ORIGINAL ARTICLE

Current Knowledge And Practice Of Exclusive Breastfeeding Among Mothers In Jos, Nigeria.

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Abstract

***Background**: Exclusive Breastfeeding has been recommended the world over as the optimal feeding mode for young infants. A cross sectional study to determine the current level of knowledge and practice of nursing mothers on exclusive breastfeeding in Jos was carried out.*

***Methods**: The target population of interest was nursing mothers who have infants aged 6-12 months in Jos, a cosmopolitan city in the north central zone of Nigeria. A pre-tested, structured close ended interviewer questionnaire was used. Four hundred and seventy nursing mothers who consented were recruited for the study through a house-to-house visit. Three assistants (two females and a male) were recruited and trained on the questionnaire administration. Data analysis was by SPSS software and chi-square test of proportion for statistical significance of association was done.*

***Results**: Out of the 470 nursing mothers studied 387(82.3%) were able to define correctly exclusive breastfeeding while 315(67.0%) practiced or were practicing exclusive breastfeeding at the time of this study. The knowledge and practice of exclusive breastfeeding was found to increase with increasing age and better educational status of the women. Ninety six (20.4%) nursing mothers said they never breastfed their babies while in public place.*

***Conclusion**. Although knowledge and practice of exclusive breastfeeding among the women were considerably high, the younger age brackets were less knowledgeable and adherent to the practice. Targeting adolescents for exclusive breastfeeding education and sensitization is necessary in preparing them for motherhood.*

***Key words**: Exclusive Breastfeeding, Nursing mothers, Knowledge and Practice.*

Paper accepted for publication 18 March 2007

INTRODUCTION:

Breastfeeding is an unequalled way of providing ideal food for the health, growth and development of infants. It is also an integral part of the reproductive process with important implication for the health of mothers.[1] The advantages of breastfeeding are well documented particularly with regard to infectious diseases, nutritional status, mother-child bonding, birth spacing and infant mortality.[2,3] Exclusive Breast Feeding (EBF) has been recommended world over by the World Health Organization (WHO) and United Nations Children Fund (UNICEF) as the optimal feeding mode for young infants especially in environments where sanitation is poor.[4,5]

A recent review of evidence has shown that on a population basis, EBF for 6 months is the optimal way of feeding infants. Thereafter, infants should receive complementary foods with continued breastfeeding up to 2 years of age or beyond.[1] Breast milk is the natural first food for babies, it provides all the energy and nutrients that the infant needs for the first months of life and it continues to provide up to half or more of a child's nutritional needs during the second year of life.[1]

Breast milk promotes sensory and cognitive development and protects the infant against infections and chronic diseases. EBF reduces infant mortality due to common childhood illnesses such as diarrhea or pneumonia and helps for a quicker recovery during illness. The effects can be measured in resource-poor and affluent societies.[6]

Faced with rising infant and early childhood morbidity and mortality rates and following the Innocenti Declaration in 1990, the WHO launched the Baby-Friendly Hospital Initiative (BFHI) in June 1991. It was noted then that over one million children died annually world wide due to cases arising from improper infant and early childhood feeding practices, notably diarrhea, malnutrition and respiratory infections. The most important feeding practice influencing the high mortality and morbidity was breastfeeding accompanied by complementary feeding practices. Nigeria launched her BFHI programme in 1991 when the infant and under five mortality rates were 114 and 191 per 1000 live births respectively.[7] Results of Nigeria Demographic and Health Survey (NDHS) study before the launching showed that although 98% of Nigerian nursing mothers breastfed their babies at one time or another only 2% of them breastfed the index child exclusively.[7] Using the " Ten Steps to successful Breastfeeding" as standard,

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over 1000 health facilities were designated Baby-Friendly nation-wide. Various professional groups were trained and hundreds of communities and voluntary organizations were also oriented in breastfeeding and lactation management. Both print and electronic media were actively used for World Breastfeeding week at the federal, zonal, state and institutional levels.

In 1996 a study in Jos showed that, at 3months only 6% of nursing mothers exclusively breastfed their babies.[8] In 1997 another study in the same locality showed that 40.9% of nursing mothers exclusively breastfed up to 6months.[9] A survey to assess the impact of the BFHI program in Nigeria was conducted in 1999. The results confirmed favorable changes in nursing mothers' knowledge and practices with regards to breastfeeding when compared with those of demographic health survey of 1990. The results showed that EBF rate increased from 2% to 66% in the first month of life, 62% and 59% at 4months and 6months respectively.[10] Plateau state in zone D of that survey had an average of 62% EBF for 0-5months age group. However, in 2003 a national survey showed that 43% of nursing mothers exclusively breastfed their babies up to 6months.[11] This study therefore aims at determining the current level of knowledge and practice of nursing mothers on EBF in Jos and the factors that influence them

METHODOLOGY

The study was carried out in Jos, a cosmopolitan city where a teaching hospital, a specialist hospital, two secondary level health facilities that are Baby-Friendly Hospital Initiative (BFHI) and several private hospitals and Primary Health Care (PHC) facilities are situated. Jos is the capital of Plateau state and has diverse ethnic groups (both indigenes and settlers) engaged in several commercial activities, civil service and educational career (the University of Jos and Plateau state Polytechnic Jos campus are both located in the city). Jos is located in Jos North Local Government Area, which has a land area of 285 Km^2 and a population of 628,350 (projected from 1991 census at 2.83% annual growth rate).[12] The Local Government is made up of Gwong district and seventeen wards. Research approval was obtained from the Ethical Committee of Jos University Teaching Hospital.

The Wards were identified as clusters and four clusters namely Tudun Wada, Tafawa Balewa, Nassarawa Gwong and Angwan Rogo were selected as the study areas through balloting. The first two settlements are Christian/Indigene dominated while the other two are Moslem/Hausa dominated. One hundred and fifteen respondents were selected from each of the former settlements and one hundred and twenty from the later. In each settlement a central location was identified and a starting direction was determined by spinning a bottle on a smooth ground. The first house in that direction was visited and from there houses were selected in sequence (house-to-house). This was repeated after reaching the end of each direction/street and nursing mothers that qualified (had babies who were 6-12months old at the time of survey) and consented to data collection were interviewed. In households where there were more than one infants balloting was used to select an index child while houses without infants were skipped for the next. The total number of nursing mothers selected for this study was guided by a minimum sample size estimation from the prevalence of EBF of 40.9% in a previous study in the same population using an appropriate formular.[9,13]

A pre-tested, structured interviewer questionnaire was administered to these nursing mothers at their homes by the researchers. The questionnaire has two sections. Section A was on respondents socio-demographic features while section B inquired on the respondents knowledge and practices of EBF. The first question in this section was; "At what age did you give/start giving this child any other foods or drinks including water other than breast milk or drug syrups". Three trained health assistants (two females and a male) participated in the data collection. Hausa, a commonly spoken language in Jos was used to interview those without formal education (illiterates). Due to the diverse and sensitive nature of ethnicity in the cosmopolitan city, researchers deemed it appropriate to exclude it from this study. Data analysis was carried out using SPSS 10.0 for windows software and test of proportion using Chi-square test statistics to determine the level of significance at 95% confidence level.

RESULTS

Four hundred and seventy nursing mothers with mean and age range of 27.5± 5.1 years and 17-38 years respectively were studied. Response rate was 98.3% as few claimed they were occupied with chores during the visit. Close to half (47.2%) had acquired secondary school education, followed by 21.3% who had tertiary education. About forty percent were house wives i.e. had no occupation while 28.1% were engaged in trading. Three hundred and eighty seven (82.3%) of the nursing mothers could correctly define EBF. The least proportion (47.4% of those who could define EBF) was among the lowest age bracket i.e. less than 20years

while those in the age bracket 30-39 years had the highest proportion (89.0%)

Table I. Age distribution and knowledge of EBF definition.

	Could define EBF				
Age (years)	*Yes*	*%*	*No*	*%*	*Total*
Less than 20	9	47.4	10	52.6	19
20-29	241	81.2	56	18.8	297
30-39	137	89.0	17	11.0	154
Total	*387*	*82.3*	*83*	*17.7*	*470*

$X^2 = 20.9$, df = 2, P = 0.0001

Eighty nine (89.0%) of those with tertiary education could correctly define EBF while the least proportion (45.0%) was found among the illiterates (Table II).

Table II. Educational status and knowledge of EBF definition

	Could define EBF				
Education	*Yes*	*%*	*No*	*%*	*Total*
Illiterate	18	45.0	22	55.0	40
Primary	77	71.3	31	28.7	108
Secondary	203	91.4	19	8.6	222
Tertiary	89	89.0	11	11.0	100
Total	*387*	*82.3*	*83*	*17.7*	*470*

$X^2 = 86.1$, df = 3, P = 0.0001

The practice of EBF was found to be highest (70.1%) among the oldest nursing mothers and lowest (10.5%) among the youngest mothers (Table III).

Table III. Age distribution and EBF practice.

	Practiced EBF				
Age (years)	*Yes*	*%*	*No*	*%*	*Total*
Less than 20	2	10.5	17	89.5	19
20-29	205	69.0	92	31.0	297
30-39	108	70.1	46	29.9	154
Total	*315*	*67.0*	*155*	*33.0*	*470*

$X^2 = 28.7$, df = 2, P = 0.0001

The proportion of those who practiced EBF was highest (76.7%) among those with tertiary education and least (24.0%) among those without formal education (Table IV).

Table IV Educational status and EBF practice

	Practiced EBF				
Education	*Yes*	*%*	*No*	*%*	*Total*
Illiterate	12	24.0	38	76.0	50
Primary	64	59.3	44	40.7	108
Secondary	170	76.6	52	23.4	222
Tertiary	69	76.7	21	23.3	90
Total	*315*	*67.0*	*155*	*33.0*	*470*

$X^2 = 57.8$, df = 3, P = 0.0001

Nursing mothers who had no occupation had the highest rate (72.1%) of exclusive breastfeeding while the students had the lowest rate (59.5%).

Table V. Occupation distribution and EBF practice.

	Practiced EBF				
Occupation	*Yes*	*%*	*No*	*%*	*Total*
Tailors	42	63.6	24	36.4	66
House wives	137	72.1	53	27.9	190
Traders	84	63.6	48	36.4	132
Civil Servants	30	66.7	15	33.3	45
Students	22	59.5	15	40.5	37
Total	*315*	*67.0*	*155*	*33.0*	*470*

$X^2 = 4.21$, df = 4, P = 0.38

A little above half (59.9%) of the nursing mothers who are Moslems exclusively breastfed their babies (Table VI).

Table VI. Religion and EBF practice

	Practiced EBF				
Religion	*Yes*	*%*	*No*	*%*	*Total*
Christians	261	83.4	52	16.6	313
Moslems	94	59.9	63	40.1	157
Total	*355*	*75.5*	*115*	*24.5*	*470*

$X^2 = 31.28$, df = 1, P = 0.0001

Three hundred and seventy four (79.6%) said they breastfeed while in public and this was found highest (92.2%) among those with tertiary education (Table VII)

Table VII. Educational status and breastfeeding in public.

	Breastfeeds in public				
Education	*Yes*	*%*	*No*	*%*	*Total*
Illiterate	30	60.0	20	40.0	50
Primary	65	60.2	43	39.8	108
Secondary	196	88.3	26	11.7	222
Tertiary	83	92.2	7	7.8	90
Total	*374*	*79.6*	*96*	*20.4*	*470*

$X^2 = 20.9$, df = 2, P = 0.0001

DISCUSSION

On average, a high percentage (82.3%) of the studied women were able to define EBF while the percentage of the younger nursing mothers was comparatively low (47.4%) as shown in Table I. This knowledge was noticed to appreciate with increasing age of the women and was found to be significantly significant, P<0.0001. This could be attributed to increasing contacts with Ante Natal Clinic (ANC) services where health talks and counseling sessions on Reproductive Health (which usually include breastfeeding) are usually and routinely provided at the health facilities by the health workers. The older nursing mothers by the virtue of increased parity with age may have frequented ANC more than the younger ones.

Exclusive Breastfeeding is one of the cardinal components of BFHI and the tertiary and secondary level hospitals in Jos are BFHI facilities to the advantage of the studied women.[13,14] However, the youngest age class interval less than 20 years with less than half of them (47.4%) who could define EBF is a challenge to the health care providers and program managers in Reproductive Health. A similar trend was also observed in their educational status. The level of their knowledge on EBF increased significantly with better educational status and was found to be statistically significant (P<0.0001) as shown in Table II. Less than half (45%) of those without formal education could define EBF. Similar studies elsewhere have shown that a high level of maternal education increased the likelihood of EBF.[15-17]

Central to the BFHI is the International Code on Marketing of Breast milk substitutes adopted in 1981 by the World Health Assembly calling upon breast milk manufacturers and distributors not to provide free or low-cost supplies to any part of the health care systems.[18] Hospitals must meet the BFHI Global Criteria for each of the Ten Steps to successful breastfeeding to achieve accreditation as a Baby-Friendly Hospital. The appraisal is carried out by a team of trained assessors from outside the facility who report the result of the assessment to the national authority that decides the issue of designation and certification. In Jos, the distribution of posters, handbills and health talks on the breastfeeding were intensified after the launching of BFHI program in 1991. Sales or hawking of breast milk substitutes were discouraged in health facilities. In some instances, baby feeders (feeding bottles) and pacifiers were confiscated by health workers when brought into the health facilities, designated as Baby-Friendly.

The appreciable increase in EBF among nursing mothers over the years and the high rate (67%) recorded in this study may be attributed to the much Reproductive Health activities of the BFHI facilities situated in the area. A national survey on breastfeeding in 2003, showed that on average, only 17.2% of studied women exclusively breastfed up to 6months post delivery.[10] However, the low knowledge among those less than 20 years in this study has a far reaching implication on the practice of EBF as only 10.5% of them practiced EBF. A study in Ibadan Nigeria also showed that mothers who were 24 years or younger and primiparous mothers were less likely to breastfeed their babies exclusively.[19]

This problem can be addressed before motherhood by focusing on adolescent girls with relevant and adequate knowledge on EBF. This should include, creating awareness on the advantages and benefits of EBF and also providing adequate information to address erroneous beliefs and misconceptions commonly held in such communities.

Part of the 1990 Innocenti Declaration states that all governments should establish a national system for monitoring the attainment of their targets and develop indicators for assessing the practice on breastfeeding in infants.[20] This should be vigorously pursued. A study on the beliefs and attitudes of adolescents to EBF showed that only 12.9% were positive to EBF while 7.9% were undecided.[21] It is obvious that these adolescents were not psychologically prepared for EBF as they approach motherhood and are unlikely to practice it as nursing mothers. These findings call for a second look at the strategies used on EBF in order to target adolescents at the verge of motherhood.

The proportion of nursing mothers who do not breastfeed in public was 20.4%. What alternative option did they have while in public with their suckling babies? It is obvious that baby feeds were provided in the alternative, as a newborn's need to feed is on demand and cannot be determined by a set schedule. There are numerous laws around the world that encourage public breastfeeding and prohibits companies from advertising breastfeeding substitutes in the work place but to provide crèches.[19] Yet, the public reaction at the sight of breastfeeding mother can make the situation uncomfortable for her. In November, 2006 a woman in New Mexico was refused service by a flight attendant after she declined to breastfeed her baby under a blanket.[22] As institutions and the society cry out for dressing codes in Nigeria, what quickly comes to mind is; can nursing mothers breastfeed any where even in places like Churches, Mosques or classrooms without attracting starring eyes or unfriendly facial expression? Among others, this evolving area is a challenge in the efforts towards the protection, promotion and support of breastfeeding in our contemporary society.

REFERENCES:

1. World Health Organization. Infant and young child. Child and adolescent Health and Development. h#P://www.who.inE/child-adolescent heath/Nutrition/Infant_exclusive. htm p 1. accessed 07/02/07

2. Andrew Chetley. Presenting breastfeeding. A guide to reporting on the state of breastfeeding in your country. WABA.1997, 6.

3. Victoria C.G, Fuchs S.C, Flores A.J.C, Fonseca W and Kirkwood B. Risk factors for pneumonia among children in a Brazilian metropolitan area. Paediatrics. 1994, 93 (6) 977-985.
4. American Academy of Paediatrics Committee on Nutrition. Breastfeeding Paediatrics. 1980;2:1176-1178.
5. Feachem R.G, Kobinsky M.A. Interventions for the Control of diarrhea diseases among young children. Promotion of breastfeeding. Bull. WHO 1984; 62:271-291.
6. Kramer M. Promotion of breastfeeding Intervention Trial (PROBIT): A randomized trial in the Republic of Balams. JAMA 2001, 285,(4): 413-420.
7. Federal Ministry of Health/UNICEF. Evaluation of the impact of Baby-Friendly Hospital Initiative in Nigeria. Report. March, 2000. 6-7.
8. Ighogboja I. S, Odumodu C. U and Olarewaju R. S. Breastfeeding pattern in Jos, Nigeria before Baby-Friendly Hospital Initiative. J Trop. Pediatr. June 1996: 42; 178-179.
9. Ogbonna C. Factors influencing exclusive breastfeeding in Jos. West Afr. J Med. Vol. 19 (2) 107-110.
10. National Population Commission (NPC) Nigeria. and ORC Marco. Nigeria Demographic and Health Survey, 2003 pg. 151-154.
11. Federal Ministry of Health (Nigeria). National HIV/AIDS and Reproductive Health Survey (NARHS) 2003. pg 97.
12. Ministry of Health. Department of Planning, Research and Statistics. HMIS. Plateau State. Annual Health Statistics Bulletin. 2005; 4
13. Afolayab-oloye B. A. Sampling and sampling size report on the seminar on small grant research proposal design and development. Federal Ministry of Health and Social Services. Lagos. 1992; 41-44.
14. World Health Organization. Ten Steps to successful breastfeeding. WHO Geneva 1989; 1.
15. Thome M, Alder E. M and Ramel A. A population based study of exclusive breastfeeding in Icelandic women; is there a relationship with depression symptoms and parenting stress? In.t. J. Nurs. Stud. 2006; 43 (1) 11-20.
16. Venancio S. I and Monteiro C. A. Individual and contextual determinants of exclusive breastfeeding in Sao Paulo, Brazil; a multi level analysis. Public Health Nutri. 2006; 9 (1);40-46.
17. Heck K. E, Braveman P, Cubbin C, Chavez G. F and Kiely J. L. Socioeconomic status and breast feeding initiation among California mothers. Public Health Reports. 2006; 121 (1) 51-59.
18. UNICEF. Baby-Friendly Hospital Initiative. Case Studies and Progressive Report. UNICEF Programme Division. March 1999.http://www.ibfn.org/english/resource/ibfo/issue2/BFHIFeeding.htm1 last accessed 25th May 2007.
19. Lawoyin t .o. Olawuyi J. F and Onadeko M.O. Factors associated with exclusive breastfeeding in Ibadan. Journal of Human Lactation 2001, Vol 17, No 4 321-325.
20. WHO/UNICEF. The Innocenti Declaration on the protection, promotion and support of breastfeeding. WHO/UNICEF Aug. 1990; 1.
21. Walker M.E. Knowledge and attitudes towards EBF and adolescent school girls in Ibadan Nigeria. East Afr Med J. 1998; Vol. 75, (8) 443-445.
22. Jordan Tim and Pile Steve (eds). A general overview and implications for helping mothers. Social change. Blackwell 2002; ISBN 0-631-23311-1; 233.