



## Exclusive Breastfeeding among Women in Rural Suburbs of Federal Capital Territory, Abuja, Nigeria

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### ABSTRACT

**Background:** The feeding of an infant with breast milk only, to the exclusion of all other feeds - liquids or solids, including water - except prescribed medications; within the first half year of life is referred to as exclusive breastfeeding (EBF). Despite its numerous benefits, not many mothers practiced it because of one barrier or the other. This study estimated the prevalence of EBF established the major barriers thereof and determined the link between socio-demographic characteristics and the practice of EBF among women living in the rural suburbs of Federal Capital Territory, Abuja, Nigeria. **Methodology:** This study was descriptive cross-sectional in design. **Results:** Among the 370 subjects, 49% practiced EBF. None of the respondents made PNC visit specifically for the purpose of learning or asking questions about breastfeeding. Nonetheless, 18.5% received breastfeeding education during PNC visit. A large proportion of the subjects did not practice EBF because they were not aware (21.1%) of it. Medical reasons, which included HIV positive mothers and those with breast disease constituted the least barriers (1.3%). EBF was prominently linked with maternal education, type of work, delivery place, skilled attendance at birth, husband's education, and occupation ( $p < 0.05$ ). **Conclusion:** Capacity building for healthcare personnel on breast feeding, establishment of facilities as close to the communities as possible with their active participation in the planning, implementation and monitoring of EBF practice is recommended. Emphasis should be laid on the need for breastfeeding during antenatal period and then postnatal just before discharge.

**Keywords:** Breast milk, Maternal health, Nigeria

### INTRODUCTION

Exclusive breastfeeding (EBF) is the feeding of an infant with breast milk only, to the exclusion of all other feeds - liquids or solids, including water - except prescribed medications, during the first 6 months of life [1]. It is a key strategy to ensure and maintain both physical and psychological benefits for mothers, infants, and young children [2]. World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommend that EBF should be started immediately after delivery within the first hour of neonatal life, and on demand (that is as often as the child wants, day and night) without use of any artificialities, until the end of the first half year of life [1]. Thereafter infants should receive complementary foods with continued breastfeeding till the second years of life or beyond [1]. EBF reduces infant mortality due to common childhood illnesses such as diarrhea or pneumonia, and promotes sensory and cognitive development [1].

In the prevention of mother to child transmission (PMTCT) of HIV in tropical Africa, adoption of exclusive breastfeeding strategy becomes even more pertinent [3]. This is because breastfeeding is part and parcel of the cultures and traditions across Africa and it will take a herculean number of disincentives for a nursing mother to refuse or abandon breastfeeding her baby, especially when other people are present to ensure compliance. Furthermore, the prevailing poverty and general lack within Africa make it virtually impossible for most of the women to afford artificial feed for their infants [4,5].

The key deterrents to practice of exclusive breastfeeding include excuses of stressfulness, mother's outright refusal for no particular reason, or just that EBF is unnecessary [6]. Agho et al. [5] found a national prevalence for EBF of 16.4% using data obtained from the NDHS of 2003. EBF can be quite challenging, no doubt, particularly for public servants such as bankers and health professionals. For example, Sadoh, et al. [6] found 11.1% prevalence of EBF among medical women in southern Nigeria, citing busy work schedule as the major barrier.

Agunbiyade and Ogunleye [7] in a study breastfeeding mothers in southwest Nigeria found a prevalence of 16%, citing baby's continued hunger after feeding, maternal health problem, fear that their infants could get addicted to breast milk, breast pains, and undue pressure from mothers-in-law to stop breastfeeding, as some of the barriers. Furthermore, Ugboaja, et al. [3] reported a higher but not impressive prevalence of 35.9% among urban women in southeast Nigeria. Other studies [4,5,7] have linked the persistence of these harmful breastfeeding practices to the influence of the grandmothers. In addition, good maternal education, antenatal and postnatal care attendances have been significantly associated with increased EBF while increasing maternal age tends to have the opposite effect [8].

WHO recommends that baseline care for all new born should include promoting, supporting, and sustaining early and exclusive breastfeeding among others [9]. However, not much is known about contemporary EBF practice and about the setbacks thereof, particularly among women residing in the rural suburbs of the Federal Capital Territory (FCT), Abuja, Nigeria. The findings of this study may provide more information on the practice of EBF in rural suburbs of the FCT. It will hopefully contribute to fine-tune and enrich the breast-feeding policy of the country. Furthermore, the findings will be used as health education tools for communities and the general public, and will serve as an important database for subsequent research.

The objectives of this study are to estimate the prevalence of EBF among women in rural suburbs of the FCT, investigate the major set-backs to EBF and determine the relationship between socio-demographic and their practice of EBF.

## METHODOLOGY

Study took place in the rural suburbs of Abuja the Federal Capital Territory (FCT) of Nigeria. Abuja is bordered by Kaduna, Niger, Nasarawa, and Kogi states to the West, East, southeast and southwest respectively [10]. There are two seasons in the territory in a year, consisting of a rainy season from March to October, and a dry season from October to March, with characteristic bright sunshine [10]. FCT population going by the 2006 National Population and Housing Census is approximately 1.4 million, with women of reproductive age group 14-49 years constituting 370,683 [11]. There are six area councils in Abuja namely: Abaji, Abuja Municipal, Bwari, Gwagwalada, Kuje, and Kwali [10]. It is a melting pot of people from various parts of the country, including the natives who reside mainly within the traditional land marks of the rural suburbs. The city and towns within the FCT are occupied predominantly by government workers and private business owners, while a large number of inhabitants of the rural suburbs are farmers who have little or no formal education.

People commute within the FCT by means of buses and taxis. Water supply is regular in the city and towns, but epileptic in the rural suburbs and the major source is the Lower Usuma Dam. Similarly, electricity supply is unevenly distributed with varying degrees of stability and efficiency from one place to the other. Malaria is endemic and together with other communicable and non-communicable diseases constitutes major public health concern.

### Study Population

The target population is made up of women resident within the rural suburb of Abuja, who have ever given birth and breastfed their babies in the past 5 years.

### Study Design

A descriptive, cross sectional questionnaire-based evaluation of exclusive breastfeeding was conducted.

### Sample Size Estimation

The sample size was calculated using the Leslie-Kish formula [12]:

$n = Z^2 pq / d^2$ , where  $n$  is the desired sample size,  $Z$  is standard normal deviation taken as 1.96,  $p$  is prevalence taken as 35% (0.35)<sup>13</sup>,  $q = 1 - p$  (0.65), and  $d$  is degree of precision taken as 5% (0.05).

$$n=(1.96)^2 \times 0.35 \times 0.65/(0.05)^2 = 0.873964/0.0025 = 350$$

Add 10% (35) for non-response = 385.

### Inclusion Criteria

Consenting women within the reproductive age group of 15-49 years, who have ever given birth and breastfed their babies in the last 5 years and currently lives in the rural suburb of FCT.

### Sampling Technique

Multistage sampling technique was adopted beginning with selection of 3 area councils, Bwari, Gwagwalada and Kuje by simple random sampling technique from a sample frame of all the 6 area councils, in the FCT. One ward was chosen by simple random sampling method from a sampling frame of all the wards in each area council. Finally, one village was chosen, again by simple random sampling technique from a frame of the villages in each selected ward leading to the emergence of the following final study areas: Ushafa village in Bwari, Dobi in Gwagwalada, and Bako in Kuje. Using the WHO cluster sampling method, eligible households/ study subjects were selected in the clockwise direction until the required sample size of 128 for each community was completed.

### Data Collection

A pre-tested, semi-structured interviewer-administered questionnaire was employed for data collection on respondent's bio data; obstetric history; and exclusive breastfeeding. Three research assistants, who were trained on the rudiments of data collection and storage, were recruited for this study. Data was collected from study subjects in their homes under close monitoring and supervision of the investigator.

### Data Analysis

Data was analyzed using the Statistical Package for Social Sciences (SPSS) version 21 and expressing them as frequencies, percentages, means and standard deviations. Pearson's Chi-square was employed to test significant relationships between socio-demographic variables and EBF. A p-value <0.05 was considered statistically significant. Results were presented in tables and charts.

### Study Schedule

The study was conducted over a period of 2 months, June and July of 2017.

### Ethical Considerations

Ethical approval for this study was obtained from the Health Research Ethics Committee (HREC) of University of Abuja Teaching Hospital (UATH). Traditional rulers of the study communities gave their permission while informed consent was also obtained from all the study subjects.

### Limitations

Other aspects of exclusive breastfeeding such as time of onset of breastfeeding, frequency of feeding, and introduction of complementary feeding were not captured.

## RESULTS

The results are discussed in the below tables and figures.

**Table 1 Socio-demographic characteristics of respondents**

Socio-demographics	Frequency (%) (n=370)
<b>Age groups (Mean ± SD 29.7 years)</b>	
18-24	98 (26.5)
25-34	206 (55.7)
≥35	66 (17.8)
<b>Level of education</b>	
Never attended/No formal education	62 (16.8)
Primary	65 (17.6)

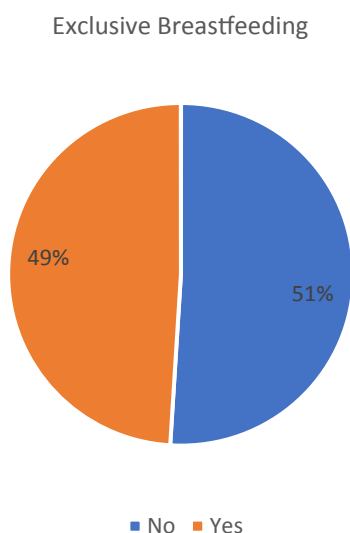
Secondary	154 (41.6)
Tertiary	89 (24.1)
<b>Marital status</b>	
Single	18 (4.9)
Married	339 (91.6)
Divorced	7 (1.9)
Widowed	6 (1.6)
<b>Occupation</b>	
Housewife	83 (22.4)
Farmer	40 (10.8)
Trader	150 (40.5)
Civil servant	58 (15.7)
Skilled labour	37 (10.0)
Others	2 (0.5)
<b>Place of delivery</b>	
Home	96 (25.9)
Hospital	272 (73.4)
Others	2 (0.5)
<b>Method of delivery</b>	
SVD	338 (91.4)
CS	29 (7.8)
AVD	3 (0.8)
<b>Skilled attendant at birth</b>	
Yes	312 (84.3)
No	58 (15.7)
<b>Husband's education</b>	
No formal education	44 (12.9)
Primary	33 (9.7)
Secondary	134 (39.4)
Tertiary	129 (37.9)
<b>Husband's occupation</b>	
Farmer	89 (26.2)
Trader	78 (22.9)
Civil servant	114 (33.5)
Skilled labour	51 (15.0)
Others	8 (2.4)

Table 1 summarizes the socio-demographic characteristics of the respondents. A total of 385 questionnaires were administered but 370 were returned, giving a response rate of 96%. Mean age was  $29 \pm 7$  years, with 55.7% making up the 25-34 years age group. Majority of the respondents, 62 (16.8%) never obtained any formal education, while 41.6% attained the secondary level of education. A large proportion 91.6% of the women was married and the major occupation was trading (40.5%). Full time housewives house wives made up 22.4% of the respondents. Delivery occurred mainly in hospitals (73.4%) whereas 25.9% delivered at home. Majority of the women delivered via SVD at 91.4% while 84.3% were delivered by skilled birth attendants (Table 2).

On the other hand, 37.9% of respondents' husbands attained tertiary level, 39.4% attained secondary educational level. However, 12.9% of the husbands never got any formal education. The husbands were majorly civil servants (33.5%), farmers (26.2%) and skilled workers (15%).

Figure 1 shows that there were slightly more women who did not practice EBF (51%) than those who did (49%).

Among those who went to the hospital for PNC, 61.5% went specifically for immunization, while only 13.0% went for routine PNC check-up. Noteworthy that none of the respondents made PNC visit specifically for the purpose breastfeeding issues. However, 18.5% received breastfeeding education during PNC visit.



**Figure 1 Practice of exclusive breastfeeding by mothers**

**Table 2 Breast feeding counselling among other reasons for postnatal care visit**

Reasons for PNC visit	Frequency (%)	PNC service	Frequency (%)
Immunization	61.5	Routine immunization	43
Postnatal care check	13	Breastfeeding counseling	18.5
Family planning	9.3	Physical examination	13.8
Baby's sickness	6.3	Family planning	16.6
Maternal illness	5.8	Counseling	7.6
Health worker's counsel	4	Drugs, LLINs, etc	0.5

**Table 3 Barriers to practice of exclusive breastfeeding**

Reasons for not practicing EBF	Frequency (%) n=237
Lack of awareness	50 (21.1)
It is too stressful	43 (18.1)
Nature of work	27 (11.4)
Cultural acceptability	27 (11.4)
Low breastmilk output	20 (8.4)
Mother's refusal	12 (5.1)
Breast pain	12 (5.1)
Husband's refusal	9 (3.8)
Baby's excessive cry	6 (2.5)
Medical reason	3 (1.3)
Others	6 (2.5)

Majority of the respondents did not practice EBF because they were not aware of it (21.1%). Medical reasons, which included HIV positive mothers and those with breast disease constituted the least barriers (1.3%) as shown in the Table 3 above.

Table 4 summarizes the result of the test of significance of the relationships between socio-demographic characteristics of respondents and the practice of exclusive breastfeeding (EBF) among them. The table shows that practice of EBF is significantly associated with maternal education, occupation, place of delivery, skilled attendant at birth, husband's education, and occupation ( $p < 0.05$ ) [13].

**Table 4 Relationship between socio-demographics and exclusive breastfeeding**

Variables	$\chi^2$	p-value
Age Group	5.153	0.076
Maternal Education	37.113	<0.001*
Maternal Occupation	35.307	<0.001*
Marital Status	3.936	0.268
Place of delivery	29.625	<0.001*
Skilled attendance	11.171	0.001*
Husband's education	20.585	<0.001*
Husband's occupation	48.952	<0.001*

\*Significant at p-value <0.05.

## DISCUSSION

### Socio-Demographic Characteristics of the Respondents

The finding from this study that most of the mothers belong to age group 25-34 years is similar to the result of work done by Somefun, et al. [14], Ugboaja, et al. [4] and Takai, et al. [15]. Furthermore, majority of the respondents attained secondary level of education and this is at variance with what was reported by Ugboaja, et al. [4] who found predominance of tertiary level education in a south-east Nigerian study, while Somefun, et al. [14] reported that majority had no formal education. Moreover, this study was conducted in rural suburbs where there is limited access to information and education compared to that of Ugboaja, et al. [4] which was in urban areas. The finding that more than 90% of the respondents were married is hardly a surprise in a traditional Nigerian rural community, but the unusual observation in this study is the large proportion of respondents who delivered in a health facility when compared to other Nigerian studies that found very high prevalence of home deliveries [14,16]. Perhaps this is due to better access to care for the mothers in our study who, despite their rural settlement, enjoy positive rub off for their proximity to a well-developed municipal FCT.

### Exclusive Breastfeeding and Barriers to its Practice

This study found a prevalence of 49% for EBF. This is higher than Nigeria's national average of 25% and those of many studies [5-7] conducted all over the country. The benefits of EBF to the mother and infant pair cannot be overemphasized, and these have been stated earlier in this work. An important benefit to the mother is the fact that EBF serves as a form of contraception referred to as lactational amenorrhea method (LAM). In rural settings, where uptake of family planning services is low, EBF offers some protection that potentially reduces unplanned pregnancies thereby improving maternal and child health.

Among those who did not practice EBF, lack of awareness again was the major reason, followed by the feeling that EBF is stressful, nature of work, cultural acceptability, low breastmilk output, mother and husband's refusal, breast pain, baby's excessive cry, and medical reasons. These are similar and comparable to findings reported [5-7]. Proper education on postnatal care during ANC and prior to discharge from hospital after delivery will improve awareness, knowledge, and practice of EBF. Family support from spouse, mothers, and other members of the family can reduce the perceived stress associated with EBF and improve acceptance. A significant number of women stated nature of work as reason for not practicing EBF. However, working does not necessarily have to lead to lower rates of breastfeeding. Traders can take their babies to the place of business or alternatively express breast milk and preserve in a refrigerator with clear instructions on how to feed the baby using cup and spoon. The same can apply to civil servants. But in addition, government should consider changing policy to allow breastfeeding women to take breaks to feed their babies or extend maternity leave to the time when EBF would have been completed. In areas where women are traditionally known to go to farm, the husbands should be enlightened to allow women to complete 6 months of breastfeeding before resuming to the farm. The WHO and UNICEF are currently supporting the Global Breastfeeding Advocacy Initiative [10] to galvanize political, financial, and social support to scale up breastfeeding programs. The initiative has identified 7 priority areas of attention for call to action which include increasing funding, implementation of the International Code of Marketing Breastmilk Substitutes [11], family leave and work place breastfeeding policy, implementation of WHO's Ten Steps to Successful Breastfeeding [12], improve access to skilled lactation counselling, strengthen links between health facilities and the communities, and create monitoring systems that will track progress of policies and programs.

### Factors Associated with Exclusive Breastfeeding

This study found that practice of EBF was significantly influenced by maternal education, occupation, place of delivery, skilled attendant at birth, husband's education, and occupation. However, age group and marital status did not have a significant association with practice of EBF. These are similar to the findings of previous studies [5-7]. A similar study in Accra, Ghana reported delivery at hospital, higher education, socio economic status and positive attitude towards EBF as the most essential support factors [17].

Low breastmilk output as a barrier to exclusive breast feeding is similar to that reported by Otoo, et al. [18]. This could be due to a biological abnormality which is beyond the women's control or poor nutrition. Husband's refusal has been cited in this study as a barrier to EBF, but another study would rather look in the direction of infants' paternal grandmother as a major influence [19].

### CONCLUSION AND RECOMMENDATIONS

The purpose of this study was to assess the practice of exclusive breastfeeding among rural women of the FCT. Prevalence of exclusive breastfeeding was 49%, and the lack of awareness was the major reason for not practicing EBF. Practice of EBF was found to be significantly associated with maternal level of education, occupation, place of delivery, skilled attendant at birth, husband's level of education and occupation.

In order to improve practice of exclusive breastfeeding in rural areas, the FCT Primary Health Care Development Board (PHCDB) should strengthen the existing Primary Health Care (PHC) facilities through capacity building for healthcare personnel, establishment of more facilities where necessary, and subsidizing products and services. Such facilities should be sited as close to the communities as possible with their active participation in the planning, implementation, and monitoring. Also, the exclusive breastfeeding should be incorporated in a comprehensive health education and promotion strategy in order to bridge the knowledge gap of most of the rural women. To ensure that health facilities provide quality affordable services, Integrated Supportive Supervision and On the Job Capacity Building (ISS/OJCB) should be adopted particularly in the rural suburbs of the FCT in monitoring all health facilities. This will further serve as a constant reminder of best work practices to the health workers and improve their overall skill in patient management. Federal government should consider reviewing civil service rules to extend maternity leave to 6 months to allow women to practice exclusive breastfeeding, or institute special breaks for breastfeeding mothers.

Healthcare providers should make the mothers the focus of their care by creating a congenial supportive environment that enables women to feel at home enough to ask any questions regarding their health without any fear. Workers should equip themselves with the necessary training to better understand the dynamics of cultural and religious influences on health seeking behavior and be able to overcome those barriers.

### DECLARATIONS

#### Conflict of Interest

The authors declare that there is no conflict of interest with regards to the publication of this paper.

### REFERENCES

- [1] World Health Organization. Exclusive breastfeeding. Available from: [http://www.who.int/nutrition/topics/exclusive\\_breastfeeding/en/](http://www.who.int/nutrition/topics/exclusive_breastfeeding/en/). Accessed 13 Feb. 2017.
- [2] Thomas, Jessie V. "Barriers to exclusive breastfeeding among mothers during the first four weeks postpartum." 2016. <http://scholarworks.waldenu.edu/dissertations>. Accessed 13 Mar. 2017.
- [3] Elattar, A., et al. "Factors influencing maternal length of stay after giving birth in a UK hospital and the impact of those factors on bed occupancy." *Journal of Obstetrics and Gynaecology*, Vol. 28, No. 1, 2008, pp. 73-76.
- [4] Ugboaja, Joseph O., et al. "Barriers to postnatal care and exclusive breastfeeding among urbanwomen in southeastern Nigeria." *Nigerian Medical Journal: Journal of the Nigeria Medical Association*, Vol. 54, No. 1, 2013, p. 45.
- [5] Agho, Kingsley E., et al. "Determinants of exclusive breastfeeding in Nigeria." *BMC Pregnancy and Childbirth*, Vol. 11, No. 1, 2011, p. 2.

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- [6] Sadoh, A.E., W.E. Sadoh, and P. Oniyelu. "Breast feeding practice among medical women in Nigeria." *Nigerian Medical Journal: Journal of the Nigeria Medical Association*, Vol. 52, No. 1, 2011, p. 7.
- [7] Agunbiade, Ojo M., and Opeyemi V. Ogunleye. "Constraints to exclusive breastfeeding practice among breastfeeding mothers in Southwest Nigeria: Implications for scaling up." *International Breastfeeding Journal*, Vol. 7, No. 1, 2012, p. 5.
- [8] Sholeye, Oluwafolahan O., Olayinka A. Abosede, and Albert A. Salako. "Exclusive breastfeeding and its associated factors among mothers in Sagamu, Southwest Nigeria." *Journal of Health Science*, Vol. 5, No. 2, 2015, pp. 25-31.
- [9] World Health Organization, Maternal and Newborn Health/Safe Motherhood Unit. "Postpartum care of the mother and newborn: a practical guide." *World Health Organization*, 1998, [http://www.who.int/maternal\\_child\\_adolescent/documents/who\\_rht\\_msm\\_983/en/](http://www.who.int/maternal_child_adolescent/documents/who_rht_msm_983/en/).
- [10] Federal Capital Territory Administration. *FCT area councils*. [www.abuja-ng/federal-capital-territory.html](http://www.abuja-ng/federal-capital-territory.html). Accessed 13 Jun. 2017.
- [11] National Population Commission (NPopC). *Population Distribution by Age and Sex: 2006 Census priorities tables vol. 4*. National Population Commission (NPopC), [www.population.gov.ng/index.php/censuses](http://www.population.gov.ng/index.php/censuses).
- [12] Charan, Jaykaran, and Tamoghna Biswas. "How to calculate sample size for different study designs in medical research?" *Indian Journal of Psychological Medicine*, Vol. 35, No. 2, 2013, p. 121.
- [13] Idris, Suleman Hadejia, Mohammed Nasir Sambo, and Muhammed Sani Ibrahim. "Barriers to utilisation of maternal health services in a semi-urban community in northern Nigeria: The clients' perspective." *Nigerian Medical Journal: Journal of the Nigeria Medical Association*, Vol. 54, No. 1, 2013, p. 27.
- [14] Somefun, Oluwaseyi Dolapo, and Latifat Ibisomi. "Determinants of postnatal care non-utilization among women in Nigeria." *BMC Research Notes*, Vol. 9, No. 1, 2016, p. 21.
- [15] Takai, Idris Usman, et al. "Factors responsible for under-utilization of postnatal care services in Maiduguri, north-eastern Nigeria." *Sahel Medical Journal*, Vol. 18, No. 3, 2015, p. 109.
- [16] Dahiru, Tukur, and Oche Mansur Oche. "Determinants of antenatal care, institutional delivery and postnatal care services utilization in Nigeria." *Pan African Medical Journal*, Vol. 22, No. 1, 2015.
- [17] Aidam, Bridget A., et al. "Factors associated with exclusive breastfeeding in Accra, Ghana." *European Journal of Clinical Nutrition*, Vol. 59, No. 6, 2005, pp. 789-96.
- [18] Otoo, Gloria E., Anna A. Lartey, and Rafael Pérez-Escamilla. "Perceived incentives and barriers to exclusive breastfeeding among periurban Ghanaian women." *Journal of Human Lactation*, Vol. 25, No. 1, 2009, pp. 34-41.
- [19] Kerr, Rachel Bezner, Peter R. Berti, and Marko Chirwa. "Breastfeeding and mixed feeding practices in Malawi: timing, reasons, decision makers, and child health consequences." *Food and Nutrition Bulletin*, Vol. 28, No. 1, 2007, pp. 90-99.