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Abstract

Purpose: Breastfeeding has been endorsed by the World Health Organization as the most effective method to feed infants. To find out the breastfeeding practices and examine the factors affecting the practice among mothers attending immunization clinics at Primary Health Centers within Ado-Ekiti in Nigeria.

Methodology: A total of 450 respondents were randomly selected with Fisher's formula using a cross-sectional descriptive study design. Multistage sampling techniques was used to select two out of fifteen wards in Ado Local Government Area through random sampling by balloting, out of which two Primary Health Care was selected one from each Local Government Area. Adapted, semi-structured, interview administered questionnaire was used, data was entered and analyzed with Statistical Package for Social Sciences version 25 and p value set at 5%.

Findings: Out of the respondents, 152 (33.8%) exclusively breastfed their babies and 163 (36.2%) initiated breastfeeding within one hour after delivery. One hundred and thirty-two (29.3%) gave pre-lacteal feeding to their babies, of whom 93 (70.4%) gave water and glucose. From the multivariate analysis, the mothers that were employed were more likely to exclusively breastfed their babies with OR of 1.58 and p value of <0.05. The primiparous mothers were less likely to initiate breastfeeding within one hour of delivery OR of 0.62 and p value of 0.03.

Recommendation: Significant numbers of the mothers were still not practicing exclusive breastfeeding and not initiating breastfeeding early enough after delivery. There is need to educate women especially the primiparous mothers on the benefits of early initiation of breastfeeding and danger of pre-lacteal feeding.

Keywords: *Breastfeeding, mothers, practice, primary care, Nigeria*

INTRODUCTION

Adequate nutrition during infancy and early childhood is of great importance to children for their growth, health, and development to maximum potential. It has been acknowledged globally that breastfeeding has both maternal and child benefits, because breast milk has been found to contain all the required nutrients for infant growtht.[1] Exclusive breastfeeding (EBF) has been endorsed by the World Health Organization (WHO) as the most effective method to feed infants. It is the intake of breast milk only, without water, tea, herbal preparations, or food- by an infant for the first six months of life except for intake of drops or syrups consisting of vitamins, mineral, supplements, or medicine that has been prescribed. [2-4]

Breast milk is a natural and renewable source of essential fats, carbohydrates, protein, vitamins and minerals, enzymes, hormones, growth factors, anti-inflammatory agents and immunological factors that fulfills all the nutritional requirement of an infant during the first 6 months of life,[4,5] and is therefore ideal for the proper development of an infant. Due to the rich constitution of the breast milk, the WHO and UNICEF have recommended the following on breastfeeding: commencement of breastfeeding within the first hour of life, EBF for the first six months of life and continued breastfeeding for two years or more together with suitable complementary feeding starting from the sixth month of life[2] -this is the stage in which breast milk alone is not sufficient to give the required energy and nutrients to sustain normal growth and optimal health and development.

There are numerous merits of EBF, for the child, there is improved neurological development and protection against diarrhea, common childhood respiratory tract illness such as pneumonia, otitis media, and malnutrition. It may also have long-term benefits, like reduction in the risk of overweight and obesity in childhood and adolescence.[1] As such, it has been regarded as a public health intervention and one of the most effective method to reduce infant morbidity and mortality rates.[6,7] For the mother, reduced risk of breast cancer, ovarian cancer, type 2 diabetes, metabolic syndrome, and quick return to pre-pregnancy weight are important benefits.[6] Furthermore, it facilitates bonding between mother and child and helps to improve natural birth spacing. Increased household income and improved food security are also advantages associated with EBF.[6]

Although the benefits of breastfeeding are enormous, some factors have been identified to hinder its practice among which are inadequate lactation, work-related problems, and medical problems of either the mother or infant.[5] There are also multiple factors influencing the practice of breastfeeding including social, cultural, health, psychosocial and economic factors.[2,4] Some of the factors influencing the initiation and continuation of breastfeeding identified in several studies are maternal age, education, ante-natal care attendance, mode of delivery, place of delivery, parity, employment status, pressure from family and cultural values.[2,4,6] Furthermore, it has been shown in other studies that many mothers find it strenuous to meet personal goals and to stick to recommended guidelines for exclusive and continued breastfeeding despite the high initiation rate. For example Oche et al in Sokoto, in the northern Nigeria documented 53% prevalence of early initiation of breastfeeding and 31% prevalence of exclusive breastfeeding.[6] Other causes include breast problems like sore nipples or mother's perception of not sufficiently lactating and limited breastfeeding knowledge.[1] These factors however vary in different settings and among women of same ethnicity.[4]

Despite the campaign and increased awareness of the effectiveness of EBF by various governmental and non-governmental bodies, in SSA, the pooled prevalence of early initiation of breastfeeding after delivery was 58.3%, though there are differences across different countries. These differences range from 24% in Chad to 86% in Burundi. [7] Only 39% of infants

in developing countries were exclusively breastfed.[4] In keeping with this, the Nigerian Demographic Health Survey in 2018 reported that less than one-third (29%) of infants in the first six months of life were EBF and this proportion was found to reduce with increasing age. The figures dropped from 39% to 29% among infants aged 0-1month and 2-3months with a further decline to 18% among infants aged 4-5 months. [8] Prevalence of early initiation of breastfeeding for newborn in Nigeria ranges from 36.6% to 53% while exclusive breastfeeding ranges from 31% to 58.8%.[2, 6, 9]

Breastfeeding practices, especially in developing countries including Nigeria, continue to be suboptimal despite the huge maternal and child benefits. In view of this, comprehending the breastfeeding practices and its predictors is imperative to designing appropriate and effective interventions that will positively impact the practice. The aim of this study was to find out the breastfeeding practices and examine the sociodemographic factors affecting breastfeeding practices among mothers attending immunization clinics in Ado-Ekiti in Nigeria.

METHODS

The study was a descriptive cross-sectional study carried out between June 2020 and September 2020 in immunization clinics of two primary health centers in Ado Local Government of Ekiti State. Mother and the child pair were the target population.

Study Setting

Ado LGA is the capital of Ekiti State. It has 13 wards and there is at least one comprehensive or basic health center and one health post in each ward in the Local Government. Immunization clinic takes place in all the primary health centers at least once in a week. Two of the thirteen wards in the LGA were selected through simple random sampling by balloting. The selected wards have comprehensive health centers which were chosen for the study. Average of fifty clients were seen during the immunization clinics in each of the two selected health centers. A multistage sampling technique was used in selecting 450 mother/child pairs as follows; participants were chosen by systematic random sampling with sample interval of three, the first client was balloted for using simple random sampling. If anyone refuse to participate, automatically the next patient was chosen from the register. The participants were mothers from age 18 to 45 years with children age 0 – 24 months who were still breastfeeding. Mothers who were sick or nursing a sick child were excluded from the study

Sample Size Determination

Sample size was calculated to be 410 with the formula for cross-sectional descriptive studies using the Fishers formula [10] at a prevalence of 38.8% obtained from a previous study, [6] confidence interval of 95%, margin of error of 0.05 with non-response rate of 10%.

Data Collection

A structured, interviewer administered questionnaire was used. Questionnaire was pre-tested in another health center of a ward different from the selected ones and ambiguous questions were reframed for clarity. The questionnaire had three sections: the first section was on socio-demographic characteristics (age, educational level, tribe, occupation etc.), second section on pre and post-natal history (parity, mode of delivery, where delivery took place, was the pregnancy planned). The third section was on the practice of breastfeeding (when breastfeeding was initiated, pre lacteal feeding, is baby breastfed exclusively?) Four Resident Doctors were trained in data collection as research assistants.

Outcome/Dependent variable was the breastfeeding practice. This was assessed by early

initiation of breastfeeding after delivery that is initiating breastfeeding within the first one hour after delivery. Also, by exclusive breastfeeding which is giving the baby only breast milk for 6 months without water and drugs except prescribed. Independents variables were the age of the mothers, age of the babies, educational level of the mothers, occupation of the mothers etc.

Data Analysis

Data was entered and analyzed with Statistical Package for Social Sciences (SPSS) version 25. Summary statistics was presented using tables. Age was categorized and summarized with mean and standard deviation. Parity was summarized with median and interquartile range. Categorical variables were presented as proportions. Binary logistic regression analysis was done for variables that were significantly associated at the bivariate level of analysis; odd ratios (OR) at 95% confident interval was reported. The significant level of 5% was set for all statistical procedures. Ethical clearance for the study was obtained from the Ethics and Research Review Committee of the Ekiti State University Teaching Hospital, Ado-Ekiti with protocol number EKSUTH/A62/2020/09/012

RESULTS

In table 1, the majority 438 (97.3%) of the respondents were married, 398 (88.4%) were Christians, 398 (88.4%) employed and 386 (85.8%) were Yoruba. The table shows that 354 (78.7%) of the respondents planned the pregnancy, 340 (75.6%) had someone to help at home apart from their spouse after discharge from postpartum ward. Majority 399 (88.7%) had prenatal education on EBF and 157 (34.9%) of them were primiparous. Almost half of the respondents 204 (45.3%) delivered in the government hospitals while 148 (32.9%) delivered in Mission Homes.

Figure 1 revealed that 163 (36.2%) of the mothers, initiated breastfeeding of their newborn early, that is within the first one hour after delivery and 167 (37.1%) initiated breastfeeding 3 hours after delivery. Figure 2 shows the prevalence of exclusive breastfeeding in this study was 152 (33.8%). Almost a third (29.3%) of the respondents gave pre-lacteal feeding of which 93 (70.3%) gave water and glucose, while 185 (41.1%) fed their babies with artificial milk before 6 months of age. One hundred and twenty-three (27.3%) bottled fed their babies before 6 months as shown in table 2.

Table 1: Socio-demographic and Obstetric characteristics of the respondents

Variable	Frequency n=450	Percentage
Sex of Infant		
Male	228	50.7
Female	222	49.3
Maternal Age		
≤ 30 years	233	51.8
≥ 30 years	217	48.2
Mean age	**29.48±5.17 years**	
Ethnicity		
Yoruba	386	85.8
Others	64	14.2

Education		
≤ Secondary	210	46.7
≥ Tertiary	240	53.3
Employment		
Employed	398	88.4
Unemployed	52	11.6
Religion		
Christianity	398	88.4
Islam	52	11.6
Marital Status		
Married	438	97.3
Single	12	2.7
Parity		
Primiparous	157	34.9
Multiparous	293	65.1
Median	2	Range (1 – 9)
Interquartile	1 – 25, 2 – 50, 3 – 75	
Planned Pregnancy		
Yes	354	78.7
No	96	21.3
Prenatal Education on EBF		
Yes	399	88.7
No	51	11.3
Place of Delivery		
Government Hospital	204	45.3
Mission	148	32.9
Private Hospital	81	18
Home	17	3.8
Mode of Delivery		
SVD	411	91.3
C/S	39	8.7
Helping hand		
Yes	340	75.6
No	110	24.4

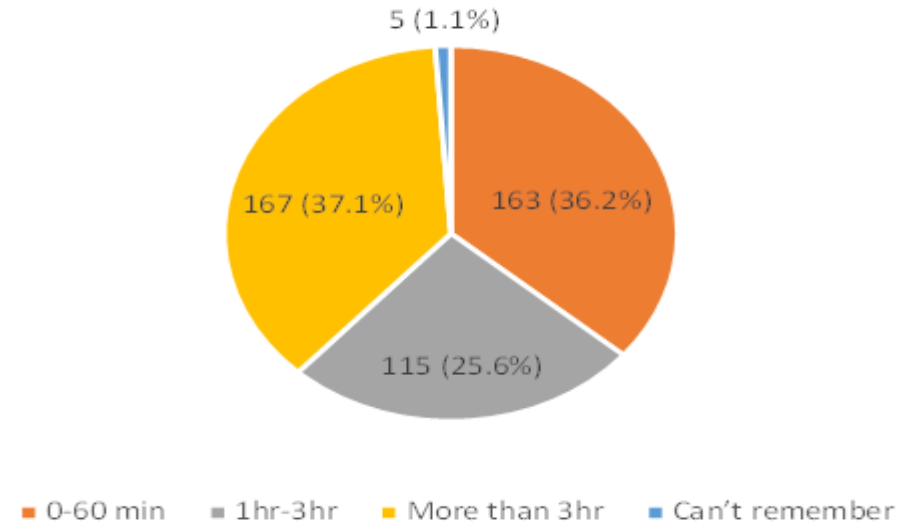

Figure 1: Time of initiating breastfeeding

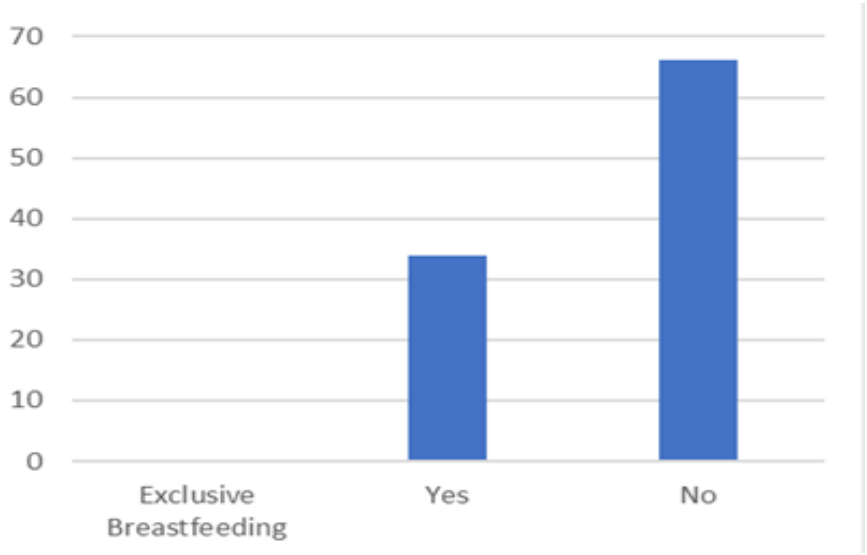

Figure 2: Exclusive breastfeeding practice

Table 2: Practice of breastfeeding among respondents

Variables	Frequency (n = 450)	Percentage
Pre-lacteal feeding		
NO	318	70.7
YES	132	29.3
- Water	19	14.4
- Water & glucose	93	70.4
- Artificial milk	20	15.2
Give cereal before 6 m		
Yes	179	39.8
No	271	60.2

Herbal concoction before 6 m		
Yes	214	47.6
No	236	52.4
Artificial milk before 6 m		
Yes	185	41.1
No	265	58.9
Bottle feeding before 6 m		
Yes	123	27.3
No	327	72.7
Exclusive Breastfeeding		
Yes	152 (33.8)	
No	298 (66.2)	
Is BF at work convenient		
Yes	406	90.2
No	44	9.8

Note: BF is breastfeeding

Bivariate analysis was conducted between sociodemographic characteristics and practice of exclusive breastfeeding using chi square. Bivariate analysis also was conducted between sociodemographic characteristics and early initiation of breastfeeding with chi square. The variables that were statistically significant with p values < 0.05 were used in conducting the multivariate analysis. The results of the multivariate analysis are as shown in Tables 3 & 4.

Table 3 revealed that the mothers age above 30 years were more likely to practice exclusive breastfeeding compared to their counterpart 30 years and less with OR of 1.58 and p value < 0.05. mothers of other religion apart from Christianity were more than two times more likely to practice exclusive breastfeeding compared to the Christian mothers with p value of 0.005. Table 4 revealed that the mothers that were employed and those not having anyone assisting them immediately after delivery apart from their spouse were more likely to initiate breastfeeding within one hour after delivery with OR of 2.29 and 1.70 respectively and p values of 0.023 and 0.024 respectively.

Table 3: Logistic regression of predictors in the practice of exclusive breastfeeding among the respondents

Variables	**Practice of EBF**		**B**	**OR (95% CI)**	**p-value**
	Yes	**No**			
Mothers' Age					
≤ 30	64 (27.5)	169 (72.5)	1		
> 30	88 (40.6)	129 (59.4)	1.582	1.005 – 2.488	0.047*
Educational level					
≤ Secondary *	62 (29.5)	148 (70.5)	1		
≥Tertiary	90 (37.5)	150 (62.5)	1.396	0.921 – 2.115	0.116

Religion					
Christianity	126 (31.7)	272 (68.3)	1		
Others	26 (50.0)	26 (50.0)	2.346	1.292 – 4.257	0.005*
Parity					
Multiparous	108 (36.9)	185 (63.1)	1		
Primip	44 (28.0)	113 (72.0)	0.813	0.505 – 1.310	0.395

**Significant p value*

Table 4: Logistic regression of predictors in the early initiation of breastfeeding among the respondents

Variables	**Early Initiation of BF**		**AOR**	**CI (95% CI)**	**p-value**
	Yes	No			
Employment					
Unemployed	152 (38.2)	246 (61.8)	1		
Employed	11 (21.2)	41 (78.8)	2.290	1.023 – 4.681	0.023*
Parity					
Multiparous	120 (41.0)	173 (59.0)	1		
Primip	43 (27.4)	114 (72.6)	0.621	0.400 – 0.965	0.034*
Helping hand					
Yes	112 (32.9)	228 (67.1)	1		
No	51 (46.4)	59 (53.6)	1.695	1.073 – 2.677	0.024*
Mode of delivery					
SVD	156 (38.0)	255 (62.0)	1		
C/S	7 (17.9)	32 (82.1)	0.407	0.170 – 0.974	0.043*
Place of delivery					
Home	6 (35.3)	11 (64.7)	1		
Government H	86 (42.2)	118 (57.8)	0.729	0.231 – 2.303	0.590
Mission H	51 (34.5)	97 (65.5)	0.591	0.323 – 1.082	0.890
Private H	20 (24.7)	61 (75.3)	0.954	0.498 – 1.827	0.888

**Significant p value, BF is breastfeeding*

DISCUSSION

It has been recommended by WHO that children should be breastfeed continuously for two years and for the first six mouth of life, breastfeeding should be exclusive. To optimize the advantage, initiation of breastfeeding should be within the first one hour after delivery.[1, 2] This study was designed to examine the practice of breastfeeding among mothers attending immunization clinics in Ado Ekiti.

The prevalence of exclusive breastfeeding in this study was 33.8% while that of early initiation of breastfeeding was 36.2%. The prevalence of exclusive breastfeeding in this study is comparable to the study in Indonesia,[3] the prevalence from the Sub Saharan African countries,[4] Gambia,[5] Edo State, Nigeria[2] and Sokoto, Nigeria.[6] However, the prevalence of exclusive breastfeeding gotten from this study was higher than the national prevalence of 29% given by NDHS in 2018.[8] It is equally higher than 13.8% reported by Andrea Lanes in Canada,[11] 2.8% reported by Pélagie Babakazo in Kinshasha,[12] 22.7% reported by Melina Mgongo et al in Tanzania.[13] It has been shown that even within the same country and same region different proportion of exclusive breastfeeding were gotten lower than that gotten from the present study ranging from 19.0% to 28.5% .[14,15,16] These differences might be due to differences in the population used in the studies, cultural background, or geographical location. When compared with other values within and outside the country, 33.8% is lower. A community based cross-sectional study conducted in Ethiopia by Asrat Sonko and Amare Work reported a prevalence of 70.5%,[17] more than half of the participant in a study conducted by Tiras Eshton Nkala and Sia Emmanueli Msuya in Tanzania was said to had breastfed their babies exclusively,[18] two third of the participants in Ghana practiced EBF.[19] There are studies within the country also where the values are higher than the present study. [9, 20]

In the present study, slightly more than one third of the participants 36.2% initiated breastfeeding within 1 hour of delivering their babies. There are studies within the country where similar proportion of mothers that initiated breastfeeding within 1 hour and others where the proportions are more. According to Berde in Nigeria 34.7% of mothers [21] and 38.8% of mothers based on the findings of Akadri [9] initiated breastfeeding within 1 hour of delivery. These are comparable to our result. However, among those that reported higher values within the country are Fehintola et al 40%,[15] Atimati et al 44.5%,[2] Oche et al 53%,[6] and Akinyinka et al 56.5%. [20] These differences might be as a result of cultural differences as some believe that colostrum is dirty and should not be given to a child. This believe denies the children of the benefit of colostrum which is rich in immunoglobulins and predisposes the infants to infection. Early initiation of breast milk also helps in establishing mother to child bonding.[9] This calls for need to educate mothers on the importance of colostrum.

Reports from other parts of Africa and beyond also revealed that prevalence of early breastfeeding in this study is low. Kimani-Murage et al in Kenya reported that almost two third 63% of their subjects initiated breastfeeding early.[22] Asrat Sonko in Ethiopia found that almost half of the participant48.6% initiated breastfeeding early[17] while Woldeamanue reported 81.8% from the same country.[23] A study from Indonesia revealed that the prevalence of early initiation of breastfeeding was 52.7%[3] and the study in Nepal reported 42.2%.[24] The low prevalence of early breastfeeding initiation in this study may be because more than half of the participants delivered outside the government hospitals. Training and re-training of health workers on benefit of exclusive breastfeeding takes place more among those in government hospitals while other health workers outside government hospital rarely or don't attend training at all. Some women decided to deliver in other places outside government hospital because of their perceived delay in access to prompt care and over dependent of government hospital on family and relation of patient involvement in their care. Looking at the benefit of early initiation of breastfeeding in reducing infant mortality, effort should be made by the government in employing more skilled health workers in the hospitals. [25]

In this study being employed and not having anyone around to help at the early part of the delivery were associated with early initiation of breastfeeding while delivery through cesarean section and being a primiparous mother were associated with delay in initiating breastfeeding.

Being employed as a mother in this study was significantly associated with early initiation of breastfeeding, this is similar to the report from Ahmed et al in Ethiopia,[26] though this is in contrast to another study in Ethiopa.[23] This is most also likely because the educated mothers will be employed, and education has been documented to be significantly associated with early initiation of breastfeeding by Adhikari et al.[25] Educated mothers can get information on benefits of early initiation of breastfeeding readily on printed materials, radio, television, or surf for it. They have more access and more understanding of health promotion messages. This is contradicted by Berde et al in Nigeria that working mothers were less likely to initiate breastfeeding timely.[21] Not having close relatives to assist at initial stage of delivery was significantly associated with early initiation of breastfeeding. The relatives that assist in this environment are mostly aged women who traditionally believe that colostrum is dirty and should not be given. A study conducted Khanal et al in Nepal shew that those that delivered with traditional birth Attendants initiated breastfeeding late [24] and these traditional birth attendants were aged women with their belief that colostrum is dirty and should not be given to newborn. They don't encourage mothers to give colostrum, so where they are absent the skilled health workers stay more around to encourage mothers to initiate breastfeeding.[24] This also show the need to educate not just the pregnant women and women of child bearing age alone but also the aged women need to be educated on benefits of good practice of breastfeeding.

It has been well documented as found in this study that delivery through cesarean section is negatively associated with early initiation of breastfeeding.[24, 25, 27] When cesarean section is done due to the anesthetic drug that the mother is given, she might not be fully conscious to breastfeed or she might be made to lie in a position that may not be conducive for breastfeeding. Most time baby might be nurse in intensive care unit separate from the mother. Babies of mothers who had cesarean section were fed with pre lacteal feedings. In this study almost one third of the babies were given pre lacteal feedings (water, glucose, and artificial milk), majority gave glucose. [15,17,20] It was found in this study that primiparous mothers had delay in initiating breastfeeding compared with those having two or more babies who had experience in breastfeeding. This is similar to other studies within and outside the country.[25] This is an indication that the primiparous women require proper education on breastfeeding during the ante-natal clinic before delivery.

CONCLUSION

Majority of the mothers were not practicing exclusive breastfeeding and did not initiate breastfeeding early as shown in this study with prevalence of exclusive breastfeeding and early initiation of breastfeeding being 36.2% and 33.8% respectively. About 29.3% of the mothers gave pre-lacteal feeding to their babies. The primiparous women and those that have people to assist them immediately after delivery were less likely to initiate breastfeeding early from this study.

RECOMMENDATION

It is recommended that education on benefit of good practice (early initiation and exclusive breastfeeding) of breastfeeding should be given to pregnant women especially the primiparous and the aged women that are likely to assist after the delivery by health workers. Government should have a written breastfeeding policy that should be implemented in the primary health care centers.

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