

DETERMINANTS OF EXCLUSIVE BREASTFEEDING PRACTICES AMONG NURSING MOTHERS ATTENDING ADEOYO MATERNITY TEACHING HOSPITAL, IBADAN, OYO STATE

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ABSTRACT

Exclusive breastfeeding serves as the fundamental approach to appropriate infant nutrition. However, variations in knowledge, attitudes, and practices related to infant feeding exist across different social groups, age brackets, genders, educational levels, and economic conditions within families and communities. This study aimed to identify the determining factors influencing exclusive breastfeeding practices among mothers of infants at Adeoyo Maternity Hospital in Oyo State.

A descriptive study design was employed to assess infant feeding practices and the determinants of exclusive breastfeeding among mothers in the hospital. Subjects were recruited using a simple random sampling technique, and data was collected through semi-structured questionnaires. The reliability of the questionnaire was established with a Cronbach Alpha coefficient of 0.76.

The findings revealed that 95.3% of breastfeeding mothers had heard of exclusive breastfeeding, with 96.2% correctly understanding the recommended definition of exclusive breastfeeding by the World Health Organization (WHO). However, only 99.0% of mothers actually practiced exclusive breastfeeding as recommended. Knowledge about exclusive breastfeeding was considered good among 95.0% of the mothers, while 98.6% initiated breastfeeding within the first hour after birth. Furthermore, 98.3% of mothers immediately initiated breastfeeding after delivery. Over half (99.0%) of the mothers understood the importance of providing only breast milk to infants under 6 months of age. Among the mothers, 57.3% reported having practiced exclusive breastfeeding, while reasons for not practicing it included lack of time (14.3%), job restrictions (8.3%), and health-related issues (16.0%).

Several factors were found to be associated with mothers' knowledge about exclusive breastfeeding, including maternal level of education, maternal occupation, father's

occupation, type of marriage, father's level of education, ethnicity, and mothers' average monthly income. Additionally, maternal age, marital status, maternal level of education and occupation, father's level of education, and fathers' average income were associated with mothers' knowledge about exclusive breastfeeding. It is recommended that public health education efforts should focus on increasing awareness among family members regarding exclusive breastfeeding recommendations. Collaborating with traditional and religious leaders could also help discourage or modify practices involving the use of herbal teas and ritual concoctions for newborns.

Keywords: Exclusive breastfeeding, Practices, Nursing mothers.

Word Count: 339

BACKGROUND

Feeding infants only breast milk for the first six months of life, has been shown to be a major strategy in improving nutritional status and infants' survival globally. Optimal breastfeeding practices have a profound impact on reducing child mortality and significantly contribute to the long-term health of children (WHO, 2016). A Lancet series report in 2016 estimated that implementing optimal breastfeeding practices could prevent approximately 823,000 deaths among children under the age of five annually (Victoria et al 2016). These practices play a crucial role in reducing hospitalizations related to illnesses such as diarrhea, respiratory infections, and otitis media in children. (Victoria et al 2016). Infants should be exclusively breastfed for the first six months of life, continue to be nursed with the right complementary foods for up to two years, and do so continuously for optimal growth, development, and health. Extended breastfeeding for up to 2 years' aids in the contraction of the mother's uterus, fosters a strong bond between mother and baby, reduces the risk of ovarian and breast cancer, and promotes optimal spacing between pregnancies (Mebratu et al., 2020).

Insufficient breastfeeding by mothers of newborns leads to child malnutrition, responsible for 60% of global under-five deaths (CDC, 2020). Inadequate feeding practices contribute to over 40% of infant mortality in Nigeria (WHO, 2020). Formula feeding is widely practiced in Africa and other regions (Berkerman J. et al., 2020). Non-exclusive breastfeeding is linked to 45% of neonatal deaths, 18% of acute respiratory deaths, and 30% of diarrheal deaths in children under five (UNICEF, 2013). Suboptimal breastfeeding raises infant mortality by 14.4 times compared to exclusive breastfeeding.

Exclusive breastfeeding provides essential nutrients for optimal growth and development in infants up to six months. Furthermore, it benefits mothers by reducing the risk of postpartum hemorrhage, postnatal complications, anemia, and breast and ovarian cancer (Okoroiwu et al., 2021). Early initiation and consistent exclusive breastfeeding have been associated with a 22% reduction in neonatal mortality and a 13% decrease in infant mortality (Chineke H. et al., 2017).

Sociodemographic factors were found among the factors influencing breastfeeding practices in both developing and developed countries (Kimani et al 2011, Senarath et al 2007). Maternal education plays a significant role (Ogbo and Agho 2008, Vieira et al 2014,), as mothers with 8 years or less of education had a 34% higher risk of discontinuing exclusive breastfeeding (Vieira et al 2014). In Nigeria, visiting antenatal clinics positively impacted exclusive breastfeeding, while residing in rural areas decreased its likelihood (Agho et al 2011). Seid et

al. found in Ethiopia that factors associated with exclusive breastfeeding included being a housewife, having a prenatal exclusive breastfeeding plan, giving birth vaginally, and receiving infant feeding counseling (Seid et al 2013).

Health education, as highlighted by Akinyinka M. et al. (2016), plays a vital role in improving mothers' knowledge, attitudes, and practices regarding exclusive breastfeeding. To enhance breastfeeding practices and address competing feeding attitudes, comprehensive social and behavioral changes across different levels of care are necessary. Understanding the factors contributing to these attitudes is crucial due to the multifaceted nature of nutrition behaviors. Addressing this issue is essential for promoting exclusive breastfeeding, preventing child stunting and malnutrition, and ensuring the survival and development of infants and young children in Nigeria

It is widely recommended that women exclusively breastfeed their infants for the first six months, followed by continued breastfeeding alongside complementary nutrition. In Southwest Nigeria, there is a lack of up-to-date statistics on exclusive breastfeeding rates and the factors influencing it. Conducting research on breastfeeding determinants is crucial to achieve Sustainable Development Goals related to hunger, nutrition, infant mortality, non-communicable diseases, cognitive development, and education. Exclusive breastfeeding contributes to poverty reduction and economic growth by fostering cognitive development in children. Promoting exclusive breastfeeding and understanding its determinants is particularly important in low-resource settings and developing nations with high rates of maternal, neonatal, and infant mortality and morbidity (Sisay and Belete, 2021). While some studies have explored awareness and knowledge of exclusive breastfeeding among mothers, more research is needed to examine its practice and understand local-level determinants in Nigeria. Therefore, this study aims to investigate the determinants of exclusive breastfeeding practices among nursing mothers attending Adeoyo maternity teaching hospital, Ibadan Oyo State

Broad Objective

The broad objective of this study is to investigate the determinants influencing exclusive breastfeeding practices among nursing mothers attending Adeoyo Maternity Hospital Oyo state

1. To assess the knowledge level of nursing mothers about the benefits and importance of exclusive breastfeeding in Adeoyo Maternity Hospital. Oyo state
2. To identify the socio-economic factors that influences exclusive breastfeeding practices in the study area.
3. To investigate the prevalence of exclusive breastfeeding practices among nursing mothers in Adeoyo Maternity Hospital, Oyo state.

Research Hypothesis

The following hypotheses will be tested in the study:

H0₁: There is no significant relationship between socio-demographic characteristics and the practice of exclusive breastfeeding among the respondents.

H0₂: There is no statistically significant relationship between the knowledge of the respondents and their practice of exclusive breastfeeding.

MATERIALS AND METHODS

A descriptive cross-sectional study design was adopted to investigate the determinants or factors influencing exclusive breastfeeding practices among nursing mothers attending Adeoyo Maternity Hospital Oyo state. This study was carried out in Adeoyo Maternity Hospital Oyo state. The hospital was established in 1928. It was formerly used as a college hospital by the University of Ibadan between 1948 and 1954 after being upgraded with an additional fifty beds, laboratory, X-ray annex, medical lecture rooms, and mortuary. The hospital provides maternal and child healthcare services to people in Ibadan and the surrounding area. It is made up of an antenatal clinic, labor ward, antenatal ward, gynecological ward, lying in ward, children's ward, immunization clinic, post-caesarian section ward, gynecological clinic and family planning clinic. The study population shall consist of mothers aged 15 to 49 years who currently breastfeeding children in Adeoyo Maternity Hospital Oyo state.

For this study, a simple random sampling technique was employed to recruit participants. This method ensures that each potential subject has an equal chance of being selected. The sample size of 400 participants is predetermined, and each individual will be assigned a unique number. Using a table of random numbers, a random sample will be selected by following this process until the desired sample size is achieved.

Data was collected and entered into SPSS software for analysis. Descriptive statistics, such as frequency tables, percentages, and graphs, were utilized to present the findings. The reliability of the instrument was assessed using Cronbach's Alpha, yielding a value of 0.76. Additionally, inferential statistics, including the chi-square test, were performed to assess the association between selected independent and dependent variables, considering a significance level of p-value less than 0.05.

Ethical clearance.

The study obtained ethical clearance from the Research and Ethical Review Committee of Adeoyo Maternity Hospital, Oyo State. All expenses related to the research were covered by the researcher, and participants did not incur any costs for their involvement.

Confidentiality of data

Mothers were provided with informed written consent before participating, and permission was obtained from the hospital as well. The collected data was solely used for research purposes. Each questionnaire was assigned a unique number to maintain anonymity, and all participant data was securely protected from any third-party access.

RESULTS

Table 1a: Socio-demographic Characteristics of the Respondents.

Age as at last birthday (in years)

20 – 29

30 – 39

40 – 49

Table 2: Pregnancy and delivery history of the respondents.

≥ 3

Birth interval between considered infant and the child before (in months)

1 – 12

13 – 24

Ever attended ante-natal clinic during the pregnancy of the considered

Place of ante-natal clinic

Reason(s) for not attending ante-natal clinic during the pregnancy of the

Were health talk given on exclusive breastfeeding during ante-natal clinic

Place of delivery of the considered child

Method of delivery of the considered child

Starting time of breastfeeding the considered child after birth

Within the first 1 hour of birth

Table 2 above presents the pregnancy and delivery history of the respondents. Among the participants, 119 had three or more living children, accounting for 40% of the respondents. The birth interval between the considered infant and the child before was 13 to 24 months for 280 participants (93.3%). During the pregnancy of the considered child, 93.3% of the respondents attended the ante-natal clinic.

Out of the 280 respondents who attended ante-natal clinic, 81.8% used the primary health center for their visits, and 94.6% received health talk on exclusive breastfeeding. Among the 20 respondents who did not attend ante-natal clinic during pregnancy, 45.0% had no genuine reason for not attending.

Regarding the place of delivery for the considered child, 185 respondents (61.7%) utilized the Primary Health Centre. The majority of the respondents, 88.0%, had a spontaneous vaginal delivery, and 70.3% initiated breastfeeding within the first hour after giving birth.

Mother's Knowledge about Exclusive Breast Feeding

Table 3: Respondents' Knowledge about Exclusive Breast Feeding

Ever heard of exclusive breast feeding

Exclusive breast feeding is defined as:

Infant receives only breast milk from his/her mother for the first 6

months and no other solids or liquids.

Infant receives only breast milk from his/her mother for the first 4

months and no other solids or liquids.

Infant receives only breast milk from his/her mother for the first 6

months and with other solids or liquids when required.

Don't know

Duration of Exclusive Breast Feeding

2 – 4 months

0 – 6 months

I don't know

Time to initiate Breast Feeding

Anytime the mother is ready

I don't know

In Exclusive Breast Feeding, infants should be breastfed on demand

In Exclusive Breast Feeding, infants should be breastfed only

I don't know

Foods or fluids to be given to a child less than 6 months old

Breast milk and Infant formula

Exclusive Breast Feeding improve a child's immunity

Exclusive Breast Feeding allows child spacing

I don't know

Exclusive Breast Feeding bonds mother and child together

I don't know

Exclusive Breast Feeding protects against childhood diseases

Breast milk only can sustain the baby for the first six (6) months of life

Table 3 above shows that the majority of respondents demonstrated good knowledge about exclusive breastfeeding, with the highest percentage of 95.3% being aware of it. Similarly, 91.7% correctly defined exclusive breastfeeding as the infant receiving only breast milk from the mother for the first 6 months without any other solids or liquids. Furthermore, 94.3% recognized that exclusive breastfeeding should be practiced for 0 to 6 months. Additionally, a high percentage of respondents, ranging from 88.0% to 95.0%, acknowledged the positive aspects of exclusive breastfeeding, including its ability to improve a child's immunity, allow child spacing, foster the mother-child bond, and protect against childhood diseases.

Practice of Exclusive Breast Feeding

Table 4: Practice of Exclusive Breast Feeding among Respondents.

Variable	Frequency (n=300)	Percentage (%)
Ever breastfed the considered child immediately after birth		
Yes	216	72
No	84	28
Food given to the considered child immediately after birth	(n = 86)	
Water only	7	8.1
Water with Glucose	39	43.0
Baby Formula	2	4.7
Others ⁺	38	44.2
Time when Breast Feeding was initiated after birth	(n = 214)	
Within one hour	211	98.6
After one hour	2	0.9
Not sure	1	0.5
First milk or colostrum:		
Discarded	86	28.7
Fed baby with it immediately after birth	212	70.7
Others ⁺⁺	2	0.7
Food given to the considered child at age 0 – 6 month		
Only breast milk	178	59.3
Breast milk and water	7	2.3
Breast milk and Infant formula	16	5.3
Breast milk, Water and Infant formula	99	33.0
Often did you feed your child with breast milk when he/she was 0 – 6 months		
On demand	207	69.0

When I am free/ when I have the time	93	31.0
Age at which other food, apart from breast milk was given to the considered child (in months)		
< 6	134	44.7
6	154	51.3
> 6	12	4.0
<i>Mean ± SD</i>	<i>3.9 ± 2.7</i>	
Ever practice Exclusive Breast Feeding		
Yes	172	57.3
No	128	42.7
Reason for not practicing Exclusive Breast Feeding **	(n = 128)	
I don't have the time	43	14.3
Job will not allow	25	8.3
Health related issues	48	16.0
Others+++	12	4.0
Categorised Practice Score		
Good	186	62.0
Poor	114	38.0

Table 4 presents the respondents' practice of exclusive breastfeeding. Among the participants, 72% breastfed their considered child immediately after birth. Out of the 214 respondents, an impressive 98.6% initiated breastfeeding within one hour after birth. Among the 86 respondents who did not breastfeed immediately after birth, 44.2% fed their children with Concoction, Honey & Concoction, Honey, and Spiritual oil.

Of the total 300 respondents, 70.7% fed their baby with colostrum immediately after birth, while 59.3% exclusively provided breast milk to the considered child from birth to 6 months. Additionally, 69.0% of the respondents fed their infants with breast milk only on demand. On average, other foods apart from breast milk were introduced to the considered child at around 3.9 ± 2.7 months of age. The majority of respondents (51.3%) introduced other foods at 6 months of age.

Overall, 172 respondents stated that they practiced exclusive breastfeeding. Among the 128 respondents who did not practice exclusive breastfeeding, 16.0% cited health-related issues as the reason for not doing so.

5a: Socio-demographic Factors Associated with the Mother's Knowledge about Exclusive Breast Feeding (EBF).

Categorised Knowledge Score				
Socio-Demographic Variable	Good n= 285 (%)	Poor n= 15 (%)	Total n=300 (%)	Statistics
Age as at last birthday (in years)				
≤ 19	8 (2.8)	1 (6.7)	9 (3.0)	+ χ^2 =

				6.976
20 – 29	147 (51.6)	7 (46.7)	154 (51.3)	df = 3
30 – 39	121 (42.5)	4 (26.7)	125 (41.7)	p = 0.073
40 – 49	9 (3.2)	3 (20.0)	12 (4.0)	
Marital status				
Single	8 (2.8)	2 (13.3)	10 (3.3)	$+ \chi^2 = 5.669$
Married	249 (87.4)	13 (86.7)	262 (87.3)	df = 3
Divorced	21 (7.4)	0 (0.0)	21 (7.0)	p = 0.129
Widowed	7 (2.5)	0 (0.0)	7 (2.3)	
Type of marriage				
Polygamous	55 (19.9)	8 (61.5)	63 (21.7)	$+ \chi^2 = 10.135$
Monogamous	222 (80.1)	5 (38.5)	227 (78.3)	p = 0.001*
Mothers level of education				
None	6 (2.1)	5 (33.3)	11 (3.7)	$+ \chi^2 = 32.799$
Primary	21 (7.4)	5 (33.3)	26 (8.7)	df = 4
Secondary	175 (61.4)	5 (33.3)	180 (60.0)	p < 0.001*
Tertiary	80 (28.1)	0 (0.0)	80 (26.7)	
Post Tertiary	3 (1.1)	0 (0.0)	3 (1.0)	
Mothers Occupation				
Full time house wife	13 (4.6)	0 (0.0)	13 (4.3)	$+ \chi^2 = 18.816$
Trader	104 (36.5)	11 (73.3)	115 (38.30)	df = 5
Artisan	111 (38.9)	3 (20.0)	114 (38.0)	p = 0.002*
Civil servant	46 (16.1)	0 (0.0)	46 (15.3)	
Farmer	0 (0.0)	1 (6.7)	1 (0.3)	
Others*	11 (3.9)	0 (0.0)	11 (3.7)	
Fathers level of education				
None	4 (1.4)	5 (33.3)	9 (3.0)	$+ \chi^2 = 35.320$
Primary	8 (2.8)	3 (20.0)	11 (3.7)	df = 4
Secondary	165 (57.9)	7 (46.7)	172 (57.3)	p < 0.001*
Tertiary	102 (35.8)	0 (0.0)	102 (34.0)	

Post Tertiary	6 (2.1)	0 (0.0)	6 (2.0)	
Fathers Occupation				
Trader	19 (6.7)	4 (26.7)	23 (7.7)	$\chi^2 = 24.219$
Artisan	154 (54.0)	7 (46.7)	161 (53.7)	df = 4
Civil servant	95 (33.3)	0 (0.0)	95 (31.7)	p < 0.001*
Farmer	9 (3.2)	4 (26.7)	13 (4.3)	
Others**	8 (2.8)	0 (0.0)	8 (2.7)	

Table 5a presents the socio-demographic factors that are linked to the respondents' knowledge about exclusive breastfeeding. The factors found to be associated with the knowledge of exclusive breastfeeding include the type of marriage ($p = 0.001$), mother's level of education ($p < 0.001$), mother's occupation ($p = 0.002$), father's level of education ($p < 0.001$), and father's occupation ($p < 0.001$).

Table 5b: Socio-demographic and Other Factors Associated with the Mother's Knowledge about Exclusive Breast Feeding (EBF).

Socio-Demographic and Other Variable	Categorised Knowledge Score			Statistics
	Good n= 285 (%)	Poor n= 15 (%)	Total n=286 (%)	
Ethnicity				
Yoruba	258 (90.5)	10 (66.7)	268 (89.3)	$\chi^2 = 12.449$
Igbo	12 (4.20)	0 (0.0)	12 (4.0)	df = 3
Hausa / Fulani	13 (4.6)	5 (33.3)	18 (6.0)	p = 0.006*
Others***	2 (0.70)	0 (0.0)	2 (0.7)	
Religion				
Christianity	154 (54.0)	5 (33.3)	159 (53.0)	$\chi^2 = 2.452$
Islam	131 (46.0)	10 (66.70)	141 (47.0)	p = 0.117
Age of considered infant (in month)				
1 – 6	30 (10.5)	0 (0.0)	30 (10.0)	$\chi^2 = 3.477$
7 – 12	253 (88.8)	15 (100.00)	268 (89.3)	df = 2
> 12	2 (0.7)	0 (0.0)	2 (0.7)	p = 0.176
Sex of considered infant				
Male	134 (47.0)	5 (33.30)	139 (46.3)	$\chi^2 = 1.099$
Female	151 (53.0)	10 (66.7)	161 (53.7)	p = 0.295
Mothers average monthly				

Income				
≤ 30,000	207 (72.6)	15 (100.0)	222 (74.0)	+ χ^2 = 9.307
> 30,000	78 (27.4)	0 (0.0)	78 (26.0)	p = 0.002*
Fathers average monthly Income				
≤ 30,000	109 (38.2)	10 (66.70)	119 (39.7)	χ^2 = 4.949
> 30,000	154 (54.0)	4 (26.7)	158 (52.7)	df = 2
I don't know	22 (7.7)	1 (6.7)	23 (7.7)	p = 0.084

Table 5b above shows that the factors associated with the knowledge of exclusive breastfeeding are the respondents' ethnicity ($p = 0.006$) and their average monthly income ($p = 0.002$).

Table 6: Pregnancy and Delivery History Associated with the Mothers Knowledge about Exclusive Breast Feeding (EBF).

Categorised Knowledge Score				
Variable	Good n= 285 (%)	Poor n= 15 (%)	Total n=300 (%)	Statistics
Number of living children				
1	67 (23.5)	2 (13.3)	69 (23.0)	χ^2 = 4.949
2	110 (38.6)	3 (20.0)	113 (37.7)	df = 2
≥ 3	108 (37.9)	10 (66.7)	118 (39.3)	p = 0.084
Birth interval between considered infant and the child before (in months)				
None	67 (23.5)	2 (13.30)	69 (23.0)	+ χ^2 = 17.319
1 – 12	3 (1.1)	3 (20.0)	6 (2.0)	df = 3
13 – 24	112 (39.3)	9 (60.0)	121 (40.3)	p = 0.001*
> 24	103 (36.10)	1 (6.7)	104 (34.7)	
Ever attended ante-natal clinic during the pregnancy of the considered child				
Yes	279 (97.9)	1 (6.7)	280 (93.3)	+ χ^2 = 81.409
No	6 (2.1)	14 (93.3)	20 (6.7)	p < 0.001*
Place of ante-natal clinic				
Primary Health center	228 (81.7)	1 (100.0)	229 (81.8)	+ χ^2 =

				0.403
General hospital	18 (6.5)	0 (0.0)	18 (6.4)	df = 4
Teaching Hospital	11 (3.9)	0 (0.0)	11 (3.9)	p = 0.982
Private hospital	21 (7.5)	0 (0.0)	21 (7.5)	
Mission house	1 (0.4)	0 (0.0)	1 (0.4)	
Were health talk given on exclusive breastfeeding during ante-natal clinic				
Yes	264 (94.6)	1 (100.0)	265 (94.6)	+ χ^2 = 0.110
No	15 (5.4)	0 (0.0)	15 (5.4)	p = 0.740
Place of delivery of the considered child				
Primary Health center	183 (64.2)	2 (13.3)	185 (61.7)	+ χ^2 = 62.632
General Hospital	25 (8.8)	0 (0.0)	25 (8.3)	df = 6
Teaching Hospital	14 (4.9)	0 (0.0)	14 (4.7)	p < 0.001*
Private Hospital	39 (13.7)	0 (0.0)	39 (13.0)	
Mission House	15 (5.3)	2 (13.2)	17 (5.7)	
Traditional Birth attendants	6 (2.1)	11 (73.3)	17 (5.7)	
Others	3 (1.1)	0 (0.0)	3 (1.0)	
Method of delivery of the considered child				
Spontaneous vaginal delivery	249 (87.4)	15 (100.0)	264 (88.0)	+ χ^2 = 3.941
Caesarian section	36 (12.6)	0 (0.0)	36 (12.0)	p = 0.047*
Starting time of breastfeeding the considered child after birth				
Within the first 1 hour of birth	209 (73.3)	2 (13.3)	211 (70.3)	+ χ^2 = 22.794
After 1 hour of birth	75 (26.3)	13 (86.7)	88 (29.3)	df = 2
Not sure	1 (0.4)	0 (0.0)	1 (0.3)	p < 0.001*

Table 6 presents the relationship between pregnancy and delivery history and mothers' knowledge about exclusive breastfeeding. The factors associated with the knowledge of exclusive breastfeeding include the birth interval between the considered infant and the child before in months ($p = 0.001$), attendance of ante-natal clinic during the pregnancy of the considered child ($p < 0.001$), place of delivery of the considered child ($p < 0.001$), method of

delivery of the considered child ($p = 0.047$), and the time of initiating breastfeeding for the considered child after birth ($p < 0.001$).

Table 7a: Factors Associated with the Respondents' Practice of Exclusive Breast Feeding (EBF).

Categorised Practice Score				
Socio-Demographic Variable	Good n= 186 (%)	Poor n= 114 (%)	Total n=300 (%)	Statistics
Age as at last birthday (in years)				
≤ 19	2 (1.1)	7 (6.1)	9 (3.0)	$+χ^2 = 9.875$
20 – 29	105 (56.5)	49 (43.0)	154 (51.3)	df = 3
30 – 39	73 (39.2)	52 (45.6)	125 (41.7)	p = 0.020*
40 – 49	6 (3.2)	6 (5.3)	12 (4.0)	
Marital status				
Single	1 (0.5)	9 (7.9)	10 (3.3)	$+χ^2 = 14.924$
Married	171 (91.9)	91 (79.8)	262 (87.3)	df = 3
Divorced	10 (5.4)	11 (9.6)	21 (7.0)	p = 0.002*
Widowed	4 (2.2)	3 (2.6)	7 (2.3)	
Type of marriage				
Polygamous	36 (19.5)	27 (25.7)	63 (21.7)	$χ^2 = 1.541$
Monogamous	149 (80.5)	78 (74.3)	227 (78.3)	p = 0.214
Mothers level of education				
None	4 (2.2)	7 (6.1)	11 (3.7)	$+χ^2 = 9.939$
Primary	11 (5.9)	15 (13.2)	26 (8.7)	df = 4
Secondary	115 (61.8)	65 (57.0)	180 (60.0)	p = 0.041*
Tertiary	55 (29.6)	25 (21.9)	80 (26.7)	
Post Tertiary	1 (0.5)	2 (1.80)	3 (1.0)	
Mothers Occupation				
Full time house wife	12 (6.5)	1 (0.9)	13 (4.3)	$+χ^2 = 13.280$
Trader	68 (36.6)	47 (41.2)	115 (38.30)	df = 4
Artisan	77 (41.4)	37 (32.5)	114 (38.0)	p = 0.021*
Civil servant	24 (12.9)	22 (19.3)	46 (15.3)	

Farmer	0 (0.0)	1 (0.9)	1 (0.3)	
Others*	5 (2.7)	6 (5.3)	11 (3.7)	
Fathers level of education				
None	1 (0.5)	8 (7.0)	9 (3.0)	+ χ^2 = 10.927
Primary	6 (3.2)	5 (4.4)	11 (3.7)	df = 4
Secondary	109 (58.6)	63 (55.3)	172 (57.3)	p = 0.027*
Tertiary	66 (35.5)	36 (31.6)	102 (34.0)	
Post Tertiary	4 (2.2)	2 (1.8)	6 (2.0)	
Fathers Occupation				
Trader	15 (8.1)	8 (7.0)	23 (7.7)	+ χ^2 = 6.785
Artisan	96 (51.6)	65 (57.0)	161 (53.7)	df = 4
Civil servant	63 (33.9)	32 (28.1)	95 (31.7)	p = 0.148
Farmer	5 (2.7)	8 (7.0)	13 (4.3)	
Others**	7 (3.8)	1 (0.9)	8 (2.7)	

Table 7b: Socio-demographic and Other Factors Associated with Respondents' Practice of Exclusive Breast Feeding (EBF).

Socio-Demographic and Other Variable	Categorised Practice Score			Statistics
	Good n= 186 (%)	Poor n= 114 (%)	Total n=300 (%)	
Ethnicity				
Yoruba	166 (89.2)	102 (89.5)	268 (89.3)	+ χ^2 = 3.895
Igbo	9 (4.80)	3 (2.6)	12 (4.0)	df = 3
Hausa / Fulani	9 (4.8)	9 (7.9)	18 (6.0)	p = 0.273
Others***	2 (1.1)	0 (0.0)	2 (0.7)	
Religion				
Christianity	103 (55.4)	56 (49.1)	159 (53.0)	χ^2 = 1.109
Islam	83 (44.6)	58 (50.9)	141 (47.0)	p = 0.292
Age of considered infant (in month)				
1 – 6	24 (12.9)	6 (5.3)	30 (10.0)	+ χ^2 = 5.070
7 – 12	161 (86.6)	107 (93.9)	268 (89.3)	df = 2
> 12	1 (0.5)	1 (0.9)	2 (0.7)	p = 0.079

Sex of considered infant				
Male	89 (47.8)	50 (43.9)	139 (46.3)	$\chi^2 = 0.452$
Female	97 (52.2)	64 (56.1)	161 (53.7)	p = 0.501
Mothers average monthly income				
≤ 30,000	138 (73.7)	84 (74.6)	222 (74.0)	$\chi^2 = 0.030$
> 30,000	49 (26.3)	29 (25.4)	78 (26.0)	p = 0.862
Fathers average monthly income				
≤ 30,000	71 (38.2)	48 (42.1)	119 (39.7)	$\chi^2 = 9.703$
> 30,000	107 (57.5)	51 (44.7)	158 (52.7)	df = 2
I don't know	8 (4.3)	15 (13.2)	23 (7.7)	p = 0.008*

Table 7a presents the association between socio-demographic factors and the practice of exclusive breastfeeding among the respondents. The factors found to be associated with the practice of exclusive breastfeeding include the respondents' age ($p = 0.020$), marital status ($p = 0.002$), mother's level of education ($p = 0.041$), mother's occupation ($p = 0.021$), and father's level of education ($p = 0.027$).

In Table 7b, the factor associated with the practice of exclusive breastfeeding is the average monthly income of the respondents' spouse ($p = 0.008$).

Table 8: Pregnancy and Delivery History Associated with the Respondents' Practice of Exclusive Breast Feeding (EBF).

Categorised Practice Score				
Variable	Good n= 186 (%)	Poor n= 114 (%)	Total n=300 (%)	Statistics
Number of living children				
1	45 (23.7)	24 (21.9)	69 (23.0)	$\chi^2 = 5.478$
2	78 (41.9)	35 (30.7)	113 (37.7)	df = 2
≥ 3	64 (34.4)	54 (47.4)	118 (39.3)	p = 0.065
Birth interval between considered infant and the child before (in months)				
None	44 (23.7)	25 (21.9)	69 (23.0)	$\chi^2 = 2.168$
1 – 12	3 (1.6)	3 (2.6)	6 (2.0)	df = 3
13 – 24	70 (37.6)	51 (44.7)	121 (40.3)	p = 0.538
> 24	69 (37.1)	35 (30.7)	104 (34.7)	

Ever attended ante-natal clinic during the pregnancy of the considered child				
Yes	185 (99.5)	95 (83.3)	280 (93.3)	$\chi^2 = 29.551$
No	1 (0.5)	19 (16.7)	20 (6.7)	p < 0.001*
Place of ante-natal clinic				
Primary Health center	153 (82.7)	76 (80.0)	229 (81.8)	$+\chi^2 = 2.639$
General hospital	10 (5.4)	8 (8.4)	18 (6.4)	df = 4
Teaching Hospital	6 (3.2)	5 (5.3)	11 (3.9)	p = 0.620
Private hospital	15 (8.1)	6 (6.3)	21 (7.5)	
Mission house	1 (0.5)	0 (0.0)	1 (0.4)	
Were health talk given on exclusive breastfeeding during ante-natal clinic				
Yes	174 (94.1)	91 (95.8)	265 (94.6)	$\chi^2 = 0.373$
No	11 (5.9)	4 (4.2)	15 (5.4)	p = 0.541
Place of delivery of the considered child				
Primary Health center	141 (75.8)	44 (38.6)	185 (61.7)	$\chi^2 = 53.801$
General Hospital	11 (5.9)	14 (12.3)	25 (8.3)	df = 6
Teaching Hospital	8 (4.3)	6 (5.3)	14 (4.7)	p < 0.001*
Private Hospital	19 (10.2)	20 (17.5)	39 (13.0)	
Mission House	5 (2.7)	12 (10.5)	17 (5.7)	
Traditional Birth attendants	1 (0.5)	16 (14.0)	17 (5.7)	
Others	1 (0.5)	2 (1.8)	3 (1.0)	
Method of delivery of the considered child				
Spontaneous vaginal delivery	179 (96.2)	85 (74.6)	264 (88.0)	$\chi^2 = 31.445$
Caesarian section	7 (3.8)	29 (25.4)	36 (12.0)	p < 0.001*
Starting time of breastfeeding the considered child after birth				
Within the first 1 hour of birth	174 (93.5)	37 (32.5)	211 (70.3)	$+\chi^2 = 132.411$
After 1 hour of birth	12 (6.5)	76 (66.7)	88 (29.3)	df = 2
Not sure	0 (0.0)	1 (0.9)	1 (0.3)	p < 0.001*

Result from table 8 above shows that the factors related to knowledge about exclusive breastfeeding were the respondents' attendance of ante-natal clinic during the pregnancy of the considered child ($p < 0.001$), place of delivery of the considered child ($p < 0.001$), method

of delivery of the considered child ($p < 0.001$), and the time of initiating breastfeeding after birth ($p < 0.001$).

Table 9a: Predictors of the Knowledge about Exclusive Breast Feeding among Respondents.

Predictor factors	Crude Odds Ratio	95% Confidence Interval	P-value
Type of marriage			
Polygamous	6.46	2.033 – 20.513	0.002*
Monogamous (Reference Category)			
Mothers level of education			
None (Reference Category)			
Primary	0.29	0.061 – 1.328	0.110
Secondary	0.03	0.008 – 0.151	< 0.001*
Tertiary	0.00	0.000 –	0.996
Post Tertiary	0.00	0.000 –	0.999
Mothers Occupation			
Full time house wife (Reference Category)			
Trader	0.00	0.000 –	0.999
Artisan	0.00	0.000 –	0.999
Civil servant	1.00	0.000 –	1.000
Farmer	0.00	0.000 –	0.999
Others*	1.00	0.000 –	1.000
Fathers level of education			
None (Reference Category)			
Primary	0.30	0.046 – 1.943	0.206
Secondary	0.03	0.007 – 0.155	< 0.001*
Tertiary	0.00	0.000 –	0.996
Post Tertiary	0.00	0.000 –	0.999
Fathers Occupation			
Trader (Reference Category)			
Artisan	0.22	0.058 – 0.806	0.023*
Civil servant	0.00	0.000 –	0.996
Farmer	2.11	0.428 – 10.423	0.359
Others**	0.00	0.000 –	0.999
Ethnicity			
Yoruba	0.00	0.000 –	0.999
Igbo	1.00	0.000 –	1.000
Hausa / Fulani	0.00	0.000 –	0.999
Others*** (Reference Category)			

Mothers average monthly income			
≤ 30,000 (Reference Category)			
> 30,000	0.07	0.000 –	0.997

Table 9b: Predictors of the Knowledge about Exclusive Breast Feeding among Respondents.

Predictor factors	Crude Odds Ratio	95% Confidence Interval	p-value
Birth interval between considered infant and the child before (in months)			
None (Reference Category)			
1 – 12	33.50	3.979 – 282.039	0.001*
13 – 24	2.69	0.565 – 12.834	0.214
> 24	0.33	0.029 – 3.658	0.363
Ever attended ante-natal clinic during the pregnancy of the considered child			
Yes	0.002	0.000 – 0.014	< 0.001*
No (Reference Category)			
Place of delivery of the considered child			
Primary Health center	0.00	0.000 –	0.999
General Hospital	1.00	0.000 –	1.000
Teaching Hospital	1.00	0.000 –	1.000
Private Hospital	1.00	0.000 –	1.000
Mission House	0.00	0.000 –	0.999
Traditional Birth attendants	0.00	0.000 –	0.999
Others (Reference Category)			
Method of delivery of the considered child			
Spontaneous vaginal delivery (Reference Category)			
Caesarian section	0.00	0.000 –	0.998
Starting time of breastfeeding the considered child after birth			
Within the first 1 hour of birth (Reference Category)			
After 1 hour of birth	18.11	3.994 – 82.150	< 0.001*
Not sure	0.00	0.000 –	1.000

Table 9a and 9b reveal that the type of marriage, mothers' level of education, fathers' level of education, fathers' occupation, birth interval between the considered infant and the child before (in months), attendance of ante-natal clinic during the pregnancy of the considered

child, and the starting time of breastfeeding the considered child after birth are significant factors influencing respondents' knowledge about exclusive breastfeeding.

Predictor of the Practice of Exclusive Breast Feeding.

Table 10a: Predictors of the Practice of Exclusive Breast Feeding among Respondents.

Predictor factors	Crude Odds Ratio	95% Confidence Interval	p-value
Age as at last birthday (in years)			
≤ 19 (Reference Category)			
20 – 29	0.13	0.027 – 0.665	0.014*
30 – 39	0.20	0.041 – 1.019	0.053
40 – 49	0.29	0.041 – 1.981	0.205
Marital status			
Single (Reference Category)			
Married	0.06	0.007 – 0.474	0.008*
Divorced	0.12	0.013 – 1.144	0.065
Widowed	0.08	0.006 – 1.069	0.056
Mothers level of education			
None (Reference Category)			
Primary	0.78	0.182 – 3.336	0.737
Secondary	0.32	0.091 – 1.145	0.080
Tertiary	0.26	0.070 – 0.969	0.045*
Post Tertiary	1.14	0.077 – 16.947	0.923
Mothers Occupation			
Full time house wife (Reference Category)			
Trader	8.29	1.043 – 65.966	0.046*
Artisan	5.77	0.722 – 46.032	0.098
Civil servant	11.00	1.320 – 91.683	0.027*
Farmer	0.00	0.000 –	1.000
Others*	14.4	1.360 – 152.526	0.027*
Fathers level of education			
None (Reference Category)			
Primary	0.10	0.010 – 1.141	0.064
Secondary	0.07	0.009 – 0.591	0.014*
Tertiary	0.07	0.008 – 0.567	0.013*
Post Tertiary	0.06	0.004 – 0.915	0.043*
Fathers average monthly income			
≤ 30,000 (Reference Category)			
> 30,000	0.71	0.430 – 1.157	0.167

I don't know	2.77	1.091 – 7.050	0.032*
Ever attended ante-natal clinic during the pregnancy of the considered child			
Yes	0.03	0.004 – 0.205	< 0.001*
No (Reference Category)			

Table 10b: Predictors of the Practice of Exclusive Breast Feeding among Respondents.

Predictor factors	Crude Odds Ratio	95% Confidence Interval	P-value
Place of delivery of the considered child			
Primary Health center (Reference Category)			
General Hospital	4.08	1.727 – 9.630	0.001*
Teaching Hospital	2.40	0.791 – 7.302	0.122
Private Hospital	3.37	1.653 – 6.884	0.001*
Mission House	7.69	2.568 – 23.031	< 0.001*
Traditional Birth attendants	51.27	6.611 – 397.660	< 0.001*
Others	6.41	0.568 – 72.379	0.133
Method of delivery of the considered child			
Spontaneous vaginal delivery (Reference Category)			
Caesarian section	8.72	3.674 – 20.717	< 0.001*
Starting time of breastfeeding the considered child after birth			
Within the first 1 hour of birth (Reference Category)			
After 1 hour of birth	29.78	14.721 – 60.258	< 0.001*
Not sure	0.00	0.000 –	1.000

In Tables 10a and 10b above, it was found that the respondent's Age, Marital status, Mothers level of education, Mothers occupation, Fathers level of education, Fathers average monthly income, Attendance of ante-natal clinic during the pregnancy of the considered child, Place of delivery of the considered child, Method of delivery of the considered child and the Starting time of breastfeeding the considered child after birth are all predictors of the practice of exclusive breast feeding among respondents.

Table 11a: Predictors of the Practice of Exclusive Breast Feeding among Respondents.

Predictor factors	Adjusted Odds Ratio	95% Confidence Interval	P-value
Age as at last birthday (in years)			
≤ 19 (Reference Category)			
20 – 29	0.36	0.014 – 9.245	0.537

30 – 39	0.63	0.022 – 17.470	0.783
40 – 49	0.15	0.002 – 9.946	0.379
Marital status			
Single (Reference Category)			
Married	0.04	0.002 – 0.646	0.024*
Divorced	0.12	0.005 – 2.556	0.172
Widowed	0.08	0.002 – 2.838	0.165
Mothers level of education			
None (Reference Category)			
Primary	9.54	0.388 – 234.821	0.167
Secondary	1.16	0.039 – 34.826	0.931
Tertiary	0.16	0.003 – 7.573	0.353
Post Tertiary	0.69	0.002 – 196.846	0.898
Mothers Occupation			
Full time house wife (Reference Category)			
Trader	6.30	0.414 – 95.784	0.185
Artisan	1.75	0.112 – 27.341	0.691
Civil servant	39.41	2.499 – 621.434	0.009*
Farmer	0.00	0.000 –	1.000
Others*	2.87	0.078 – 106.169	0.567
Fathers level of education			
None (Reference Category)			
Primary	0.03	0.001 – 1.245	0.066
Secondary	0.03	0.001 – 0.884	0.042*
Tertiary	0.11	0.003 – 4.105	0.232
Post Tertiary	0.15	0.002 – 12.939	0.399
Fathers average monthly Income			
≤ 30,000 (Reference Category)			
> 30,000	0.47	0.175 – 1.288	0.143
I don't know	1.71	0.380 – 7.696	0.485
Ever attended ante-natal clinic during the pregnancy of the considered child			
Yes	0.11	0.002 – 5.776	0.278
No (Reference Category)			

Table 11b: Predictors of the Practice of Exclusive Breast Feeding among Respondents.

Predictor factors	Adjusted Odds Ratio	95% Confidence Interval	P-value
Place of delivery of the considered child			
Primary Health center (Reference Category)			

General Hospital	5.23	1.269 – 21.571	0.022*
Teaching Hospital	1.03	0.088 – 12.022	0.982
Private Hospital	0.67	0.139 – 3.240	0.619
Mission House	1.76	0.337 – 9.146	0.504
Traditional Birth attendants	1.62	0.033 – 80.673	0.808
Others	0.17	0.005 – 5.100	0.303
Method of delivery of the considered child			
Spontaneous vaginal delivery (Reference Category)			
Caesarian section	1.70	0.290 – 9.895	0.558
Starting time of breastfeeding the considered child after birth			
Within the first 1 hour of birth (Reference Category)			
After 1 hour of birth	72.19	20.491 – 254.327	< 0.001*
Not sure	0.00	0.000 –	1.000

Table 11a and 11b shows that respondent's Marital status, Occupation, Spouse level of education, Place of delivery of the considered child and the Starting time of breastfeeding the considered child after birth are all predictors of the practice of exclusive breast feeding among respondents.

DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATION

Discussion of Findings

The average age of the respondents was 29.3 ± 5.3 years, with a significant proportion falling within the 20-29 years age group. A majority of the respondents were married (87.3%) and came from monogamous families. The majority of respondents had completed secondary level education (60.0%) and were engaged in trading (38.3%). Similarly, the husbands of the respondents had similar educational backgrounds, with the majority having completed secondary education (57.3%), while the respondents' occupations were predominantly in the artisan category (53.7%). The ethnic group of the majority of the respondents was Yoruba (89.3%), and Christianity was the most commonly reported religion (53.0%). In terms of infant characteristics, the mean age of the considered infants was 9.0 ± 2.0 months, with a majority falling within the 7-12 months age group. Female infants constituted the majority (53.7%). The average monthly income of most mothers was less than or equal to ₦30,000, while the fathers' monthly income was higher than ₦30,000 for the majority.

Regarding pregnancy and delivery history, a significant number of respondents (40.3%) had three or more living children, and the birth interval between the considered infant and the previous child was often 13-24 months. The majority of the respondents (93.3%) attended antenatal clinics during the pregnancy of the considered child, primarily utilizing primary health centers (81.8%). Almost all respondents (94.6%) received health talks on exclusive breastfeeding during their antenatal visits. However, a small percentage (6.7%) did not attend antenatal clinics, with some lacking genuine reasons for their absence.

Most of the respondents (88.0%) delivered their child at a primary health center, and the majority (70.3%) initiated breastfeeding within the first hour of giving birth. A considerable proportion of the respondents (71.3%) breastfed immediately after birth. However, among those who did not breastfeed immediately, a notable portion (44.2%) fed their children with concoctions, honey, and spiritual oil instead.

In terms of exclusive breastfeeding practices, the findings of the present study indicate that a significant proportion of respondents (70.7%) initiated breastfeeding with colostrum immediately after birth. This differs from the findings of Wren and Chambers (2016), where only 25% of women initiated breastfeeding within the first hour post-delivery. Additionally, 59.3% of the respondents in the present study reported exclusively breastfeeding their child from 0 to 6 months. This contrasts with the findings of Oche, Umar, and Ahmed (2016), where the practice of exclusive breastfeeding was rare, with only 17% of children younger than six months being exclusively breastfed. Furthermore, the majority of respondents (69.0%) practiced breastfeeding on demand, aligning with the findings of Ogbonna and Daboer (2017). However, Agunbiade and Ogunleye (2015) reported a lower proportion (19%) of nursing mothers practicing exclusive breastfeeding in a similar study. Regarding the introduction of complementary foods, it was found that the average age at which this occurred was 3.9 ± 2.7 months, with most respondents (51.3%) introducing other foods at 6 months of age. These findings highlight the importance of timely introduction of complementary foods according to recommended guidelines.

This study identified several factors associated with knowledge and practice of exclusive breastfeeding. Factors such as type of marriage, mothers' level of education, mothers' occupation, fathers' level of education, fathers' occupation, attendance of antenatal clinics, place of delivery, method of delivery, and starting time of breastfeeding after birth were found to be associated with knowledge and practice of exclusive breastfeeding. These findings are consistent with previous research studies published in reputable journals, including Ogbonna and Daboer (2017) and Agunbiade and Ogunleye (2015). The identification of these factors emphasizes the importance of considering various socio-demographic factors when promoting and supporting exclusive breastfeeding practices. By understanding the factors that influence knowledge and practice of exclusive breastfeeding, interventions and support can be tailored to target specific populations and improve breastfeeding rates.

The study uncovered the factors influencing exclusive breastfeeding practices among mothers attending Adeoyo Maternity Hospital in Oyo State. Maternal education, occupation, and socioeconomic status, as well as antenatal care utilization, delivery practices, and timely breastfeeding initiation, emerged as significant determinants affecting both exclusive breastfeeding knowledge and practice. These findings enhance our comprehension of the factors that impact exclusive breastfeeding and can guide the development of interventions to promote this essential health behavior. Based on the findings presented, the following recommendations can be made to improve exclusive breastfeeding practices among nursing mothers:

1. Enhance Breastfeeding Education Programs: Implement comprehensive breastfeeding education programs that target both expectant mothers and fathers. These programs should focus on the benefits of exclusive breastfeeding, correct

breastfeeding techniques, and the importance of initiating breastfeeding within the first hour after birth. Special attention should be given to mothers with lower levels of education and those from lower-income backgrounds to ensure they receive adequate support and knowledge.

2. Strengthen Antenatal Clinic Services: Antenatal clinics play a crucial role in promoting exclusive breastfeeding practices. Health facilities should ensure that all pregnant women receive regular antenatal care, which includes counseling on exclusive breastfeeding. Antenatal clinic staff should be trained to provide accurate and up-to-date information on exclusive breastfeeding, debunk common myths, and address any misconceptions that mothers may have. Additionally, healthcare providers should emphasize the importance of attending antenatal clinics regularly, as it provides an opportunity for mothers to receive essential information on breastfeeding and early infant care.

By implementing these recommendations, healthcare providers, policymakers, and community organizations can work together to improve knowledge and practice of exclusive breastfeeding, leading to better health outcomes for both mothers and infants.

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