



Low Breast feeding Practices: Are Female Health care Workers Guilty Too?

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Abstract

Objective: To assess the knowledge and practices of breastfeeding among female healthcare workers in Osun State.

Study design: It was a cross-sectional descriptive study

Methods: It was carried out among female healthcare workers working in public health facilities. Eligibility criterion was mothers nursing children ≤ 24 months old and 160 respondents were recruited. Pretested semi-structured questionnaire was used to obtain data about their knowledge and recent breastfeeding practices. Statistical Package for Social Sciences version 21 was used to analyse data. Chi-square and logistics regression were used to compute associated factors and predictors of knowledge of breastfeeding practices with level of statistical significance set at $p < 0.05$

Results: Response rate was 99.4% (159), 124 (78.0%) were in the age group 26-35 with mean age 31.6 ± 4.96 years. The majority [105 (66.0%)] were nurses. One hundred (63%) respondents had good knowledge about breastfeeding, 108 (67.9%) practiced exclusive breastfeeding for 6 months and 40 (25.2%) breastfed their babies for 2 years. Commonest reason given by those who did not practice exclusive breastfeeding was work [40 (78.4%)].

More respondents in the younger age group (66.7% of ≤ 25 years and 67.7% of 26-35 years) significantly ($p = 0.018$) had better knowledge about breastfeeding than the older age groups (43.5% of 36-45 years and 0.0% of ≥ 46 years). Predictor of having good knowledge about breastfeeding was age ≤ 25 years compared to those aged ≥ 46 years (CI 0.00-2.11; $p = 0.046$), and the predictor of practicing exclusive breastfeeding for 6 months was having good knowledge about breastfeeding practices (CI 8.09-53.43; $p < 0.0001$)

Conclusion: This study concluded that good knowledge of the healthcare workers about breastfeeding positively influences their practice of exclusive breastfeeding

Keywords: Female healthcare workers, Exclusive breastfeeding, Breastfeeding practices, Optimal breastfeeding

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Introduction

Breast milk is highly nutritious, it provides all the necessary elements needed for infant health during the first six months of life and thereafter.⁽¹⁻³⁾ It is cheap, clean, accessible, and safe. It contains antibodies, thus promoting newborn immunity and enhancing child survival by protecting infants from common childhood illnesses—such as diarrhea and pneumonia, the two primary causes of child mortality worldwide.^(1,2,4) Breastfeeding has also been shown to promote protection against pregnancy, development of breast cancer and mother-infant bonding, amongst other benefits.^(1,5) Breast feeding thus has benefits for both the mother and the baby.⁽⁶⁾

The World Health Organization (WHO) strongly recommends exclusive breastfeeding (EBF) for the first six months of life. At six months, other foods should complement breastfeeding, with breastfeeding continuing for up to two years. In addition, breastfeeding should begin within half an hour of birth; offered to the infant “on demand,” and as often as the child wants day and night; bottles or pacifiers should be avoided.^(4,7)

In spite of the many benefits of breastfeeding, numerous factors still hinder its optimal practice. Some of these barriers included mother's employment, advertisement of breast milk substitutes, ignorance, family pressures, mother's ill health, and surprisingly unfriendly hospital practices, among other factors.^(2,3,5,8) Nursing mothers said the attitude of healthcare workers towards breastfeeding was not encouraging, as many of them were not adequately educated on breastfeeding techniques and nutrition practices of lactating mothers by healthcare workers during antenatal clinics;⁽⁹⁾ thus making healthcare workers to be perceived as barriers to optimal breastfeeding. It was said that doctors and nurses were not supporting breastfeeding enough.⁽¹⁰⁾ It is expected that the knowledge of medical and paramedical personnel should affect breastfeeding practice,⁽³⁾ this however seems not to be so. A study carried out about breast feeding practices among medical women in Nigeria showed all the respondents have good knowledge about breastfeeding, but only 11.1% of them practised EBF for six months, more than 60% gave breast milk only for 3 months or less.⁽³⁾ Most of them said they could not breast feed during work hours and had to offer an alternative to breast feeding during these hours.⁽³⁾ Working as a physician might thus be a newly identified maternal characteristic associated with low breastfeeding maintenance rates.⁽¹¹⁾ In addition to the work schedule as an obstacle, some knowledge gaps have also been observed in the domains of breastfeeding among healthcare workers.^(3,12-14) A study carried out in south-southern part of Nigeria showed only 36.1% of healthcare workers knew that breastfeeding should be continued up to 24 months and beyond, and 16.7% recognized EBF as an appropriate practice in preventing diarrheal disease.⁽¹³⁾ These are critical findings given that wrong belief and inadequate knowledge could lead to dangerous misinformation and counseling of breastfeeding mothers.⁽¹³⁾ Health care workers are important in the promotion, protection and support of breast-feeding, and their ability to do this may be influenced by their knowledge and personal experiences. This study therefore assesses the knowledge and practices of breastfeeding among female healthcare workers in Osun State, Southwestern Nigeria.

Methods

Study design and study area

This was a cross sectional descriptive survey conducted in Osogbo, Osun state, South West, Nigeria. Osogbo is the capital of Osun State; it has one tertiary health facility, one secondary health facility and four primary health facilities all funded/managed by the State government, as well as mission hospitals and private owned hospitals. The cadres of female healthcare workers that work in these health facilities were Doctors, Nurses, Community Health officers (CHO) and Community Health Extension Workers (CHEW).

Study population

Female healthcare workers working in the public health facilities were taken as the study population. Using one of the eligibility criteria from a previous study in Nigeria⁽³⁾; female healthcare workers who had a baby within the preceding 24 months of the study and had resumed work from maternity leave were recruited for the study. It was expected that respondents would remember the feeding practices for their babies in the last 24 months

Sample size determination and sampling

All eligible respondents in the public health facilities in Osogbo were recruited for the study. They were 160 respondents

Instruments & Data collection methods

The instrument for data collection was pretested, semi structured questionnaire and data collection method was through self-administration of the questionnaires.

Based on WHO recommendation (7), the definition of optimal breastfeeding practice in this study was taken to be: initiating breastfeeding within 30 minutes to 1 hour of birth, exclusively breastfeeding child for the first six months of life, addition of complementary feeding (with other foods) afterwards, while breastfeeding continues for up to two years.

Data management

Questionnaires were sorted out to check for errors and omissions at the end of data collection each day. Data was entered into the computer and analyzed using Statistical Package for Social Sciences (SPSS) version 21. Knowledge of respondents was assessed with questions relating to breastfeeding. Value of one was given for each correct answer and zero for an incorrect answer. The mean of the total scores was computed and any score equal or above the mean was taken as good knowledge while score values below the mean was poor knowledge.

Frequency distribution tables, charts and graphs were plotted, Categorical variables such as respondent's characteristics and categories of breastfeeding knowledge of respondents was expressed in proportions. Continuous variables that are normal in distribution such as age were expressed as means (\pm standard deviation). The categorical variables were compared using chi-square test and logistic regression was used to show the predictors of EBF practice. Statistical significance was set at p-value less than 0.05.

Ethical consideration

Ethical clearance was obtained from the Ethical Review Committee of LAUTECH Teaching Hospital. The purpose of the study was explained into details to respondents and participation was made to be voluntary, verbal informed consent was also obtained from respondents before carrying out the study. All the information gathered were kept confidential; participants' questionnaires were identified using only allotted numbers.

Limitation of the study

Although respondents chosen for this study were those who had their babies in the last two years in order to minimize the problem of recall. Recall bias can still not be entirely ruled out especially for those who had their babies more than 18 months prior to the study.

Results

Out of the 160 questionnaires distributed, 159 were retrieved, giving a response rate of 99.4%. Table 1 shows the socio-demographic characteristics of respondents. A hundred and twenty four (78.0%) respondents were in the age group 26-35 years with mean age 31.6 \pm 4.96 years. All of them were married and were all Yoruba. Majority [132 (83.0%)] were Christians and 105 (66.0%) were nurses; 25 (15.7%) were doctors and 29 (18.2%) were CHOs and CHEWs. The occupation of respondents' partners revealed that 141 (88.7%) were professionals such as doctors, nurses, engineers etcetera. Sixty-nine respondents had one child at the time of study.

Variables	Frequency (n=159)	Percentage (%)
Age group (years)		
≤ 25	9	5.7
26-35	124	78.0
36-45	23	14.5
≥ 46	3	1.8
Mean age	31.6±4.96	
Marital Status		
Married	159	100.0
Religion		
Christian	132	83.0
Muslim	27	17.0
Tribe		
Yoruba	159	100.0
Designation		
Doctor	25	15.7
Nurse	105	66.0
CHEW/CHO	29	18.2
Partner's occupation		
Unemployed	5	3.1
Unskilled worker	3	1.9
Skilled worker	10	6.3
Professionals	141	88.7
Number of children		
1	69	43.4
2	59	37.1
3	25	15.7
4	6	3.8

Table 1: Socio-demographic characteristics of respondents

Table 2 shows the assessment of respondents' knowledge about breastfeeding. A hundred and fifty one of them said breastfeeding should commence immediately or within 30 minutes after delivery while the remaining eight said breastfeeding should commence at a later time. Majority [135 (84.9%)] also said exclusive breastfeeding should be for 6 months and [121 (76.1%)] said babies should be breast fed on demand, but 24 (15.1%) said exclusive breastfeeding should be for 4 to 5 months, while 38 (23.9%) have varying opinion about how often a baby should be fed, such opinions included every 3hrs, every 6hrs and every 8hrs. Only 98 (61.6%) respondents said breastfeeding should be for 2 years, the remaining 61 (38.4%) said breastfeeding should stop at either 15 or 18 months.

Respondents knowledge about the advantages and disadvantages of breastfeeding was also sought, and they all said that breastfeeding provides food for baby, prevents diseases, it is cheap and safe and it promotes mother to child bonding. Other advantages mentioned by

115 (72.3%), 154 (96.9%) and 147 (92.5%) of the respondents were that breast milk increases a child's intelligent quotient, that breastfeeding can protect the mother from breast cancer and that breastfeeding is a form of contraception respectively. On the other hand, when asked about the disadvantage(s) of breastfeeding, majority of the respondents [132 (83.0%)] said mother to child transmission (MTCT) of HIV is a disadvantage of breastfeeding. Fifty-two (32.7%) and 59 (37.1%) of the respondents respectively said breast pain and sagging of breast were disadvantages of breastfeeding; interestingly 4 (2.6%) said diarrhoea is a disadvantage of breastfeeding and 1 (0.6%) respondent said failure to thrive of the baby is another disadvantage. All respondents said water, protein, vitamins and antibodies are present inside the breast milk, but only 149 (93.7%) and 155 (97.5%) of them said breastmilk contains fat and carbohydrates respectively.

Knowledge score of respondents about breastfeeding showed that 100 (63%) of them had good knowledge while the remaining 59 (37%) had poor knowledge. (Figure 1)

Variables	Frequency (n=159)	Percentage (%)
Commencement of breastfeeding		
Immediately/within 30 minutes	151	95.0
> 30 minutes	8	5.0
Duration of EBF		
6 months	135	84.9
< 6 months (4 to 5 months)	24	15.1
Frequency of feeding		
On demand	121	76.1
Others*	38	23.9
When to stop breastfeeding		
≥ 2 years	98	61.6
< 2 years (15 months or 18 months)	61	38.4
Advantages of breastfeeding**		
Food provision	159	100.0
Disease prevention	159	100.0
Cheap and safe	159	100.0
Improves child's intelligent quotient	115	72.3
Promotes maternal-child bonding	159	100.0
Protects mother from breast cancer	154	96.9
A form of contraception	147	92.5
Disadvantages of breastfeeding**		
Breast pain	52	32.7
MTCT of HIV	132	83.0
Sagging of breast	59	37.1
Baby's mental retardation	0	0.0
Failure to thrive	1	0.6
Diarrhoea09/10/16	4	2.6
Constituents of breast milk**		
Water	159	100.0
Protein	159	100.0
Fat	149	93.7
Carbohydrate	155	97.5
Vitamin	159	100.0
Antibodies	159	100.0

Table 2: Knowledge of respondents about breastfeeding

Respondents' breastfeeding practices was further assessed. All of them had Antenatal clinic in their last pregnancy, 120 (75.5%) had spontaneous vaginal delivery (SVD) and 149 (93.7%) did not require special care for their babies, in all, 118 respondents had normal SVD with normal healthy baby. Out of this 118 respondents, only 93 (78.8%) initiated breastfeeding for their babies within 30 minutes, the remaining 25 (21.2%) initiated breastfeeding later, and reasons given were weakness of mothers after delivery [8 (32.0%)] and baby being asleep [8 (32.0%)]; 9 (36.0%) had no reason for initiating breastfeeding later. Respondents were also asked about their exclusive breastfeeding practices (EBF) as well as total duration of their breastfeeding. A hundred and eight said they practiced (or intend to practice for those still breastfeeding at the time of the study) EBF for 6 months and the remaining

51 (32.1%) practiced for less than 6 months. Reasons given by the 51 respondents were work [40 (78.4%)], post graduate education/schooling [10 (19.6%)] and the belief that EBF is not sufficient for a baby up to 6 months of age [8 (15.7%)]. In the same vein, only 40 (25.2%) of the respondents practiced (or intend to practice for those still breastfeeding) breastfeeding for as long as 2 years or beyond, the remaining 119 (74.8%) said they stopped breastfeeding before their babies became 2 years, usually at the age range of 12 to 18 months. Reasons were, they felt child has had enough breastmilk after 1 year [49 (41.0%)], they just decided to stop [42 (35.3%)], the child stopped taking breastmilk [25 (20.8%)] and 3 (2.9%) said because they did not know breastfeeding should be for 2 years. (Table 3)

Twenty-nine (18%) of respondents were therefore found to optimally breastfed their babies while the remaining 130 (82%) did not. (Figure 2)

Variables	Frequency (n=159)	Percentage (%)
Delivery mode of last pregnancy (n=159)		
Spontaneous vaginal delivery	120	75.5
Caesarean section	39	24.5
Baby admitted for special care after delivery (n=159)		
Yes	10	6.3
No	149	93.7
Breastfeeding initiation (n=118)		
Within 30 minutes	93	78.8
≥ 1 hour	25	21.2
Reasons for delaying breastfeeding (n=25)		
Mother's weakness	8	32.0
Baby sleeping	8	32.0
No reason	9	36.0
Duration/Planned duration of EBF (n=159)		
6 months	108	67.9
< 6 months	51	32.1
Reasons of EBF for less than 6months (n=51)*		
Work	40	78.4
School (Post-graduate)	10	19.6
EBF not sufficient for child	8	15.7
Alternatives to EBF (n=51)		
Infant milk formula	48	94.1
Homemade cereals (Pap)	3	5.9
Breastfed/intend to breastfeed for how long (n=159)		
≥2 years	40	25.2
<2 years	119	74.8
Reason for less than 2 years (n=119)		
Felt child has had enough after 1 year	49	41.0
Just decided to stop (By choice)	42	35.3
Child stopped taking it	25	20.8
Do not know breastfeeding is up to 2 years	3	2.9

Table 3: Breastfeeding Practices of Respondents

Respondents feeding practices of their babies at work was seen in Table 4. Majority [99 (62.3%)], resumed work when their babies were between 1 to 3 months of age, mean age of babies when their mothers resumed work was 3.48±2.53 months. Only 76 (47.8%) could breast-feed their babies directly at work, hence supplements to direct breast-feeding opted for included expressed breastmilk [60 (72.3%)], plain water [8 (9.6%)], milk formula [31 (37.3%)] and homemade cereal (pap) [19 (22.9%)]. Methods used to feed the babies were feeding bottles [22 (26.5%)], cup only [7 (8.4%)] as well as cup and spoon [75 (90.4%)]. The association between some of the respondents' demographic characteristics and their knowledge about breastfeeding is shown in Table 5. More respondents in the younger age group (66.7% of ≤25years and 67.7% of 26–35years) significantly ($p=0.018$) had good knowledge than the older age groups (43.5% of 36–45years and 0.0% of ≥46 years). Similarly respondents whose partners were professionals had good knowl-

edge significantly ($p=0.005$) more than others. More proportion of doctors (76.0%) were also found to have good knowledge than other health care workers, but this was not significant ($p=0.33$).

In Table 6, logistic regression analysis was done to show the predictors of respondents having good knowledge about breastfeeding and practicing EBF for 6 months. The odds of those in the age group 36-45 years having good knowledge about breastfeeding was 0.38 times less than those in the age group ≤ 25 years (OR 0.38; CI 0.05-2.43; $p=0.24$). Respondents whose partners were skilled and unskilled workers were 0.50 (OR 0.50; CI 0.11-2.30; $p=0.29$) and 0.25 (OR 0.25; CI 0.00-4.97; $p=0.23$) times respectively less knowledgeable about breastfeeding than respondents whose partners were professionals. Respondents with good knowledge about breastfeeding were 20.5 times significantly more likely to practice EBF than those with poor knowledge (OR 20.5; CI 8.09-53.43; $p<0.0001$)

Variables	Frequency (n=159)	Percentage (%)
Baby's age at resumption of work (months)		
1-3	99	62.3
4-6	51	32.1
> 6	9	5.7
Baby's mean age at work resumption (months)	3.48±2.53	
Breastfeeding directly at work (n=159)		
Yes	76	47.8
No	83	52.2
Supplements to direct breastfeeding (n=83)*		
Expressed breast milk	60	72.3
Plain water	8	9.6
Glucose water	0	0.0
Milk formula	31	37.3
Commercial cereal	0	0.0
Homemade cereal (Pap)	19	22.9
Feeding methods (n=83)*		
Feeding bottles	22	26.5
Cup only	7	8.4
Cup and spoon	75	90.4
Taking calls or shift (n=159)		
Yes	106	66.7
No	53	33.3
Baby's age when call/shift started (n=106)		
< 6 months	68	64.1
≥ 6 months	38	35.9
*multiple responses allowed		

Table 4: Respondents' Feeding Practices for Babies at Work

Variable	Knowledge category		χ ²	p value
	Good (n=100) Frequency (%)	Poor (n=59) Frequency (%)		
Age				
≤ 25	6 (66.7)	3 (33.3)	10.104	0.018*
26-35	84 (67.7)	40 (32.3)		
36-45	10 (43.5)	13 (56.5)		
≥ 46	0 (0.0)	3 (100.0)		
Religion				
Christian	82 (62.1)	50 (37.9)	0.007	0.93
Muslim	17 (63.0)	10 (37.0)		
Number of children				
1	43 (62.3)	26 (37.7)	0.787	0.85
2	39 (66.1)	20 (33.9)		
3	15 (60.0)	10 (40.0)		

4	3 (50.0)	3 (50.0)		
Designation				
Doctors	19 (76.0)	6 (24.0)	2.225	0.33
Nurses	63 (60.0)	42 (40.0)		
CHEWs/CHOs	18 (62.1)	11 (37.9)		
Partner's occupation				
Unemployed	0 (0.0)	5 (100.0)	12.767**	0.005*
Unskilled	1 (33.3)	2 (66.7)		
Skilled	5 (50.0)	5 (50.0)		
Professional	94 (66.7)	47 (33.3)		
*statistically significant, **Likelihood ratio value used				

Table 5: Association between the Socio-demographic Characteristics of Respondents and their Knowledge

Variable	Odds Ratio(OR)	95% Confidence Interval		p value
		Lower	Upper	
Predictors of having Good Knowledge about Breastfeeding				
Age group (years)				
≤ 25 (Ref)	1	-	-	-
26-35	1.05	0.16	5.22	0.95
36-45	0.38	0.05	2.43	0.24
≥ 46	0.00	0.00	2.11	0.046*
Partner's Occupation				
Professional (Ref)	1	-	-	-
Skilled	0.50	0.11	2.30	0.29
Unskilled	0.25	0.00	4.97	0.23
Unemployed	0.00	0.00	0.58	0.002*
Predictors of Practicing Exclusive Breastfeeding for 6 Months				
Knowledge				
Poor (Ref)	1			
Good	20.50	8.09	53.43	<0.0001*
*statistically significant				

Table 6: Predictors of having Good Knowledge about Breastfeeding and of practicing Exclusive Breastfeeding for 6 Months

Discussion

Twenty five years after “Innocenti declaration” to promote breastfeeding, there has been no appreciable improvement in the breastfeeding practices in Nigeria. There was a decline in EBF from 17.2% in 2003(19) to 13% in 2008 (20) and very minimal improvement of 17% was found in 2013.(21) One of the major channels for promoting breastfeeding should be the health sector - ante-natal clinics, delivery rooms, postnatal clinics, infant welfare/growth monitoring clinics etc. Healthcare workers should be responsible for this and they should ensure practices and training that promote, protect and support breastfeeding.

In this study, almost four-fifth of the respondents were in the age

range of 26-35 years old, this is similar to what has been reported in previous studies about breastfeeding among health care workers where the highest respondents were in this age range.(13,22,23) It is not surprising as the criteria for choosing respondents in this study would make them to be in their reproductive age and they will also be in the work force age since they were recruited from work. About 7 out of 10 respondents in this study were nurses, previous studies in Congo(24) and North Central part of Nigeria(12) have also reported similar finding, but another Southern Nigerian study carried out in Cross River State(13) showed a different finding with majority of the respondents being CHEWs and CHOs. The latter study was conducted in a single hospital where majority of the employees were CHEWs, whereas the

former two studies were conducted in different health facilities as it was also done in this study; hence the similarities and differences.

Over ninety percent knew that breastfeeding should commence immediately or within 30 minutes of delivery and over eighty percent knew breast milk only should be given up to six months of age. Although the frequency of those with right knowledge is high, but the few respondents who do not have the right knowledge is something that should not be overlooked because it could have a negative geometric effect as such healthcare workers will disseminate wrong information to uninformed audience. Early initiation of breastfeeding have been said to enhance maintenance of breast milk flow and the colostrums secreted from the breast immediately after delivery is highly nutritious and very rich in antibodies.^(12,25) Some studies have also reported knowledge gaps among healthcare workers in the initiation of breastfeeding and duration of EBF.^(3,13) Furthermore, it was observed in this study that only about 7 out of 10 respondents knew that babies should be fed “on demand”, and 6 out of 10 knew that breastfeeding should be continued for two years or more. Dachew and Bifttu in their study about breastfeeding knowledge and practice among nurses/midwives in North Ethiopia also observed that 66.3% of respondents knew breastfeeding should be for 24 months.⁽²²⁾ Similar proportion was also found among doctors in Benin,⁽³⁾ but Utoo et al identified a lesser percentage of 36.1% in Cross-River State.⁽¹³⁾ The lower proportion in the Cross-River study may be due to the fact that almost 70% of the respondents were CHEWs and CHOs. All the respondents in this study knew some of the advantages of breastfeeding such as food provision, diseases prevention and promotion of maternal-child bonding. Not all however knew that breastmilk could protect child from some chronic disease as well as protect mothers from breast cancer.

Studies have shown that beyond the immediate benefits for children, breastfeeding contributes to a lifetime of good health. It has been demonstrated that adults who were breastfed as infants have better blood pressure and cholesterol profiles, in addition to lower weights and incidence of type- 2 diabetes,^(13,26) and mothers who breastfeed have been said to have lower risk of developing breast cancer.^(27,28) Being equipped with thorough knowledge about these advantages is important for health care workers as this will help them to be able to educate and convince mothers on the importance of breastfeeding. Breastfeeding has also being said to serve as a form of short term contraception because of its effect in delaying return to menstruation.^(13,29) It is however important to note that practice of EBF for the first 6 months is important for this contraceptive effect to be possible. This may account for the reason why not all respondents admit that breastfeeding is a form of contraception.

Improper positioning and attachment, making the woman and baby uncomfortable as well as breast trauma could be painful; about a third of the respondents mentioned breast pain as a disadvantage of breastfeeding. It is however important to educate mothers that proper breastfeeding positioning, proper breast emptying and avoidance of trauma to the breast would prevent pains. Some women also believe breastfeeding distort their breast shape and more than a third of the respondents in this study identified sagging of breast as a disadvantage of breastfeeding. Utoo et al also reported that over twenty percent of healthcare workers believed breastfeeding causes sagging of breast.⁽¹³⁾ This erroneous belief could give negative impressions to nursing mothers as there are other factors such as pregnancy weight, mother's pre-pregnancy Body Mass Index (BMI), numbers of pregnancies and lots more that may cause sagging of breast but not breastfeeding per se.⁽³⁰⁾

In spite of its numerous advantages, one major shortcoming of breastfeeding in this era of HIV pandemic is mother to child transmission

(MTCT) of HIV; 5-15% of infants born to HIV positive women get infected with the virus via breastmilk,⁽³¹⁾ however World Health Organization issued guidelines to help healthcare workers with infant feeding counseling in the context of HIV. Current guidelines advocate that HIV positive mothers on Anti-Retroviral Therapy should exclusively breastfeed their infants for the first six months of life, introduce appropriate complementary foods thereafter, and continue breastfeeding for the first 12 months of life. Furthermore, the guidelines indicated that prophylactic antiretroviral (ARV) drugs during the breastfeeding period greatly reduce the risk of HIV transmission from mother to infant.^(32,33) Over eighty percent in this study identified MTCT of HIV as a disadvantage; they see the MTCT of HIV as a major obstacle to breastfeeding. Inadequate knowledge about the MTCT of HIV via breastmilk has also been reported in Nigeria.⁽¹³⁾ Healthcare workers need to have a comprehensive knowledge about breastfeeding in the context of HIV infection for the benefits of HIV positive mothers and other clients. There has been a reported case of healthcare workers erroneously believing that breastfeeding could cause mental retardation, failure to thrive and diarrhea.⁽¹³⁾ In this study too, a respondent identified failure to thrive as one of the disadvantages of breastfeeding and another four respondents mentioned diarrhea as disadvantage of breastmilk. This is grave and requires serious attention because passing such misleading information to clients is dangerous. Breastfeeding is a key strategy for resolving failure to thrive; it reduces gastrointestinal infection thus preventing diarrheal diseases and EBF for the first 6 months of life improves the growth, health and survival status of newborns.^(13,22,25,29) Successful breastfeeding is said to be crucial to the curbing of infant malnutrition.⁽³⁴⁾

Among 118 respondents who had normal spontaneous vaginal delivery and whose babies were not admitted for special care, almost four-fifth of them initiated breastfeeding for their babies within 30 minutes of delivery. Similar proportion of nurses were found to initiate breastfeeding immediately after delivery in Ethiopia,⁽²²⁾ but only about half of nursing mothers initiated breastfeeding immediately after delivery in a study carried out in Ile-Ife.⁽³⁴⁾ The lower proportion observed in the Ile-Ife study may be because it was carried out among the general population and they may not have positive attitude towards breastfeeding as much as healthcare workers. The remaining respondents in this study that initiated breastfeeding late gave reasons such as mother's weakness and baby being asleep while some had no reason for initiating breastfeeding late. Mother or child illnesses as well as inability of mothers to produce milk were given as reasons for the delayed initiation of breastfeeding in the Ethiopian study too.⁽²²⁾ Pre-empting these possible impediments is good for healthcare workers so as to ensure early initiation of breastfeeding.

Practice of EBF for up to 6 months among respondents in this study showed almost 7 out of 10 practiced it. Various previous studies have also shown that not all healthcare workers practice EBF for 6 months,^(29,35,36) even though that is the “gold standard” recommended by WHO.^(1- 3,5,25,37) Commonest reason given for non-sustenance of EBF for 6 months was work. With the present maternity leave of 4 months which starts a month prior to delivery of the woman's baby presently practiced in Nigeria, workers will resume to work before babies become 6 months, mostly when babies are around 3 months of age. This was reflected in this study with the value of the mean age of babies at the resumption of their mothers to work; the mean age of babies at mothers' resumption was similar to the mean age of babies at commencement of work by their mothers in another Nigerian study.⁽³⁾ Almost two-third of respondents in this study resumed work when their babies were 3 months or less and two-third have also started taking calls or running shift when their babies were less than

6 months old. Various studies within and outside Nigeria have also reported work resumption/tight work schedule as the commonest reasons given by healthcare workers for not breastfeeding exclusively for 6 months.^(3,22,29,36,38) Less than half of our respondents could breastfeed their babies directly at work, hence expressed breast milk and infant milk formula were resolved to as alternatives. Nursing mothers should be given special considerations at work in order to encourage and promote EBF if really we want to achieve significant improvement, arrangements and facilities to support breastfeeding such as comfortable crèches and flexible time/work schedule should be encouraged at workplaces. The International Labour Office on workers' rights and gender equality stipulates that the breastfeeding worker should be provided with the right to one or more daily breaks or a daily reduction of hours of work to breastfeed her child. She should have the right to interrupt her work for this purpose, and such interruptions or reductions in daily hours of work should be counted as working time and remunerated accordingly.⁽³⁹⁾ Ways to implement these rights for all nursing mothers should be ensured.

Another worrisome observation in this study was that only about a quarter of the respondents breastfed their babies for up to two years and above. Sadoh et al's study among medical women in Benin revealed that among those who had stopped breastfeeding, none breastfed up to 24 months, while among those still breastfeeding, only one person said she intended to breastfeed up to 24 months,⁽³⁾ likewise in Ethiopia, none of the respondents continued or planned to continue breastfeeding up to 24 months or beyond.⁽²³⁾ Less than a fifth of the respondents in this study were found to practice optimal breastfeeding.

Although, more proportions of doctors were found to exhibit good knowledge about breastfeeding in this study, the knowledge difference between the nurses and CHEWs/CHOs was not significantly different from that of the doctors. A study carried out in Nasarawa State, Nigeria however revealed doctors to have more knowledge significantly, followed by nurses.⁽⁴⁰⁾ Various recommendations that all cadres of healthcare workers should be exposed to adequate training about breastfeeding may have been yielding result, thus improving all healthcare workers knowledge level irrespective of the cadre.

Predictor of EBF for 6 months in this study was good knowledge and good attitude. Education has been suggested has a vital key to improve breastfeeding practices.^(13,22,36)

Conclusion and Recommendations

Respondents' knowledge about breastfeeding is good, although some knowledge gaps still exist. This study also showed that good knowledge about breastfeeding influences practice of EBF, but only this does not translate into optimal feeding practice. In addition, other factors such as work schedule affect breastfeeding practices generally. There should be more updated education for healthcare workers about breastfeeding to increase knowledge to maximal level. Policy makers should encourage employers to make workplaces more breastfeeding friendly in order to encourage nursing mothers to breastfeed their babies optimally. Healthcare workers practicing what they preach about breastfeeding will go a long way to encourage nursing mothers and 'would-be' mothers to breastfeed their infants optimally.

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