

Knowledge, Attitude, and Practice of Breastfeeding: A Comparative Study of Mothers in Urban and Rural Communities of Lagos, Southwest Nigeria

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Abstract

Background: Breastfeeding is a child survival intervention, which is effective in reducing child mortality. This study compared the knowledge, attitude, and practice of breastfeeding among mothers of under-five children in rural and urban communities of Lagos, Southwest Nigeria. **Methods:** This comparative cross-sectional study was conducted in Ikeja and Ikorodu, an urban and a rural local government area (LGA) of Lagos state, respectively. A total of 248 mothers of children under 5 years were selected from both areas using multistage sampling technique and subsequently interviewed. Data were analyzed using the Statistical Package for the Social Sciences version 20. Chi-squared test was used for urban and rural comparisons. **Results:** The respondents with good level of knowledge of breastfeeding in the urban and rural areas were 84.7% and 89.5%, respectively ($P = 0.256$). The overall positive attitude was 52.4% and 57.3% among the urban and rural respondents, respectively ($P = 0.444$). More than three-quarters (75.8%) of the respondents in the rural LGA and 43.5% of the urban respondents initiated breastfeeding immediately after birth ($P < 0.001$). Most of the rural respondents who had babies aged 0–24 months (46.8%) were currently breastfeeding their babies compared to 25.9% of their urban counterparts ($P = 0.001$). Furthermore, 79.8% of the rural respondents had practiced or were currently practicing exclusive breastfeeding (EBF) compared to 29.0% of the urban respondents ($P < 0.001$), with more urban women citing work resumption as reason for nonpractice of EBF ($P = 0.010$). The overall good practice was 16.1% and 69.4% among the urban and rural respondents, respectively ($P < 0.001$). **Conclusion:** Respondents' knowledge about breastfeeding was good, while their attitude was fair. The practice of breastfeeding among urban respondents was however low. Government and nongovernmental agencies should focus on programs that improve the attitude and breastfeeding practice of urban women.

Keywords: Breastfeeding, knowledge, Lagos, practice

INTRODUCTION

Breastfeeding is essential for the optimal growth and wellness of a child, and it should commence within the 1st h of birth. This should continue exclusively for 6 months and actively for at least 1 year.¹ Breastfeeding plays a particularly important role in child survival, especially in developing countries such as Nigeria.¹ Exclusive breastfeeding (EBF) is the practice of feeding the infant for the first 6 months of life on breast milk only without any other type of food, not even water. It is recommended as the best feeding alternative for infants up to 6 months and has a protective effect against mortality and morbidity.² Research has shown that nonbreastfed infants aged 0–5 months have a 5-fold increased risk of death from pneumonia and a 7-fold increased risk of death from diarrhea, compared with infants who are

exclusively breastfed.³ Thirteen percent of deaths in children under-five can be prevented when exclusively breastfed for 6 months and breastfeeding is continued until 11 months.⁴ This child survival intervention is the single most effective preventive intervention in reducing child mortality.⁴

Advocates of breastfeeding have noticed a global decline in EBF behavior among nursing mothers, more pronounced in developing countries where clean water and good sanitation

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are also major challenges.⁵ Some reasons for this trend include maternal employment, poor family support, and psychological unpreparedness for breastfeeding.⁶ According to a comparative Demographic Health Survey, there were inconsistencies in the practice of EBF in 19 Sub-Saharan African countries. For instance, water was offered to newborn infants, and porridge was given to infants as young as 2 months of age.⁷

In Nigeria, although the mean duration of breastfeeding is on the increase, the rate of EBF and initiation of breastfeeding is low according to a recent systematic review.⁸ Studies in urban and rural communities in the southeast revealed that only 35.9% and 10.0% of women practiced EBF, respectively.^{9,10} Another study in Ibadan, Southwest Nigeria, revealed that after 12 months of follow-up, none of the babies of urban elite women were being breastfed compared to 100% and 80.8% of babies in the rural poor and urban poor groups, respectively.¹¹ Some studies have reported ignorance, undesirable sociocultural beliefs and misconceptions prevailing in the community as a negative influence to breastfeeding behavior of mothers.^{12,13}

Previous studies to understand breastfeeding practices in Lagos state have demonstrated inadequate breastfeeding initiation and exclusivity practices, although most have been within urban communities without comparison across regions or groups.^{14,15} This study aimed to compare the knowledge, attitude, and practice of breastfeeding among mothers of under-five children in rural and urban communities of Lagos State which is cosmopolitan in nature and to determine factors associated with breastfeeding knowledge, attitude, and practice. It is important to understand child health knowledge and habits of mothers of under-fives who are usual targets of intervention for child survival. The result will be useful in designing programs to improve knowledge and practice of breastfeeding.

METHODS

This comparative cross-sectional study was conducted in two local government areas (LGAs), Ikeja and Ikorodu, an urban and a rural LGA, respectively. Each was selected by simple random sampling (by balloting) from the 16 urban and four rural LGAs in Lagos State. Ikeja and Ikorodu have six and seven political wards, respectively, with an estimated 2016 population of 437,400 and 727,000, respectively.¹⁶ The study population comprised mothers of children under-five and those that had resided in the LGAs for at least 6 months were included in the study, while temporary visitors were excluded. A sample size of 124 per LGA was calculated using the formula for comparison of proportion;¹⁷

$n = (Z\alpha + Z\beta)^2 (p_1q_1 + p_2q_2) / (p_1 - p_2)^2$, where $Z\alpha$ is the one-sided percentage point of the normal distribution corresponding to the power of the study at 80% = 0.84; $Z\beta$ is the percentage point of the normal distribution corresponding to the 5% significance level = 1.96, and p_1 and p_2 are prevalence estimates from urban (50.0%)¹⁸ and rural (68.0%)¹⁹ studies.

A multistage sampling technique was used to select study participants: three wards were each selected from Ikeja and

Ikorodu LGAs by simple random sampling (balloting) and two streets were selected by simple random sampling from each of the three wards, totaling 12 streets from both LGAs. Every consecutive house in each street that had an eligible respondent was selected until the sample size was reached. In each selected house, a list of all eligible women was obtained, and one respondent was randomly selected from this list by simple random sampling (where there was more than one eligible respondent).

Data were collected using pretested, structured, and interviewer-administered questionnaires by three trained interviewers. Ethical approval was obtained from the Health Research and Ethics Committee of the Lagos University Teaching Hospital (approval number: ADM/DCST/HREC/APP/1357). Furthermore, written informed consent was obtained from the women before the administration of a questionnaire and privacy ensured during the interview.

The data were analyzed using IBM Statistical Package for the Social Sciences (SPSS) Version 20.0 (IBM Corp, Armonk, NY). Comparison of proportions for urban versus rural was done using Chi-squared test and Fisher's exact test where applicable. Knowledge and attitude questions were scored and graded in percentage with 50% being cutoff for good versus poor knowledge and positive versus negative attitude, respectively. Correct knowledge responses were awarded 1 mark, while incorrect answers were scored 0 with a possible range of 0–18. Respondents with scores between 0 and 8 were classified as having poor knowledge, while those with scores between 9 and 18 were classified as having good knowledge. Attitude was scored using a 5-point Likert scale ranging from 5 marks for the most positive response to 1 mark for the least positive response with a possible range of 5–45. Respondents with scores between 5 and 22 were classified as having negative attitude, while those with scores between 23 and 45 were classified as having positive attitude. Four practice questions (initiation, current breastfeeding, EBF, and separation from baby) were scored; 1 score for a positive response and 0 for a negative response with a maximum score of 4. Respondents who scored 0–2 were classified as having poor practice, while those with scores between 3 and 4 were classified as having good practice.

Logistic regression was conducted to examine multivariate associations between respondents' characteristics and knowledge of breastfeeding among urban and rural respondents. Variables with statistical differences at $P < 0.05$ in bivariate analyses were considered for inclusion in logistic 95% regression analyses. Odds ratios (OR) and confidence intervals (CI) were computed for each predictor variable. Level of significance was set at 0.05.

RESULTS

The respondents ranged in age from 18 to 55 years with the mean age of 31 ± 0.6 years in Ikorodu (rural) and 31 ± 0.5 years in Ikeja (urban). Most of the respondents (53.2% and 46.8%) were of the Yoruba ethnic group in the rural and urban LGA,

respectively. Seventy-eight percent (urban) and 69.4% (rural) were Christians and most (82.3% in urban and 79.8% in rural) respondents were married. Eighty-five percent of the urban and 58.1% of the rural respondents had at least a secondary education, while 16.1% (urban) and 42.7% (rural) were skilled workers. There was a significantly higher proportion of Igbo respondents in the urban area and also higher proportions of respondents with tertiary education and professional occupations. All the respondents in the rural area had children aged 0–24 months compared to 87.1% in the urban area ($P < 0.001$) [Table 1].

Majority of the respondents in the urban area (84.7%) had correct knowledge of the usefulness of colostrum compared with 68.5% in the rural area, and this difference was statistically significant ($P = 0.003$). Among the urban respondents, 59.2% knew the right time to start complementary feeding, while less than a quarter (24.2%) had correct knowledge in the rural group

and this difference was statistically significant ($P < 0.001$). However, majority (85.5%) of the rural dwellers compared to 68.5% of the urban dwellers knew the adequate length of time for EBF ($P = 0.002$). The respondents with good knowledge of breastfeeding in the urban and rural areas were 84.7% and 89.5%, respectively. There was no statistically significant difference in the level of knowledge of urban and rural respondents [Table 2].

Most of the respondents in the urban area (66.9%) agreed that it was okay to stop breastfeeding if affected by work compared to 28.2% of the rural respondents, and this difference was statistically significant ($P < 0.001$). Most of the rural respondents (24.2%) strongly agreed that it was okay to breastfeed until the right time to wean than their urban counterparts (10.5%), and this was statistically significant ($P = 0.001$). About half (50.8%) in the urban and 55.6% in the rural group strongly disagreed that breastfeeding

Table 1: Demographic characteristics of respondents in urban and rural areas

Variables	Frequency (%)		χ^2	P
	Urban (n=124)	Rural (n=124)		
Mother's age group (years)				
16-25	18 (14.5)	23 (18.5)	1.44	0.488
26-35	81 (65.3)	72 (58.1)		
>35	25 (20.2)	29 (23.4)		
Marital status				
Single	13 (10.5)	9 (7.3)		0.548 ^f
Married	102 (82.3)	99 (79.8)		
Separated	4 (3.2)	8 (6.5)		
Divorced	2 (1.6)	2 (1.6)		
Widowed	3 (2.4)	6 (4.8)		
Religion				
Christianity	97 (78.2)	86 (69.4)		0.101 ^f
Islam	27 (21.8)	35 (28.2)		
Others	0 (0.0)	3 (2.4)		
Ethnicity				
Igbo	40 (32.3)	21 (16.9)	8.86	0.031*
Hausa	2 (1.6)	5 (4.0)		
Yoruba	58 (46.8)	66 (53.2)		
Others	24 (19.3)	32 (25.8)		
Education				
No formal education	13 (10.5)	34 (27.4)	36.96	<0.001*
Primary	7 (5.7)	18 (14.5)		
Secondary	36 (29.0)	48 (38.7)		
Tertiary	68 (54.8)	24 (19.4)		
Occupation				
Senior professional	42 (33.9)	15 (12.1)	39.26	<0.001*
Intermediate professional	28 (22.6)	12 (9.7)		
Junior professional	13 (10.5)	8 (6.5)		
Semi-skilled	20 (16.1)	53 (42.7)		
Unskilled	9 (7.3)	16 (12.9)		
Homemaker/student	12 (9.6)	20 (16.1)		
Age of last baby (months)				
0-24	108 (87.1)	124 (100)		<0.001* ^f
25-60	16 (12.9)	0 (0)		

*Statistically significant P value, ^fFisher's exact P value

was old-fashioned, embarrassing, and must not be done in public, but this finding was not statistically significant. The overall positive attitude was 57.3% among the rural respondents and 52.4% in the urban respondents, but this difference was not statistically significant [Table 3].

More than three-quarters (75.8%) of the respondents in the rural LGA and 43.5% of the urban respondents initiated breastfeeding immediately after birth, and this difference was statistically significant ($P < 0.001$). More of the rural respondents with babies aged 0–24 months (46.8%) were still breastfeeding their babies compared to their urban counterparts (25.9%) ($P = 0.001$). Furthermore, 79.8% of the rural respondents had practiced or were currently practicing EBF compared to 29.0% of the urban respondents ($P < 0.001$), and a higher proportion of urban respondents who did not practice EBF (44.3%) gave work resumption as a reason compared

to 16% in the rural area ($P = 0.010$). The rural respondents were in the habit of breastfeeding their babies ≥ 10 times in a day than their urban counterparts ($P = 0.003$). Most of the respondents in the rural area (69.4%) had a good overall practice of breastfeeding compared to 16.1% of the urban respondents ($P < 0.001$) [Table 4].

Table 5 shows that a higher level of maternal education, urban mother's occupation (junior to senior professional), household size (<10 members), and place of delivery (hospital) were significantly associated with increased knowledge of breastfeeding ($P < 0.05$). There were no significant associations between sociodemographic variables and respondents' overall attitude or practice of breastfeeding in this study.

In multivariate analyses, professional occupation was associated with good knowledge in the urban area (OR: 65.27,

Table 2: Respondent's knowledge of breastfeeding in urban and rural areas

Variables	Frequency (%)		χ^2	P
	Correct response Urban (n=124)	Correct response Rural (n=124)		
Right time to initiate breastfeeding	35 (28.2)	23 (18.5)	3.24	0.072
Usefulness of colostrum	105 (84.7)	85 (68.5)	9.00	0.003*
Heard of EBF	107 (86.3)	107 (86.3)	0.00	1.000
Length of time of EBF	85 (68.5)	106 (85.5)	10.05	0.002*
Right time to start complementary feeding	74 (59.7)	30 (24.2)	32.06	<0.001*
Level of knowledge				
Good	105 (84.7)	111 (89.5)	1.29	0.256
Poor	19 (15.3)	13 (10.5)		

*Statistically significant P value. EBF – Exclusive breastfeeding

Table 3: Respondent's attitude toward breastfeeding in urban and rural areas

Variables	SA (%)	A (%)	I (%)	D (%)	SD (%)	χ^2 P
Breast milk alone is sufficient for the first 6 months						
Urban (n=124)	19 (15.3)	81 (65.3)	4 (3.2)	18 (14.5)	2 (1.6)	0.121 ^f
Rural (n=124)	18 (14.5)	66 (53.2)	12 (9.7)	26 (21.0)	2 (1.6)	
It is okay to stop breastfeeding if my work takes me away from my baby most times						
Urban (n=124)	15 (12.1)	83 (66.9)	0 (0.0)	25 (20.2)	1 (0.8)	60.88
Rural (n=124)	4 (3.2)	35 (28.2)	2 (1.6)	65 (52.4)	18 (14.5)	<0.001*
It is okay to breastfeed till the right time to wean						
Urban (n=124)	13 (10.5)	106 (85.5)	4 (3.2)	0 (0.0)	1 (0.8)	0.001* ^f
Rural (n=124)	30 (24.2)	84 (67.7)	0 (0.0)	1 (0.8)	0 (0.0)	
In the absence of any disease, cesarean section should not hinder exclusive breastfeeding						
Urban (n=124)	20 (16.1)	94 (75.8)	2 (1.6)	4 (3.2)	4 (3.2)	0.108 ^f
Rural (n=124)	33 (26.6)	83 (66.9)	5 (4.0)	2 (1.6)	1 (0.8)	
Breastfeeding is old-fashioned, embarrassing and should not be done publicly						
Urban (n=124)	0 (0.0)	4 (3.2)	5 (4.0)	50 (40.3)	63 (50.8)	2.47
Rural (n=124)	0 (0.0)	8 (6.5)	3 (2.4)	44 (35.5)	69 (55.6)	0.480
Overall attitude	Urban (%)	Rural (%)				
Positive	65 (52.4)	71 (57.3)				0.59
Negative	59 (47.6)	53 (42.7)				0.444

*Statistically significant P value. ^fFisher's exact P value. SA – Strongly Agree; A – Agree; I – Indifferent; D – Disagree; SD – Strongly disagree

Table 4: Respondents' practice of breastfeeding in Urban and Rural setting

Variables	Frequency (%)		χ^2	P
	Urban (n=124)	Rural (n=124)		
Initiated breastfeeding immediately after birth				
Yes	54 (43.5)	94 (75.8)	26.28	<0.001*
No	70 (56.5)	30 (24.2)		
Currently breastfeeds baby 0–24 months	n=108	n=124		
Yes	28 (25.9)	58 (46.8)	10.76	0.001*
No	80 (74.1)	66 (53.2)		
Baby's age at weaning (months)	n=90	n=62		
1-6	38 (41.9)	24 (38.7)	2.54	0.280
7-12	46 (51.6)	29 (46.8)		
>12	6 (6.5)	9 (14.5)		
Practiced or currently practicing EBF				
Yes	36 (29.0)	99 (79.8)	64.52	<0.001*
No	88 (71.0)	25 (20.2)		
Reasons for nonpractice of EBF [#]	n=88	n=25		
Insufficient milk production	33 (37.5)	7 (28.0)	0.77	0.381
Not convenient	43 (48.9)	7 (28.0)	3.44	0.638
Work resumption	39 (44.3)	4 (16.0)	6.62	0.010*
Sickness	4 (4.5)	0 (0.0)		0.574 ^f
New pregnancy	4 (4.5)	3 (8.6)	1.86	0.172
Relatives' advice to stop	9 (10.2)	2 (8.0)	0.11	0.740
Felt baby needed water	43 (48.9)	16 (64.0)	1.79	0.181
Work separates from baby most times				
Yes	46 (37.1)	21 (16.9)	0.01	0.918
No	78 (62.9)	103 (83.1)		
Expressed breast milk for baby				
Yes	48 (38.7)	23 (18.5)	0.63	0.480
No	76 (61.3)	101 (81.5)		
Daily frequency of breastfeeding				
2-6 times	38 (30.7)	16 (12.8)	11.02	0.003*
7-10 times	80 (64.5)	53 (42.8)		
11-15 times	6 (4.8)	44 (35.5)		
Cannot count	0 (0.0)	11 (8.9)		
Overall practice				
Good	20 (16.1)	86 (69.4)	71.77	<0.001
Poor	104 (83.9)	38 (30.6)		

*Statistically significant P value, [#]Multiple responses allowed. ^fFisher's exact P value. EBF – Exclusive breastfeeding

95% CI: 4.47–952.44), and hospital delivery was associated with good knowledge in the rural area (OR: 10.40, 95% CI: 1.61–67.03) [Table 6].

DISCUSSION

This comparative study was carried out among mothers of under-fives in Ikeja and Ikorodu LGAs. The mean age was 31 years in both groups and about half of the respondents in each group were of Yoruba ethnicity; this is expected because the study was carried out in Lagos state, which is a Southwestern state predominantly inhabited by the Yorubas. Expectedly, the urban women were better educated than their rural counterparts, and this was also the finding from the Nigerian National Demographic and Health Survey of 2013.²⁰ However, the difference in education between both groups was not statistically significant. The results from this study

indicated that the women's awareness about EBF was good as 86.3% of the respondents in each of the groups had heard of the term EBF. This was similar to a study in Osun State, Nigeria, in which 88.0% had heard of EBF and also in Southwestern Ethiopia where 93.6% of mothers had heard of EBF.^{21,22} The proportions of urban and rural women with good knowledge in this study (84.7% vs. 89.5%) were higher than found in Sokoto, Northwest Nigeria (31%), and in another urban community in Lagos (39%).^{23,24} In urban-rural comparison, this study found no statistically significant difference in overall knowledge of EBF among mothers in the rural and urban groups, this was in contrast to study findings in Ajmer, India, where the urban mothers were more knowledgeable about breastfeeding than their rural counterparts (61.6% vs. 45.0%).²⁵ The finding in our study may be attributed to the cosmopolitan nature of Lagos State where rural areas are increasingly receiving health

Table 5: Association between sociodemographics and respondents knowledge of breastfeeding in urban and rural areas

Variables	Urban, frequency (%)			Rural, frequency (%)		
	Good knowledge	Poor knowledge	χ^2 P	Good knowledge	Poor knowledge	χ^2 P
Mother's age group (years)						
16-25	13 (72.2)	5 (27.8)	0.294 ^f	19 (82.6)	4 (17.4)	0.459 ^f
26-35	70 (86.4)	11 (13.6)		64 (88.9)	8 (11.1)	
>35	21 (84.0)	4 (16.0)		28 (96.4)	2 (3.6)	
Marital status						
Single	8 (61.5)	5 (38.5)	0.178 ^f	7 (77.8)	2 (22.2)	0.558 ^f
Married	88 (86.3)	14 (13.7)		89 (89.9)	10 (10.1)	
Separated	4 (100.0)	0 (0.0)		7 (87.5)	1 (12.5)	
Divorced	2 (100.0)	0 (0.0)		2 (100.0)	0 (0.0)	
Widowed	3 (100.0)	0 (0.0)		6 (100.0)	0 (0.0)	
Education						
No formal	7 (53.8)	6 (46.2)	33.86 <0.001*	27 (79.4)	7 (20.6)	8.16 0.043*
Primary	3 (42.9)	4 (57.1)		15 (83.3)	3 (16.7)	
Secondary	27 (75.0)	9 (25.0)		45 (93.8)	3 (6.3)	
Tertiary	68 (100.0)	0 (0.0)		24 (100.0)	0 (0.0)	
Occupation						
Senior professional	42 (100.0)	0 (0.0)	<0.001* ^f	15 (100.0)	0 (0.0)	0.418
Intermediate professional	28 (100.0)	0 (0.0)		12 (100.0)	0 (0.0)	
Junior professional	11 (84.6)	2 (15.4)		7 (87.5)	1 (12.5)	
Semi-skilled	11 (55.0)	9 (45.0)		47 (88.7)	6 (11.3)	
Unskilled	4 (44.4)	5 (55.6)		13 (81.3)	3 (18.8)	
Homemaker/student	9 (75.0)	3 (25.0)		17 (85.0)	3 (15.0)	
Household size						
1-5	63 (90.0)	7 (10.0)	0.023* ^f	60 (93.8)	4 (6.3)	16.00 0.001*
6-10	41 (80.4)	10 (19.6)		47 (90.4)	5 (9.6)	
11-15	1 (33.3)	2 (66.7)		3 (60.0)	2 (40.0)	
16-20	0 (0.0)	0 (0.0)		1 (33.3)	2 (66.7)	
Place of delivery			0.005* ^f			<0.001* ^f
Hospital	103 (87.3)	15 (12.7)		104 (94.5)	6 (5.5)	
Home/healing center/TBA	2 (33.3)	4 (66.7)		7 (50.0)	7 (50.0)	
Delivery method			2.55			0.215 ^f
Vaginal	69 (81.2)	16 (18.8)	0.110	95 (88.0)	13 (12.0)	
Cesarean section	36 (92.3)	3 (7.7)		16 (100.0)	0 (0.0)	

*Statistically significant *P* value, ^fFisher's exact *P* value. TBA – Traditional birth attendant

awareness campaigns and targeted health education from local government authorities and health workers.

In specific areas of knowledge, 84.7% of the urban respondents knew the usefulness of colostrum to the newborn which was higher compared to 68.5% of their rural counterparts who had correct knowledge. This was lower than the 89.3% found in a study among female teachers in Southwestern, Saudi Arabia, but higher than 77% found in a study among women in Dhaka city, Bangladesh.^{26,27} This disparity in knowledge when compared with the Saudi Arabian study may be because the latter was among teachers who are often used as health promoters in schools.²⁸ More mothers in the urban area knew of the right time to start complementary feeding compared to the rural women. This is an important consideration in future nutrition education interventions, especially as a significantly higher proportion of the rural women (14.5%) started to wean their babies over 12 months of age at a time when breastfeeding

alone is insufficient to meet the baby's nutritional needs. Higher proportions of mothers with at least secondary education had better knowledge of breastfeeding in both areas as documented in some other studies.^{29,30} This underscores the importance of female education, which is a clearly identified strategy for children's survival and health.³⁰ However, the predictors of good knowledge in this study were professional occupation and hospital delivery. Hospital delivery most likely exposed women to breastfeeding counseling, which was found to be associated with good breastfeeding knowledge in rural India.³¹ Regarding occupation, it has been previously reported that although Nigerian women in formal employment may have satisfactory knowledge, their engagement in economic activities impedes their breastfeeding practices.³²

There was no statistically significant difference in the overall attitude toward EBF in this study similar to study findings in India among urban and rural respondents with attitude

Table 6: Multivariate analysis of characteristics associated with good knowledge in urban and rural areas

Characteristic	Urban			Rural		
	OR	95% CI	P	OR	95% CI	P
Good knowledge ^a						
Education						
None	Reference			Reference		
Primary	0.48	0.02-14.86	0.675	1.72	0.22-13.16	0.602
Secondary-tertiary	2.52	0.37-17.17	0.347	2.34	0.37-14.63	0.363
Occupation						
Unskilled	Reference					
Junior-senior professional	65.27	4.47-952.44	0.002*			
Semi-skilled	3.68	0.34-40.12	0.284			
Homemaker/student	6.68	0.90-49.40	0.063			
Household size						
Over 10	Reference			Reference		
1-5	3.67	0.12-113.09	0.457	6.46	0.80-52.27	0.080
6-10	0.62	0.02-17.22	0.775	3.09	0.40-24.01	0.280
Place of delivery						
Home/TBA	Reference			Reference		
Hospital	3.43	0.57-20.60	0.177	10.40	1.61-67.03	0.014*

Reference category: ^aPoor knowledge, *Statistically significant P value. CI – Confidence interval; OR – Odds ratio; TBA – Traditional birth attendant

scores of 81.5% and 82.2%, respectively.²⁴ Most of the urban and rural respondents agreed that breast milk alone was sufficient for the baby for the first 6 months, which was similar to the finding in a study carried out in Iraq, in which 61.2% of mothers agreed that breast milk is insufficient for babies <6 months.³³ About half (55.6% and 50.8%) of the rural and urban respondents, respectively, strongly disagreed that breastfeeding was old-fashioned, embarrassing and should not be done publicly. This finding was lower than in a study in Delhi where majority (78.2%) of the respondents agreed that breastfeeding is not embarrassing and 82.0% stated that it is not old-fashioned.³⁴ The difference could possibly be as a result to the time interval between the studies and the declining popularity of EBF among Nigerian mothers.⁸

As much as three-quarters of the rural respondents compared to less than half of the urban respondents in this study initiated breastfeeding immediately after birth and the difference was statistically significant. Although the proportions are higher in this study and this may be the effect of the adoption of Baby-Friendly Health Initiative (BFHI) in many primary health-care centers and hospitals, a similar trend with a narrower but also statistically significant rural/urban disparity was seen in a study in India which reported 33.6% among the rural respondents and 25.3% in the urban counterparts.³⁵ However, it was the contrary in Vietnam and China (37.5% vs. 44.5%) and (5.2% vs. 8.1%) among respondents in rural and urban areas.^{36,37}

In the rural setting of this study, more women were still breastfeeding their babies of breastfeeding age compared to women in the urban setting, and this may not be surprising considering the professional nature of most urban women's jobs and the cosmopolitan and busy nature of urban areas, which tend to separate mother and baby. There was a similar

finding in a study in Edo State, Nigeria, where more than half (51.8%) of rural respondents were still breastfeeding as compared to 42.5% of urban respondents.³⁸ Regarding the practice of EBF in this study, most women did practice EBF in the rural areas (79.8%) compared to the urban area (29%). Other studies that had similar findings of better EBF practices in the rural area include in Pradesh, India (60.6% vs. 47.6%),³⁹ and Kakinada, India (64.5% vs. 35.4%).⁴⁰ Contrarily, findings in Imo State, Nigeria, had better EBF practices in the urban (66.4%) than the rural areas (57.8%) possibly because of the negative beliefs held, especially by rural women.⁴¹ A reason for the poor EBF practice seen among urban respondents in our study includes the fact that majority in this group were senior professionals who probably had a busy work schedule compared to those of rural respondents, most of whom were semi-skilled. The demands of work are one of the most common reasons for discontinuation of breastfeeding among Nigerian women;⁸ it was also one of the top-cited reasons among urban women in our study. It is therefore important to emphasize breastfeeding support for urban women; in doing so, it would be helpful to reevaluate the ongoing BFHI program and community-based efforts to protect, promote, and support breastfeeding.

A limitation of this study is that we assessed mainly maternal characteristics as factors associated with breastfeeding knowledge, attitude, and practices. Future comparative studies should also explore the influence of fathers and other relatives on breastfeeding.

CONCLUSION

These findings suggest that the knowledge about breastfeeding was good, while attitude was fair among the respondents; the practice of breastfeeding among urban respondents was however low. Benefits

of good practice should, therefore, serve as potential themes for educational campaigns. Government and nongovernmental agencies should focus on programs that improve attitude and breastfeeding practices, especially among urban women.

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Conflicts of interest

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