

# The World Health Organisation's recommendation on breastfeeding: Assessing knowledge and practice among mothers in Abuja, Northern Nigeria

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## Abstract

Despite the fact that breastfeeding remains the healthiest, simplest and least expensive means of meeting the nutritional needs of newborns and infants, the knowledge and practice as recommended by WHO remain low in most low-and middle-income countries. This study aims at exploring the gap in the knowledge of exclusive breastfeeding among mothers in Northern Nigeria as well as comparing their practises with the WHO recommendations. This was a cross-sectional facility-based study among 343 mothers in Abuja, Northern Nigeria. Data was collected over 8 weeks using a structured interviewer-administered questionnaire assessing knowledge and practise of breastfeeding based on the WHO recommendations. Data collected were analyzed using SPSS version 22. Chi square test of statistical significance was used to measure the degree of bivariate associations at a level of p < 0.05. Only 42.6% of the mothers had good general knowledge of breastfeeding. Exclusive breastfeeding for 6 months was practised by 232 (75.1%) mothers. Having more than one child was associated with good knowledge of breastfeeding ( $\chi^2 = 7.331$ , p = 0.007) while having poor knowledge of breastfeeding ( $\chi^2$ =5.722, p=0.017) was associated with exclusive breastfeeding practise. Commonest reasons for not practising exclusive breastfeeding were insufficient breast milk (38.7%) and resumption of work (19.8%). In this study, the practise of initiating breastfeeding within an hour after birth and exclusive breastfeeding are both in line with WHO recommendations. Continuous breastfeeding awareness campaigns are needed to improve knowledge and sustain the practise of exclusive breastfeeding.

# Introduction

Breastfeeding is the healthiest, simplest and least expensive means of meeting the nutritional needs of newborns and infants.<sup>1</sup> Breast milk is known to contain all essential nutrients; carbohydrates, essential fats, proteins, minerals, and immunological factors required for the optimal growth and development of infants in the required quantity; hence, it is the ideal meal for babies.<sup>2</sup> Globally, this practice is accepted by all cultures as the mainstay feeding for the newborn although cow milk can double as a substitute. Around the world, at least 95% of babies are breastfed at some point in their lives though this rate varies widely between countries.<sup>3</sup> In low and middle-income countries, 1 in 25 babies are never breastfed while 21% of babies in high-income countries

never receive breast milk.<sup>3</sup> Given the importance of breastfeeding, the World Health Organisation (WHO) adopted the "Innocenti Declaration" which emphasizes the need to initiate breastfeeding within the first hour of delivery.<sup>4</sup> This practise ensures that the infant receives colostrum which is rich in immunoglobulins and other bioactive molecules, including growth factors that are important for nutrition, growth, development of newborn infants and for building passive immunity. United Nations Children's Fund's (UNICEF) and WHO's global recommendations for optimal infant feeding as set out in the Global Strategy are, "exclusive breastfeeding (EBF) for 6 months, complementary feeding starting from the age of 6 months with continued breastfeeding for at least 2 years of age or beyond."5 This is also adopted by the National policy on infant and young child feeding in Nigeria.<sup>6</sup> EBF is a type of breastfeeding practise involving feeding on breast milk or expressed breast milk only, excluding water, breast milk substitutes, other liquids and solid foods, in the first 6 months of life.<sup>3</sup> The first two years of life provide a critical window of opportunity for ensuring children's appropriate growth and development through optimal feeding hence the recommendation that breastfeeding should continue for at least two years post-delivery.<sup>4</sup>

The advancement, fortification, and care of breastfeeding are exceptional economic strategies for improving child-wellbeing and decreasing the burden of childhood disease, particularly in developing countries.<sup>7</sup> Despite the benefits of breastfeeding, the rate of EBF remains low in most low-and middle-income countries resulting in over 1 million child mortalities and morbidities annually.<sup>2,8</sup> In most developing countries, only 39% of children aged less than 6 months are exclusively breastfed, and just about 58% of children 20–23 months old benefit from the practise of continued breast feeding, which highlights the poor overall breastfeeding practices in the world.<sup>9</sup> In sub-Saharan countries, while almost all children born in Nigeria are breastfed, the rate of EBF is low and declining – from 28% in 1999 to 27% in 2018 compared to 52.0% in Ghana and 58.0% in Togo.<sup>10,11</sup>

In Nigeria, changes in infant feeding practises have occurred over time due to factors such as alien cultures, values, education and urbanization with consequent changes in lifestyle.<sup>12</sup> Many policies and programs have been designed and implemented in Nigeria to address these factors. A lot of behavioural change communication interventions have focused on improving awareness, knowledge and information on breastfeeding practices. However, evidence from a study had posited that knowledge of EBF does not correlate with its practise; the fact that 65% of the respondents were informed of EBF did not guarantee their practicing it.<sup>13</sup>

In the Federal Capital Territory (FCT), Abuja, evidence also suggests that despite the health education provided at hospitals and communities on awareness of EBF up to six months, mothers are reluctant to stick to the teachings, making rates of adherence low.<sup>13</sup> Child nutrition programs worldwide consistently require investments and commitments to improve infant feeding practises in order to have maximum impact on children's lives.<sup>8</sup> This study therefore attempts to explore the gap in the knowledge and practises of breastfeeding among mothers and compare the practises with WHO's recommended breastfeeding practises.

### **Materials and Methods**

#### Study area

The study area is Abuja Municipal Area Council (AMAC) in the FCT. Until a few decades ago, AMAC was predominantly

inhabited by the Gbagyi people, however rapid urbanization spurred by the relocation of the seat of the government of the Federal Republic of Nigeria from Lagos to the council area in 1991 has turned it into a cosmopolitan metropolis, hosting people of different races and colours, as well as languages and tribes. The AMAC is further divided into 5 geographical districts namely Gwarimpa, Maitama, Wuse II, Wuse Zones 5 and 6, and Garki District. There are 486 hospitals in AMAC consisting of primary, secondary and tertiary facilities that are either private or public owned.<sup>14</sup>

## Study design, population and sampling

The study was a cross-sectional facility-based study and assessed the knowledge and practice of breastfeeding among

 Table 1. Socio-demographic characteristics of breastfeeding mothers in Abuja.

Variables	Frequency N = 343	Percentage (%)
Age Mean ± STD	31.32 ± 4.61	
Age Categorized 19 - 28 years 29 - 38 years 39 - 48 years ≥ 49 years	88 234 19 2	25.7 68.2 5.5 0.6
Marital status Single Married Separated Widowed Divorced	5 329 3 5 1	1.5 95.9 0.9 1.5 0.3
Religion Christian Islam Others	285 53 5	83.0 15.5 1.5
Tribe Igbo Yoruba Hausa Others	135 51 44 113	39.4 14.9 12.8 32.9
Educational Qualification Informal education Primary Secondary Tertiary Qur'anic	1 19 15 305 3	0.3 5.5 4.4 88.9 0.9
Employment status Student Unemployed Informally/Self-employed Formally employed	14 51 106 172	4.1 14.9 30.9 50.1
Number of Children Mean ± STD	$1.59\pm0.61$	
Number of Children Categorized 1 <4 >4	d 163 159 21	47.5 46.4 6.1
Age of last Child < 6 months 6 - 12 months 1 - 2 years 2 - 5 years	143 83 66 51	41.7 24.2 19.2 14.9



mothers of infants, above 18 years of age assessing maternal and child healthcare services in secondary health facilities within AMAC using quantitative study instruments for a period of 8 weeks from April to June, 2019.

Gwarimpa district was selected for the study. The secondary health facilities within this district were further stratified into public and private owned, and from each stratum, 2 public (Federal Medical Centre, Jabi and Federal Medical Centre, Gwarimpa) and 2 private facilities (Nisa Premier Hospital, and Arewa Specialist Hospital) were selected. Fisher's statistical formula using a prevalence of 65% from a previous study was used to determine the minimum sample size of 400 for the study.<sup>13</sup> The sum of the average two-monthly attendance rates for ante-natal, post-natal and immunization clinics in the 4 facilities was calculated to get the sampling frame. The sample size was proportionately allocated to the facilities according to their patient load and the study participants were selected using systematic random sampling during their clinic visits. Three hundred and forty-three (343) questionnaires were retrieved bringing the response rate to 85.75%.

#### Data collection and analysis

The study instrument was a structured interviewer-administered questionnaire comprising of 3 sections on socio demographics, knowledge and practise of breastfeeding. Knowledge was assessed using 15 questions extracted from WHO tool for assessing national practises, policies and programmes on breastfeeding.<sup>15</sup> Each correct answer scores one point. The practise of EBF was assessed with eight questions based on WHO recommended EBF practise.<sup>4</sup> This measurement assessed such practices such as; initiation of breastfeeding within an hour after birth, practice of EBF and other questions to enlist responses peculiar to breastfeeding practises.

Data entry and analysis was done using Statistical Package for Social Sciences (SPSS) version 22. Descriptive statistics, frequen-

Table 2	Knowledge	of breastfeeding	among mothers	in Abuia
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cies and proportions were derived for categorical variables. Chi square test of statistical significance, student t-test and multivariate analysis using binary logistic regression analysis were used in the analysis. Level of statistical significance was set at predetermined p-value of <0.05.

Ethical approval for the study was obtained from the Health Research and Ethics Committee of Federal Capital Territory with number FHREC/2019/01/54/13-05-19. Approval was also sought from the management of selected health facilities. Written informed consents were obtained from the participants with detailed accounts of the study objectives, procedures, risks and benefits.

## Results

Table 1 above shows the socio-demographic characteristics of respondent. The mean age of the participants in this study is 31.32  $\pm$  4.61 years with the highest proportion of respondents within the age group 29-38 years. Majority of the respondents were married (95.9%), Christians (83.0%) and had tertiary educational qualifications (88.9%). On the employment status of the respondents, about half (50.1%) were found to be in formal employment while others were self-employed (30.9%), unemployed (14.9%) or students (4.1%). A total of 343 mothers participated in this study. The majority of them (92.1%) knew that the best time to initiate breastfeeding is within an hour after birth. However, 25.4% did not know that exclusively breastfed children should not receive any other food apart from breast milk. Likewise, only 5 respondents reported that EBF should last for 6 months from birth. Only 144 (42.0%) of the respondents knew that children should be breastfed for up to 2 years of age. The assessment of knowledge of breastfeeding among mothers showed that less than fifty per cent (42.6%) of the mothers had good knowledge while majority (57.4%) demonstrat-

Variable		wledge = 343
	True n (%)	False n (%)
The best time for initiating breastfeeding is within an hour after birth	316 (92.1)	27 (7.9)
Ever heard of exclusive breastfeeding	330 (96.2)	13 (3.8)
Recommended duration for exclusive breastfeeding is 0 - 6 months	301 (87.8)	42 (12.2)
First yellowish breast milk (colostrums) expressed by mother has high nutritional and protect	ive value 333 (97.1)	10 (2.9)
Breast milk contains enough water for baby's needs in the first 6 months of life	321 (93.6)	22 (6.4)
Bottle feeding has adverse effects on baby's health	215 (62.7)	128 (37.3)
Correct age to start weaning baby is after six months	56 (16.3)	287 (83.7)
Exclusively breastfed children should not be given anything else	256 (74.6)	87 (25.4)
Recommended duration to continue breast feeding is at least for 2 years	144 (42.0)	199 (58.0)
A mother who delivered through caesarian section should start breastfeeding immediately after	er birth 306 (89.2)	37 (10.8)
The immunity factors in breast milk can help the baby to fight off infections	308 (89.8)	35 (10.2)
Breast milk contains vitamins and enzymes which aid the baby's digestion	265 (77.3)	78 (22.7)
Breast milk is the ideal form of nutrition for infants	299 (87.2)	44 (12.8)
Breastfeeding mothers return to their pre-pregnancy weight faster than those who do not breast	astfeed 158 (46.1)	185 (53.9)
Breastfeeding reduces mothers' risk for breast and ovarian cancer	234 (68.2)	109 (31.8)
Knowledge categorized		
Poor	197 (57.4)	
Good	146 (42.6)	

Categorized into Poor and Good knowledge using average score of 12 out of 15 points.



ed poor knowledge (Table 2).

Table 3 shows the breastfeeding practises of nursing mothers. Out of 343 respondents who participated in this study, 309 (90.1%) breastfed their babies with 259 (75.5%) initiating breastfeeding immediately after birth. According to WHO recommendation, EBF till six months was practised by 232 (75.1%) mothers. Only 6 (1.7%) of the respondents' breastfed their babies for up to 2 years as recommended. More than two-third of the respondents (86.1%) breastfed their babies on demand and majority (89.2%) would recommend EBF to other mothers.

Table 4 reveals reasons for not adhering to the recommendation of EBF. The majority of the respondents felt breast milk is insufficient for their babies 43 (38.7%) while only one respondent (0.9%) feels EBF is not necessary.

Table 5 outlines the factors associated with knowledge of breastfeeding. Mothers with more than a child (61.0%) had better knowledge when compared with their counterparts with just one child (39.0%) and the difference in proportion was found to be statistically significant ( $\chi^2 = 7.331$ , p = 0.007). Respondents more than 30 years (52.1%) were slightly more knowledgeable on breastfeeding than the younger mothers. This finding was however not statistically significant ( $\chi^2 = 0.056$ , p = 0.813).

In Table 6, a significantly higher proportion of respondents with poor knowledge (53.0%) had better EBF practise when compared with those with good knowledge ( $\chi^{2}$ =5.722, p=0.017).

## Discussion

From the result, majority (87.8%) of the mothers knew that EBF should last for the first six months of life. The duration of EBF is a good index in accessing the knowledge of breastfeeding as recommended by the WHO as mothers who know the recommended duration are expected to practice it. This finding is higher than that reported by Odu et al (64.6%) in Osun, South-west Nigeria.<sup>12</sup> This is surprising as the study was conducted mainly in the urban area among mothers of infants attending infants Welfare Clinics where the WHO recommended baby-friendly practices are expected to be optimal. Across different countries in East Africa, findings from a systematic review revealed that only 49.2% of the mothers knew that the expected duration of EBF was for the first six months of life.16 This finding is limited as majority of the studies included in the review had small sample size, thereby restricting generalisation of the findings. Again the literacy levels and access to health information is expected to vary across various East African countries.

The overall knowledge of breastfeeding in this study is 42.6%. The WHO recommended baby-friendly policy implores education of women on the practice and benefits of breastfeeding during ante-natal and post-natal health services. This Baby Friendly Hospital Initiative (BFHI) was introduced in Nigeria in 1992 and Onah *et al.* in his study, revealed that contact with BFHI designated hospitals increase both WHO recommended knowledge and practise.<sup>17</sup> The prevalence recorded in this study is inadequate considering the fact that the study was carried out on mothers attending maternal and child health clinics where they are expected to

### Table 3. Breastfeeding practises among mothers in Abuja as recommended by WHO.

Variables	Frequency	Percentage
Breastfed baby		
Yes	309	90.1
No	34	9.9
Initiated breastfeeding within an hour after birth	n=309	
Yes	259	83.8
No	50	16.2
Exclusively breastfed baby for 6 months	$O_{\lambda}$	
Yes	232	75.1
No	77	24.9
Breastfeeding pattern opted for	n=77	
Supplemental feeding (introduction of water/formula)	30	25.9
Predominant feeding (breast milk is the predominant diet, no formula)	33	62.9
Any breastfeeding (introduction of water, infant formula, any other liquids)	14	8.6
Time breastfeeding was stopped		
No breastfeeding at all	34	9.9
At 6 months	33	9.6
Between 6 and 12 months	131	38.2
Between 12 and 18 months	118	34.4
Between 18 and 24 months	21	6.1
After 24 months	6	1.7
Timing of breastfeeding	n=309	
Hourly	43	13.9
On demand	266	86.1
Duration of breastfeeding	n=309	
Until baby is satisfied	240	77.7
5-20 minutes	47	15.2
>20 minutes	22	7.1
Recommendation of exclusive breastfeeding to others		
Yes	306	89.2
No	37	10.8



acquire adequate knowledge on breastfeeding from trained health workers. However, this finding is higher than 31% recorded in Sokoto, Nigeria.<sup>18</sup> Higher levels of knowledge have been reported among attendant mothers in other Nigerian studies; FCT Abuja (65%),<sup>13</sup> Osun, South-west (71.3%)<sup>19</sup> and Nnewi, South-east (82%).<sup>17</sup> These higher levels of knowledge reported in these studies could be related to their sources of information and the quality of baby-friendly services traditionally available at their respective health facilities. Additionally, the higher level of knowledge reported in a previous study<sup>13</sup> within the same study area could be attributed to the study population who were working mothers with supposedly higher level of education than those in the present study. Across different African countries, findings from a study in Uganda and a systematic review of sixteen East African countries reveal the prevalence of 62.6% and range of 41.4 to 97.5% in these

### Table 4. Main reason for not practising EBF.

Variables	Frequency N = 111	Percentage (%)
Breast milk insufficiency	43	38.7
Resumption of work	22	19.8
Baby needs water also	12	10.8
Baby was too demanding	10	9.0
Unwillingness of the child to suckle	8	7.2
Mother's preference	7	6.3
Nursing makes breasts feel less sexual	6	5.4
Medical complications	2	1.8
Don't think it is necessary	1	0.9

regions respectively.<sup>16,20</sup> Breastfeeding practices in this study were analyzed using different variables based on WHO recommendations. Among the recommendations is initiation of breastfeeding within an hour after birth. Initiation of breastfeeding in the first hour of a baby's life establishes an emotional bond between mother and baby.<sup>15</sup> This practice is important for child growth and development as delays in early initiation to breastfeeding has been linked to neonatal mortality.<sup>15</sup> Out of the 309 mothers that breastfed their babies, 83.8% initiated breastfeeding within an hour after birth. This value is higher than 19.2% of children breastfed within one hour of birth based on the Nigerian 2018 National Nutrition and Health Survey (NNHS) prevalence but lies within the range of 17.7% to 98.4% (average 57.6%) based on WHO Global Survey on Maternal and Perinatal Health.<sup>10,21</sup> Contrary to this finding, a lower proportion of Nigerian mothers initiated breastfeeding immediately after birth in Sokoto (53%),<sup>18</sup> Osun (45%)<sup>22</sup> and Katsina (38%).<sup>23</sup> In some parts of the country, there are beliefs that the first milk from the breast (colostrum) is harmful hence they delay early breastfeeding initiation, awaiting the flow of the unspoilt pure milk.<sup>18,24</sup> In other African countries, initiation within one hour after delivery was reported by 39.4% mothers in Ghana,25 68.6% in Uganda,<sup>20</sup> 72.9% of the mothers in East Africa<sup>16</sup> and 76.9% in Malawi.<sup>26</sup> This variation could still be related to the varying level of maternal literacy and cultural practices obtainable across these African countries.

Exclusive breastfeeding in this study was practised by twothirds (75.1%) of the mothers in this study. This result is higher than report of the WHO global survey (57.6%), though below the 90% recommended by WHO.<sup>15,21</sup> Across the zones in Nigeria, though the practise of breastfeeding is preserved in their culture, the prevalence of EBF for the recommended six months duration

Table 5. Factors associated with knowledge of breastfeeding among mothers in Abuja.

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Variable	Know	ledge	$\chi^2$	p-value
	Good	Poor		
	N = 146	N = 197		
ge Categorised				
≤30 years	70 (47.9)	97 (49.2)	0.056	0.813
>30 years	76 (52.1)	100 (50.8)		
Aarital status				
Single	3 (2.1)	11 (5.6)	2.667	0.102
Married	143 (97.9)	186 (94.4)		
ribe				
Igbo	57 (39.0)	78 (39.6)	4.599	0.204
Yoruba	19 (13.0)	32 (16.2)		
Hausa	25 (17.1))	19 (9.6)		
Others	45 (30.8)	68 (34.5)		
Educational Qualification				
Informal education	0 (0.0)	1 (0.5)	6.713	0.152
Primary	5 (3.4)	14 (7.1)		
Secondary	3 (2.1)	12 (6.1)		
Tertiary	137 (93.8)	168 (85.3)		
Qur'anic	1 (0.7)	2 (1.0)		
Employment status				
Employed	123 (84.2)	155 (78.7)	1.692	0.193
Unemployed	23 (15.8)	42 (21.3)		
Number of Children Categorized				
1	57 (39.0)	106 (53.8)	7.331	0.007
1	89 (61.0)	91 (46.2)		
ge of last child				
$\leq 1$ year	100 (68.5)	126 (64.0)	0.767	0.381
>1 year	46 (31.5)	71 (36.0)		

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varies; in Lagos (3.6%)<sup>27</sup> and Osun (19%)<sup>22</sup> states in the Southwest, Enugu (26%)<sup>28</sup> in the South-east, Katsina (6.7%)<sup>23</sup> and Sokoto  $(31\%)^{18}$  in the North. This is an indication that the majority of mothers introduce complementary foods too early which are often of poor nutritional value to their infants.<sup>6</sup> This variation in the prevalence of EBF remains a major concern and could be attributed to socio-cultural and religious practises/beliefs associated with child birth, feeding and nurturing practices among the various ethnic groups in Nigeria. In a Ghanaian study having a population of predominantly working mothers; it is not surprising that only 27.7% reported having exclusively breastfed their babies for the first 6 months.<sup>25</sup> The majority of mothers here had to discontinue breastfeeding on resumption of work. In other African countries such as Uganda and Malawi, less than 50 percent (42.1%) and 61.2% of mothers practised EBF respectively.<sup>20,26</sup> Across different countries in East Africa, the prevalence of EBF was recorded as 55.9%.16 This low level of practice of WHO recommended EBF pattern among mothers in Africa is not unconnected to the gap in level of knowledge on breastfeeding recorded in that region as mothers had poor knowledge on duration of breastfeeding, breastfeeding on demand and benefits of colostrum.

On bivariate analysis, number of children was associated with the level of breastfeeding knowledge in this study. Mothers with more than one child had better knowledge on breastfeeding than those with a child. This is expected as experience advances knowledge. Their years of experience usually would give them better insight into their babies' demands and possible ways to improve their welfare. Similar findings have been reported in other African countries such as Malawi and Ethiopia where secundipara women

having gained experience from previous pregnancies, have better knowledge on initiation of breastfeeding.<sup>26,29</sup> It is however, surprising that mothers who have poor knowledge had better breastfeeding practise than those with good knowledge in this study. This goes a long way in confirming the general perception that good knowledge does not always translate to good practice. A similar finding was reported in a previous study in AMAC Abuja, as knowledge of EBF in this study did not correlate with its practise; the fact that 65% of the respondents were informed of EBF did not guarantee their practicing it.<sup>13</sup> This could be attributed to the fact that Abuja, being the FCT has a lot of women in the civil service, who though knowledgeable, might not be disposed (due to tight work schedule) to practice optimal breastfeeding as recommended by WHO. Working mothers such as civil servants have shown over the years their inability to practise EBF in a previous study in the study area.13 This was corroborated by 19.8% of the mothers who claimed the reason for nonpractice of EBF was because of their jobs. Maternity leave in Nigeria does not exceed four months hence the mothers need to return back to work after this leave or risk losing their jobs. Though the National breastfeeding policy advocates that public and private places of employment provide crèches and establish flexible nursing periods during the working hours, this is yet to be accomplished.<sup>6</sup> Again, the belief by 38.7% of mothers in this study that breast milk is insufficient alone for babies less than six months has been a recurring challenge reported in previous studies.<sup>22,24,28</sup> This, among other reasons is a myth that could have a socio-cultural undertone hence the need for continuous and intensified health education and promotion activities in this area. Contrary to this finding, mothers in a Ghanaian study that had adequate knowledge about EBF adopted the

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Table 6. Factors	associated wit	h exclusive	breastfeeding	practise amor	o mothers	in Abilia.
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Variable	Exclusive br		$\chi^2$	p-value
	Yes N = 232	No N = 111		
Age categorised				
≤30 years >30 years	112 (48.3) 120 (51.7)	55 (49.5) 56 (50.5)	0.049	0.825
Marital status Single Marri <ed< td=""><td>11 (4.7) 221 (95.3)</td><td>3 (2.7) 108 (97.3)</td><td>0.797</td><td>0.372</td></ed<>	11 (4.7) 221 (95.3)	3 (2.7) 108 (97.3)	0.797	0.372
Tribe Igbo Yoruba Hausa Others	91 (39.2) 37 (15.9) 27 (11.6) 77 (33.2)	44 (39.6) 14 (12.6) 17 (15.3) 36 (32.4)	1.370	0.713
Educational qualification Informal education Qur'anic Secondary Tertiary Primary	$\begin{array}{c} 0 \ (0.0) \\ 1 \ (0.4) \\ 11 \ (4.7) \\ 211 \ (90.9) \\ 9 \ (3.9) \end{array}$	$\begin{array}{c}1 \ (0.9)\\2 \ (1.8)\\4 \ (3.6)\\94 \ (84.7)\\10 \ (9.0)\end{array}$	7.823	0.098
Employment status Employed Unemployed	186 (80.2) 46 (19.8)	92 (82.9) 19 (17.1)	0.359	0.549
Number of children Categorized 1 >1	109 (47.0) 123 (53.0)	54 (48.6) 57 (51.4)	0.084	0.773
Age of last child ≤ 1 year >1 year	156 (67.2) 76 (32.8)	70 (63.1) 41 (36.9)	0.583	0.445
Knowledge Good Poor	109 (47.0) 123 (53.0)	37 (33.3) 74 (66.7)	5.722	0.017





practice.<sup>25</sup> This positive correlation could be linked to the high level of understanding of the importance of breastfeeding among participants in the study.

## Conclusions

Among mothers in this study, the overall knowledge of breastfeeding was poor. Initiation of breastfeeding immediately after birth and the practice of EBF are both in line with WHO recommendations. The belief that human milk is not sufficient food for infants in the first six months of life and pressure to resume work were major challenges of EBF in this study. To sustain WHO recommended EBF practises, health education during antenatal/postnatal clinics should be intensified.

This is the first study in Abuja Nigeria, comparing the variables with WHO recommendations. However, the study is subject to some limitations. The measurement of knowledge and practise of breastfeeding could only be acquired from the questions regarding a 24 hour–recall knowledge of breastfeeding and practise, thus recall bias and social desirability bias are likely occurrence.

# References

- 1. Ballard O, Morrow AL. Human Milk Composition: Nutrients and Bioactive Factors. Pediatr Clin North Am 2013;60:49–74.
- 2. Adewuyi E, Adefemi K. Breastfeeding in Nigeria: a systematic review. Int J Community Med Public Heal 2016;3:385–96.
- United Nations Children Fund (UNICEF). Breastfeeding. A Mother's Gift, for Every Child. 2018. Accessed on 15/10/2020. Available from: https://www.unicef.org/publications/files/ UNICEF Breastfeeding A Mothers Gift for Every Child.pdf
- 4. Kramer MS, Kakuma R. The Optimal Duration of Exclusive Breastfeeding: a Systematic Review. World Heal Organ. 2002. Available from: https://www.who.int/nutrition/publications/optimal duration of exc bfeeding review eng.pdf
- World Health Organization (WHO). Infant and young child feeding: Model Chapter for textbooks for medical students and allied health professionals. 2009. Accessed on: 15/07/20. Available from: https://apps.who.int/iris/bitstream/handle/ 10665/44117/9789241597494\_eng.pdf?ua=1
- National Policy on Infant and Young Child Feeding in Nigeria. Federal Ministry of Health, Nutrition Division ABUJA. 2005.
- World Health Organization (WHO). Community-based strategies for breastfeeding promotion and support in developing countries. 2003;570:40. Accessed on 17/5/2020. Available from: http://apps.who.int/iris/bitstream/10665/42859/1/ 9241591218.pdf
- Cai X, Wardlaw T, Brown DW. Global trends in exclusive breastfeeding. Int Breastfeed J 2012;7:12.
- Issaka AI, Agho KE, Renzaho AMN. Prevalence of key breastfeeding indicators in 29 sub-Saharan African countries: A metaanalysis of demographic and health surveys (2010-2015). BMJ Open 2017;7:e014145.
- National Bureau of Statistics (NBS) and United Nations Children's Fund (UNICEF). 2018 National Nutrition and Health Survey, Report. Abuja, Nigeria. NBS and UNICEF.
- Agho KE, Ezeh OK, Ghimire PR, et al. Exclusive Breastfeeding Rates and Associated Factors in 13 "Economic Community of West African States" (ECOWAS) Countries. Nutrients 2019;11:3007.
- 12. Odu S, Deji SA, Amu E, Aduayi V. Knowledge, Attitude and

Practice of Exclusive Breastfeeding Among Mothers Attending an Infant Welfare Clinic in Osogbo, Osun State, Nigeria. Eur J Prev Med 2016;4:39-43.

- Udoudo IOA, Ajayi PH. Working Mother Attitude and Practices of Exclusive Breastfeeding in Amac, Fct-Abuja. Int J Res Sociol Anthropol 2015;1:28–36.
- Federal Ministry of Health. Nigeria Health Facility Registry. Accessed on 11/9/2020. Available from: https://hfr.health.gov. ng/facilities/hospitals-list
- World Health Organization (WHO). Infant and young child feeding. A tool for assessing national practices, policies and programmes. Geneva. 2003. Accessed on 15/10/2020. Available from: https://apps.who.int/iris/bitstream/handle/ 10665/42794/9241562544.pdf
- Dukuzumuremyi JPC, Acheampong K, Abesig J, Luo J. Knowledge, attitude, and practice of exclusive breastfeeding among mothers in East Africa: a systematic review. Int Breastfeed J 2020;15:70.
- Onah S, Osuorah DIC, Ebenebe J, et al. Infant feeding practices and maternal socio-demographic factors that influence practice of exclusive breastfeeding among mothers in Nnewi South-East Nigeria: a cross-sectional and analytical study. Int Breastfeed J 2014;9:6.
- Oche MO, Umar AS, Ahmed H. Knowledge and practice of exclusive breastfeeding in Kware, Nigeria. Afr Health Sci 2011;11:518-23.
- Mbada CE, Olowookere AE, Faronbi JO, et al. Knowledge, attitude and techniques of breastfeeding among Nigerian mothers from a semi-urban community. BMC Res Notes 2013;6:552.
- 20. Adrawa AP, Opi D, Candia E, et al. Assessment of the Knowledge and Practices of Exclusive Breastfeeding amongst the Breastfeeding Mothers in Adjumani District, West Nile. East Afr Med J 2016;93:576-81.
- 21. Takahashi K, Ganchimeg T, Ota E, et al. Prevalence of early initiation of breastfeeding and determinants of delayed initiation of breastfeeding: secondary analysis of the WHO global survey. Sci Rep 2017;7:44868.
- Agunbiade OM, Ogunleye OV. Constraints to exclusive breastfeeding practice among breastfeeding mothers in Southwest Nigeria: implications for scaling up. Int Breastfeed J 2012;7:5.
- National Bureau of Statistics (NBS) and United Nations Children's Fund (UNICEF). Multiple indicator cluster survey 2016–17, Survey Findings Report. Abuja: National Bureau of Statistics and United Nations Children's Fund; 2017.
- Joseph FI, Earland J. A qualitative exploration of the sociocultural determinants of exclusive breastfeeding practices among rural mothers, North West Nigeria. Int Breastfeed J 2019;14:38.
- Nukpezah RN, Nuvor SV, Ninnoni J. Knowledge and practice of exclusive breastfeeding among mothers in the tamale metropolis of Ghana. Reprod Health 2018;15:140.
- Nkoka O, Ntenda PAM, Kanje V, et al. Determinants of timely initiation of breast milk and exclusive breastfeeding in Malawi: a population-based cross-sectional study. Int Breastfeed J 2019;14:37.
- Akodu SO, Njokanma OF, Kehinde OA. Exclusive breastfeeding practices among women attending a private health facility in Lagos, Nigeria. Niger J Paed 2014;41:345–9.
- Bisi-onyemaechi AI, Chikani UN, Ubesie AC, et al. Factors associated with low rate of exclusive breastfeeding among mothers in Enugu, Nigeria. Int J Res Med Sci 2017;5:3776.
- Liben ML, Yesuf EM. Determinants of early initiation of breastfeeding in Amibara district, Northeastern Ethiopia: a community based cross-sectional study. Int Breastfeed J 2016;11:7.