81 (50.6)		
40 – 49	3 (3.8)	7 (8.8)	10 (6.2)		
Sex of child					
Male	37 (46.2)	46 (57.5)	83 (51.9)		
Female	43 (53.8)	34 (42.5)	77 (48.1)	48.13	000
Religion					
Christianity	80 (100.0)	35 (43.8)	115 (71.9)		
Islam	-	44 (55.0)	44 (27.5)	62.61	.000
Others	-	1 (1.2)	1 (0.6)		
Ethnicity					
Yoruba	52 (65.0)	66 (82.5)	118 (73.8)		
Igbo	14 (17.5)	10 (12.5)	24 (15.0)	12.33	.01
Hausa	4 (5.0)	4 (5.0)	8 (5.0)		
Others	10 (12.5)	-	10 (6.2)		
Monthly salary (Naira)					
< 30,000	3 (3.8)	22 (27.5)	25 (15.6)		
30,000	5 (6.2)	13 (16.2)	18 (11.2)	24.23	.00
> 30,000	72 (90.0)	45 (56.2)	117 (73.1)		
Marital status					
Married	80 (100.0)	79 (98.8)	159 (99.4)	1.01	.316
Widowed	-	1 (1.2)	1 (0.6)		
Highest educational level					
No formal education	-	3 (3.8)	3 (1.9)		
Primary education completed	2 (2.5)	4 (5.0)	6 (3.8)		
Secondary education completed	5 (6.2)	32 (40.0)	37 (23.1)	32.35	.00
Tertiary education completed	73 (91.2)	41 (51.2)	114 (71.2)		
Occupation					
Trader	42 (52.5)	51 (63.8)	93 (58.1)		
Teacher	3 (3.8)	8 (10.0)	11 (6.9)	6.64	.04
Civil servant	35 (43.8)	21 (26.2)	56 (35.0)		

$p<0.05$

Table 2 summarizes mothers' knowledge of exclusive breastfeeding across both healthcare settings. While knowledge levels were generally high, significant differences were observed between private and public hospital respondents on key items such as breastfeeding as contraception, protection against cancer, likelihood of illness, and appropriateness during maternal smoking ($p < .05$).

Table 2 Respondents' knowledge on exclusive breastfeeding

Variable	Private N (%) = 80	Public N (%) = 80	Total N (%) =160	X^2	P-value
Breastfeeding is the ideal food for newborn	80 (100.0)	79 (98.8)	159 (99.4)	1.01	.316
Newborns should be exclusively breastfed for more than 6 months of life	77 (96.2)	80 (100.0)	157 (98.1)	3.06	.08
Breastfeeding provides infants with more nutritional benefits than formula	78 (97.5)	78 (97.5)	156 (97.5)	0.00	1.00
Breastfeeding reduces the risk of malnutrition and obesity in children	69 (86.2)	76 (95.0)	145 (90.6)	3.61	.06
Breastfeeding reduces the risk of constipation in children	71 (88.8)	75 (93.8)	146 (91.2)	1.25	.263
Breastfeeding is a method of contraceptive	34 (42.5)	9 (11.2)	117 (73.1)	19.88	.000
Nursing mothers should consult their doctors before taking any medication	76 (95.0)	77 (96.2)	153 (95.6)	0.15	.699
Breastfeeding protects against breast and ovarian cancer	62 (77.5)	74 (92.5)	136 (85.0)	7.06	.01
A breastfed child is less likely to get sick compared to a formula-fed child	52 (65.0)	72 (90.0)	124 (77.5)	14.34	.000
Mothers who smoke should not breastfeed	50 (62.5)	64 (80.0)	114 (71.2)	5.98	.014
Mothers should stop breastfeeding if the baby is sick	58 (72.5)	60 (75.0)	118 (73.8)	0.13	.719
Breastfeeding helps the mother to reduce weight	31 (38.8)	40 (50.0)	71 (44.4)	2.05	.152
Mothers should not breastfeed in public places	18 (22.5)	24 (30.0)	42 (26.2)	1.16	.281
Fathers should support mothers in exclusive breastfeeding	62 (77.5)	64 (80.0)	126 (78.8)	0.15	.699
Formula feeding is better than breastfeeding	62 (77.5)	54 (67.5)	116 (72.5)	2.01	.157

Each knowledge item was assessed on a binary scale (correct/incorrect), and only the proportion of respondents who provided the correct responses were reported at $p<0.05$

Table 3 presents respondents' breastfeeding practices across public and private hospitals. Significant differences were found between groups regarding exclusive breastfeeding for six months, duration of exclusive breastfeeding, timing of complementary feeding, and introduction of water ($p < .05$), with public hospital mothers generally demonstrating better adherence to recommended practices.

Table 3: Breastfeeding practices of respondents

Variable	Private N(%)= 80	Public N(%)=80	Total N(%)=160	X^2	P-value
Early breastfeeding initiation within 1hour	28 (35.0)	24 (30.0)	52 (32.5)	0.46	.500
How often do you breastfeed your baby daily	26 (32.5)	17 (21.2)	43 (26.9)	2.58	.108
Did you exclusive breastfeed?	40 (50.0)	64 (80.0)	104 (65.0)	15.82	.000
Frequency of breastfeeding your baby	46 (57.5)	43 (53.8)	89 (55.6)	0.23	.633
How many months did you use to exclusively breastfeed?	2 (2.5)	16 (20.0)	18 (11.2)	12.67	.000
At what month did you introduce other foods?	39 (48.8)	54 (67.5)	93 (58.1)	5.78	.016
At what point did you introduce water to your child?	33 (41.2)	49 (61.2)	82 (51.2)	6.40	.011

Only responses that conformed to WHO-recommended standards for initiation, exclusive breastfeeding, complementary feeding, and breastfeeding duration were included in this table at $p<0.05$

Table 4 summarizes respondents' attitudes toward breastfeeding. Significant differences between private and public hospital mothers were observed for several beliefs, including perceptions of overfeeding, work-related feeding choices, and the health benefits of breastmilk versus formula ($p < .05$).

Table 5 presents the association between respondents' breastfeeding knowledge, attitudes, and practices in a private and public hospitals. While knowledge and attitude scores did not differ significantly between private and public hospitals, mothers in public hospitals were significantly more likely to demonstrate good breastfeeding practices ($p = .010$).

As shown in Table 6a, in the public hospital setting, a statistically significant association was found between breastfeeding knowledge and attitude ($\chi^2 = 4.01$, $p = .045$). However, this association was not significant in the private hospital ($p = .152$).

Table 6b shows the association between mothers' knowledge and practice of exclusive breastfeeding. There was no statistically significant association between respondents' breastfeeding knowledge and practice in either the private ($p = .348$) or public hospital ($p = .305$).

Table 6c shows the association between mothers' attitudes and practices regarding exclusive breastfeeding. A statistically significant relationship was found between respondents' attitudes and practices in the private hospital ($\chi^2 = 14.76$, $p < .001$), whereas no such association was observed in the public hospital ($p = .93$).

Table 4: Breastfeeding attitudes of the respondents

Variable	Private N(%)= 80	Public N(%)= 80	Total N(%)= 160	X^2	P-value
Formula feeding is more convenient than breastfeeding	18 (22.5)	20 (25.0)	38 (23.8)	0.14	.710
The benefits of breastfeeding last only as long as the baby is breastfed	26 (32.5)	28 (35.0)	54 (33.8)	0.11	.738
Breastfeeding increases mother-infant bonding	58 (72.5)	53 (66.2)	111 (69.4)	0.74	.391
Formula-fed babies are more likely to be overfed than breastfed babies	42 (52.5)	26 (32.5)	68 (42.5)	6.55	.011
Formula feeding is a better choice if the mother plans to go back to work	22 (27.5)	35 (43.8)	57 (35.6)	4.61	.032
Women should not breastfeed in public places	44 (55.0)	50 (62.5)	94 (58.8)	0.93	.335
Breastfed babies are healthier than formula-fed babies	38 (47.5)	52 (65.0)	90 (56.2)	4.98	.026
Breastfed babies are more likely to be overfed than formula fed babies	39 (48.8)	26 (32.5)	65 (40.6)	4.38	.036
Fathers feel left out if a mother breastfeeds	44 (55.0)	45 (56.2)	89 (55.6)	0.03	.874
Breastmilk is the ideal food for babies	63 (78.8)	53 (66.2)	116 (72.5)	3.14	.077
Breastmilk is more easily digested than formula	63 (78.8)	52 (65.0)	115 (71.9)	3.74	.053
Formula is as healthy for an infant as breast milk	25 (31.2)	37 (46.2)	62 (38.8)	3.79	.051
Breastmilk is cheaper than formula	60 (75.0)	52 (65.0)	112 (70.0)	1.91	.168
A mother who occasionally drinks alcohol should not breastfeed her baby	38 (47.5)	30 (37.5)	68 (42.5)	1.64	.201
Breastmilk is lacking in iron	47 (58.8)	49 (61.2)	96 (60.0)	0.10	.747
Breastfeeding is more convenient than formula	31 (38.8)	41 (51.2)	72 (45.0)	2.53	.112
Mothers who formula feed miss one of the great loves of motherhood	36 (45.0)	25 (31.2)	61 (38.1)	3.21	.073

*Responses that agrees with each statement are what is recorded in this table

Table 5 Association between breastfeeding knowledge, attitudes, practices of respondents in the two hospitals

Variables	Private N(%)= 80	Public N(%)= 80	Total N(%)= 160	X^2	P-value
Knowledge					
Poor (0 – 7)	2 (2.5)	4 (5.0)	6 (3.8)	0.69	.405
Good (8 – 15)	78 (97.5)	76 (95.0)	154 (96.2)		
Practice					
Poor (0 – 3)	56 (70.0)	40 (50.0)	96 (60.0)	6.67	.010
Good (4 – 7)	24 (30.0)	40 (50.0)	64 (40.0)		
Attitude					
Negative (0 – 8)	40 (50.0)	41 (51.2)	81 (50.6)	0.03	.874
Positive (9 – 17)	40 (50.0)	39 (48.8)	79 (49.4)		

Table 6a: Association between respondents' breastfeeding knowledge and attitude

Classification	Attitude		Total	X^2	p-value
Private hospital	**Negative**	**Positive**			
Poor knowledge (0 - 7)	-	2 (5.0)	2 (2.5)		
Good knowledge (8 - 15)	40 (100.0)	38 (95.0)	78(97.5)	2.05	.152
Public hospital					
Poor knowledge (0 - 7)	4 (9.8)	-	4 (5.0)	4.01	.045
Good knowledge (8 - 15)	37 (90.2)	39 (100.0)	76(95.0)		

Table 6b: Association between respondents' breastfeeding knowledge and practice

Classification	Practice		Total	X^2	p-value
Private hospital					
Poor knowledge (0 - 7)	2 (3.6)	-	2 (2.5)	0.88	.348
Good knowledge (8 - 15)	54 (96.4)	24 (100.0)	78(97.5)		
Public hospital					
Poor knowledge (0 - 7)	3 (7.5)	1 (2.5)	4 (5.0)	1.05	.305
Good knowledge (8 - 15)	37 (92.5)	39 (97.5)	76(95.0)		

Table 6c: Association between respondents' breastfeeding attitude and practice

Classification	Practice		Total	X^2	p-value
Private hospital	**Negative**	**Positive**			
Negative Attitude (0 - 8)	43 (74.1)	6 (27.3)	49 (61.2)		
Positive Attitude (9 - 17)	15 (25.9)	16 (72.7)	31 (38.8)	14.76	0.00
Public hospital					
Negative Attitude (0 - 8)	38 (54.3)	16 (53.3)	54 (54.0)	0.01	0.93
Positive Attitude (9 - 17)	32 (45.7)	14 (46.7)	46 (46.0)		

Table 7 compares mean scores for breastfeeding knowledge, attitude, and practice between mothers attending private and public hospitals. A significant association was observed in the mean breastfeeding knowledge (p = .009) and practice score (p = .004) of mothers in both hospitals. However, there was no statistical significant difference in the mean breastfeeding attitude score of mothers in both hospitals.

Table 8 presents the associations between sociodemographic characteristics and levels of breastfeeding-related knowledge, attitudes, and practices. None of these variables was statistically associated across the KAP domains.

Table 7: Difference in scores by hospital

Classification	Private hospital Mean±SD	Public hospital	t-value	p-value
Knowledge	11.07±1.95	11.80±1.71	-2.651	.009
Attitude	8.35±2.21	8.54±2.54	-.527	.599
Practice	2.25±1.55	2.89±1.26	-3.05	.003

Knowledge was assessed with 15 items scored as (0–7) poor, (8-15) Good; Attitude assessed with 17 items scored as (0-8) Negative (8-17) Positive; Practice assessed with 7items, (0-3) poor, (4-7) good.; p<0.05.

Table 8: Association between sociodemographic characteristics and knowledge, attitude, and practice of mothers (N = 160)

Variable	χ^2 (df)	p-value	Fisher's Exact	Interpretation
			Knowledge	
Age (Years)	0.006 (1)	.939	1.000	Not significant
Educational level	0.303 (1)	.582	1.000	Not significant
Ethnicity	3.688 (1)	.055	.089	Not significant
Occupation	2.911 (1)	.088	.166	Not significant
Salary level	2.172 (1)	.141	.184	Not significant
			Attitude	
Age (Years)	0.343 (1)	.558	.647	Not significant
Educational level	0.226 (1)	.635	.746	Not significant
Ethnicity	3.632 (1)	.057	.077	Not significant
Occupation	0.394 (1)	.530	.546	Not significant
Salary level	0.059 (1)	.808	.840	Not significant
			Practice	
Age (Years)	0.012 (1)	.911	1.000	Not significant
Educational level	2.297 (1)	.130	.155	Not significant
Ethnicity	2.909 (1)	.088	.122	Not significant
Occupation	1.990 (1)	.158	.185	Not significant
Salary level	0.380 (1)	.538	.657	Not significant

Note: Fisher's Exact Test was used due to small cell sizes.

Table 9 indicates that binary logistic regression analyses were conducted to examine whether selected sociodemographic characteristics predicted mothers' breastfeeding knowledge, attitude, and practice. The analyses showed that none of the sociodemographic variables significantly predicted any of the breastfeeding-related outcomes. Across all models, explanatory power was limited, indicating that variation in breastfeeding knowledge, attitudes, and practices was not statistically explained by ethnicity or occupation in this study population.

Before presenting the regression estimates, overall model fit was evaluated using the Omnibus Test of Model Coefficients. The chi-square statistics reported for each model (e.g., $\chi^2(2)$, $\chi^2(1)$) assess whether the inclusion of the specified predictors improves model fit compared with a null model containing only the intercept. The number in parentheses represents the degrees of freedom, corresponding to the number of predictors included in each model. These statistics are reported as global indicators of model adequacy.

Table 9: Binary logistic regression predicting good knowledge, positive attitude, and good practice from sociodemographic variables (N = 160)

Outcome Variable	Predictor	B	SE	Wald	*p*	Exp(B)	95% CI for Exp(B)
Good Knowledge	Ethnicity (Yoruba)	1.532	0.940	2.659	.103	4.629	[0.734,29.195]
	Occupation (Trader)	1.634	1.136	2.070	.150	5.126	[0.553,47.508]
	Constant	2.025	0.649	9.732	.002	7.579	—
Model summary							
$\chi^2(2) = 5.674$, $p = .059$							
Nagelkerke $R^2 = .138$							
Hosmer–Lemeshow $p = .451$							
Classification Accuracy: 97.2%							
Positive Attitude	Ethnicity (Yoruba)	0.705	0.374	3.558	.059	2.023	[0.973, 4.208]
	Constant	-0.836	0.332	6.343	.012	0.433	—
Model summary							
$\chi^2(1) = 3.731$, $p = .053$							
Nagelkerke $R^2 = .028$							
Hosmer–Lemeshow: not computed							
Classification Accuracy: 57.2%							
Good Practice	Ethnicity (Yoruba)	0.727	0.432	2.829	.093	2.070	[0.887, 4.832]
	Constant	-1.476	0.392	14.184	.000	0.229	—
Model summary							
$\chi^2(1) = 3.095$, $p = .079$							
Nagelkerke $R^2 = .024$							
Hosmer–Lemeshow: not computed							
Classification Accuracy: 71.1%							

Notes: OR = odds ratio; CI = confidence intervazlχ^2(df) indicates whether the regression model fits better than a model with no predictors; df represents the number of predictors included. Nagelkerke R^2 indicates how much variation in the outcome is explained by the model. Hosmer–Lemeshow p-value assesses model fit; a non-significant value indicates adequate fit. Classification accuracy refers to the percentage of cases correctly classified by the model.

DISCUSSION

This study assessed the knowledge, attitudes, and practices regarding exclusive breastfeeding among lactating mothers attending the immunization clinic at the public Adeoyo Maternity Teaching Hospital and the private Vine Branch Medical Centre in the Ibadan North Local Government Area, Ibadan, Oyo State, Nigeria.

The mothers who attended the public hospital were generally younger, a pattern often observed because younger women with lower incomes tend to patronize public health services more frequently (Okafor & Goon, 2021). In contrast, mothers in the private hospital had higher educational attainments, a pattern often prevalent among users of private facilities (Onah et al. 2014). These socioeconomic and educational differences may shape patterns of breastfeeding information and support, impacting subsequent behaviour. Notably, the occupational distribution also differed significantly, with mothers attending the public hospital mainly traders, and those in the private hospital mostly civil servants. This is important in the Nigerian context, since women in the informal sector, although with limited formal maternity protections, often operate with more flexible schedules and hence command more time at home. The relative flexibility in comfort contributed to the higher rates of breastfeeding and exclusive breastfeeding found among the mothers in the public hospital group, compared with their counterparts in private employment, who often report to work earlier and deal with workplaces that may be less supportive of breastfeeding (Comfort et al. 2023; Kayode et al. 2023).

KNOWLEDGE OF MOTHERS ON EXCLUSIVE BREASTFEEDING

The breastfeeding knowledge of mothers in both hospital settings was high. Several other studies also found good breastfeeding knowledge among mothers in Tanzania (Faustine et al 2022). In Nigeria this was also found in Lagos (Balogun et al. 2017), Osun State (Lemina et al. 2023), Kaduna) Yakubu et al.2023), Sokoto (Ahmad et al. 2017), and Cross River (Ella et al. 2016).

However, we found persisting misconceptions, especially regarding breastfeeding duration, maternal smoking, and breastfeeding as a contraceptive method. Other research in Nigeria has also found that while awareness of EBF is widespread, understanding of its full benefits remains limited (Yakubu et al. 2023).

BREASTFEEDING ATTITUDES OF MOTHERS

Attitudes were similar across groups, with approximately half of mothers in both hospitals having negative breastfeeding attitudes. This is in line with the work conducted in Lagos by Osibogun et al. (2018) and in Northwest Nigeria by Sabo et al. (2023). A significant association was observed between exclusive breastfeeding knowledge and attitudes of mothers in the public hospital. This mirrors the findings of Mohamed et al. (2018) in Kenya.

Interestingly, mothers from public hospital were more likely to believe that breastfed babies are healthier and that formula-fed babies are more prone to overfeeding. These attitudes reflect a growing shift among some Nigerian mothers, influenced by their exposure to antenatal health talks (Schnefke et al. 2023). However, the persistence of negative attitudes, even among those with good knowledge, highlights that improving behaviour requires more than information; it requires positive framing, peer support, and enabling environments (Kayode et al. 2023).

BREASTFEEDING PRACTICES OF MOTHERS

In the present study, good breastfeeding knowledge did not translate into adequate exclusive breastfeeding practice. This finding contrasts with studies conducted in Malaysia (Lemina et al. 2023), Southwest Nigeria (Akadri and Odelola, 2020), Lagos (Osibogun et al. 2018), and Southeastern Nigeria (Onah et al. 2014). Mothers from the public hospital were more likely to practice exclusive breastfeeding for six months compared to their counterparts. This is consistent with findings from the Nigeria Demographic and Health Survey (FMoHSW et al. 2024), which reported higher EBF rates among women delivering in public health facilities. The difference may be attributed to structural differences in care. For instance, public hospitals may adhere more strictly to the Baby-Friendly Hospital Initiative (BFHI) protocols such as immediate skin-to-skin contact and postpartum breastfeeding counselling, which are known to improve breastfeeding outcomes (Pérez-Escamilla et al. 2016).

ASSOCIATIONS BETWEEN SOCIO-DEMOGRAPHIC VARIABLES AND BREASTFEEDING KNOWLEDGE, ATTITUDES, AND PRACTICES OF MOTHERS IN BOTH HOSPITALS

A significant relationship was observed between mothers' breastfeeding knowledge and their marital status and occupation, while only educational level was associated with mothers' breastfeeding attitudes. This agrees with the work of Amungulu et al. (2023) in Namibia and Okwesa et al. (2025) in Delta State, Nigeria. Additionally, we found a significant relationship between educational level and mothers' attitudes toward exclusive breastfeeding. This is congruent with findings in Ibadan (Ishola et al. 2019) and by Mohd et al. (2021) in Malaysia.

This reinforces the role of marital status and occupation as strong predictors of exclusive breastfeeding knowledge and attitudes.

SOCIODEMOGRAPHIC PREDICTORS OF EXCLUSIVE BREASTFEEDING KNOWLEDGE, ATTITUDES AND PRACTICES

The multivariate analysis indicates that sociodemographic factors could not independently predict mothers' knowledge, attitudes, or practices toward breastfeeding, even after adjusting for confounding variables. The low explanatory power of the logistic regression models indicates that other factors, such as ethnicity and occupation, were insufficient to explain variation in breastfeeding-related outcomes among the study population. This finding highlights the importance of differentiating between unadjusted patterns and the independent effects that are explained by multivariable modelling, since the latter provides a more stringent measure of predictors after the shared exposures are considered.

The most likely reason no substantial predictors are found is that most influences are health-systemic and contextual, which can override individual sociodemographic factors. The available literature, both globally and regionally, testifies that relatively uniform knowledge and attitudes across population groups can counteract demographic

inequality through the consistent provision of facility-based breastfeeding counselling and support (World Health Organization & Regional Office for Africa, 2023). Furthermore, the overall social and cultural determinants, such as family support, workplace factors, and existing community norms, which simple sociodemographic variables cannot adequately capture, influence breastfeeding behaviours (Victora et al. 2016; World Health Organization & United Nations Children's Fund, 2003). In that setting, the results in Table 9 indicate that better breastfeeding outcomes might require interventions that place greater emphasis on health-system strengthening and social support systems, rather than relying solely on sociodemographic targeting.

CONCLUSION

This research study evaluated the knowledge, attitudes, and practices regarding exclusive breastfeeding among lactating mothers who visited both public and private health facilities in the Ibadan North Local Government Area of Oyo State, Nigeria, and examined the effects of sociodemographic factors on these results.

The findings showed that there were sociodemographic differences between mothers using public and private facilities, especially in age, education level, income level, and occupation, which were consistent with general healthcare utilization trends in Nigeria. The level of breastfeeding education was also high in the two settings, suggesting general awareness of exclusive breastfeeding guidelines; however, the presence of misconceptions also indicated that there are gaps in a holistic understanding of the subject, despite the high awareness.

Attitudinal analyses revealed a divergence in attitudes among mothers regarding exclusive breastfeeding, with a significant number expressing a negative attitude toward it, highlighting the intricate relationship between knowledge and attitude. Furthermore, strong knowledge of breastfeeding was not a reliable predictor of optimal exclusive breastfeeding, underscoring the effects of contextual, structural, and psychosocial barriers on maternal behaviour.

The bivariate and multivariate analyses showed that sociodemographic factors were not significant predictors of breastfeeding knowledge, attitudes, and practices. This observation implies that individual demographic characteristics did not have a substantial impact on breastfeeding outcomes in this study population, but that the outcome was more likely to be affected by common exposures within health systems and broader social contexts. Finally, the paper shows that the improvement of exclusive breastfeeding outcome will require interventions that will go beyond mere dissemination of knowledge and sociodemographic targeting; more focus should be made on the use of fortified facility-based counselling, elimination of long-standing misconceptions, and the establishment of conducive social and work environments that would enable the transfer of knowledge to practice.

Further research should be conducted to deepen the understanding of how mothers' EBF knowledge can be translated into practice. Health workers at different levels should consistently encourage and support lactating mothers to practice EBF.

STRENGTHS AND LIMITATIONS

A major strength of this study is its direct comparison of KAP outcomes between private and public facilities within the same LGA, providing insight into how different institutional contexts influence maternal behaviour. However, its cross-sectional design limits causal inference drawn from the study. The very high classification accuracy in predicting good knowledge may be inflated due to class imbalance. Additionally, the study did not explore the healthcare provider practices or workplace policies, which are key in shaping maternal and infant feeding choices.

AUTHOR CONTRIBUTIONS

Y.O.A., T.I.A., and B.O. contributed to the study design. Data collection tools were designed by Y.O.A., J.A.Q., and E.O. Data collection was coordinated and supervised by O.Y.A. and B.O. Initial analysis and data coding were conducted by T.I.A. and J.A.Q. T.I.A. and Y.O.A. drafted the first version of the manuscript, with critical scientific review and revisions provided by E.O. and B.O. All authors critically reviewed subsequent drafts, approved the final version of the manuscript for submission, and consented to its publication.

CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN SCIENTIFIC WRITING

Nothing to disclose.

ACKNOWLEDGEMENTS

None

FUNDING

None

Received: March 24, 2025; **Revised:** December 24, 2025; **Accepted:** December 25, 2025; **Published:** December 30, 2025

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