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Breastfeeding practices of mothers of young children in Lagos, Nigeria

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Abstract Objective: To determine the breastfeeding practices (prevalence, initiation and exclusivity) of mothers of young children in Lagos.

Methods: This was a community-based, cross-sectional study carried out in 2010 in two Local Government Areas of Lagos State. Structured, interviewer-administered questionnaires were administered on 600 mothers whom were selected by multistage sampling technique. Data was analyzed with Epi-info 2008.

Results: The majority, (91.8%) of respondents breastfed their babies and 59.2% of them initiated breastfeeding within 1 hour of delivery. Eighty-two percent practiced exclusive breastfeeding (EBF) and 52.9% did for 6 months. Formal antenatal care (ANC) (OR 3.27, 95%CI 2.03-5.29) and institutional delivery (OR 3.63, 95%CI 2.38-5.53) significantly increased early

initiation of breastfeeding. These factors also significantly increased practice of EBF for 6 months; ANC- OR 2.54, 95%CI 1.49-4.35 and institutional delivery- OR 1.81, 95%CI 1.15-2.86. EBF for 6 months was significantly associated with lower parity ($p=0.020$) and higher maternal educational level. Those who had more than secondary education were 8 times more likely to practice EBF for 6 months than those with no formal education (OR 7.65, 95%CI 2.58-24.28).

Conclusion: Breastfeeding initiation and exclusivity for 6 months were inadequate. Promotion of good health-seeking behavior, maternal education and family planning are recommended in order to improve mothers' breastfeeding practices and infant nutrition.

Key words: Breastfeeding, health-seeking behavior, infant nutrition, maternal education, Nigeria

Introduction

Breastfeeding is one of the oldest practices known to mankind. For almost all infants, breastfeeding remains the simplest, healthiest and least expensive feeding method that fulfils the infant's needs. It is considered as the most complete nutritional source for infants because breast milk contains the essential fats, carbohydrates, proteins, and immunological factors needed for infants to thrive and resist infection in the formative first year of life. Exclusive Breastfeeding is recommended by WHO for each newborn up to six months of age and the "Innocenti declaration" emphasizes that breastfeeding should be for at least two years. Breastfeeding has many benefits both to mother and the child. It confers both short-term and long-term benefits to the child. It reduces infections and mortality among infants, improves mental and motor development, and protects against obesity and metabolic diseases later in the life course¹. Frequent and exclusive breastfeeding can delay the return of fertility through lactational amenorrhoea method. Exclusive breastfeeding (EBF) in the first six months of life and continued breastfeeding

from six to 11 months has been identified as the single most effective preventive intervention in reducing child mortality, with the potential of saving 1.3 million lives annually. In addition, during breastfeeding beneficial hormones are released into the mother's body and the maternal bond can be strengthened.² Furthermore, studies have shown that infants who are exclusively breastfed for 6 months and those with longer total breastfeeding time have a lower risk of infections, cancers, metabolic diseases such as obesity and diabetes in the future.^{3,4}

It has been estimated that exclusive breastfeeding reduces infant mortality rate by up to 13% in low income countries⁵. Recent analysis showed that suboptimal breastfeeding, especially non-EBF in the first six months results in about 1.4 million deaths and up to 10% of the disease burden in children younger than five years in low income and middle income countries⁶. A recent study also confirmed that breastfeeding children for more than 18 months are one of the factors associated with reduced risk of under-five mortality⁷.

In spite of the enormous benefits of breastfeeding and

prevalence has remained low all over the world. Poor breastfeeding practices have been widely documented in the developing countries. Only about 39% of infants in the developing countries (25% in Africa) are exclusively breastfed for the first six months. Additionally, 6% of infants in developing countries are never breastfed. Moreover, the prevalence of no breastfeeding is 5.6%; the prevalence of continued feeding is 86% and 68% for infants and children aged 6-11 months and 12-23 months respectively.⁸ Poor breastfeeding practices, together with high rate of morbidity from infectious diseases are the prime proximate causes of malnutrition in the first two years of life.⁹

The first two years of life are critical stages for a child's growth and development. Any damage caused by nutritional deficiencies during this period could lead to faltered growth, disease, impaired cognitive development, compromised educational achievement, low economic productivity and death.¹⁰ A quarter (25%) of children under five years of age in Sub-Saharan Africa are underweight, 43% are stunted, 11.4% of them are wasted.¹¹ In Nigeria, Neonatal Mortality Rate is 40/1000 live births, Infant Mortality Rate is 75/1,000 live births while the under-five Mortality rate is 157/1000 live births.¹²

In Nigeria breastfeeding practices continue to fall well below the WHO/UNICEF recommendations for developing countries. Report of Kenyan Demographic and Health Survey 2008-2009 revealed that 32% of children under the age of six months are exclusively breastfed, improving from only 13% in 2003 whereas in Nigeria, proportion of children less than 6 months who are exclusively breastfed decreased from 17% in 2003 to 13% in 2008. The proportion of children less than six months who received complementary foods increased from 18% to 35%. Various factors associated with sub-optimal breastfeeding practices have been identified in various settings. These include maternal characteristics such as age, marital status, occupation, and education level; antenatal and maternity health care. Others are health education and media exposure, socio-economic status and area of residence; and the child's characteristics including birth weight, method of delivery, birth order, and the use of pacifiers.^{13,14}

This study therefore, examines breast-feeding practices among mothers in Lagos state Nigeria, specifically breastfeeding prevalence, initiation and exclusivity. The result will be useful to health educators, policy makers and other stakeholders in detecting possible areas for intervention in order to improve the breastfeeding practices among mothers in Lagos State and reduce child morbidity and mortality.

Materials and methods

This was a cross-sectional study carried out in January, 2010 in Lagos, Nigeria. Lagos is a heavily populated megacity where women of child-bearing age and under-fives constitute about two-fifths of the over 10

million inhabitants.¹² The study was done in two of the 20 Local Government Areas (LGAs) in the State. The LGAs are further divided administratively into wards. These two LGAs were served by one tertiary, two secondary and 19 Primary Health Care Centres (PHCs), including seven health posts. There were also numerous private health facilities and alternative health practitioners.

The study population was females in the reproductive age group aged 15-45 years in the two selected LGAs. Only those residing in the study area and whose last confinement was not more than two years prior to interview, were included in the study. Appropriate sample size was determined using the formula for descriptive studies at a precision of 5%. Multi-stage sampling approach was used to select the 600 respondents who participated in the study (300 from each LGA). At each stage, simple random sampling technique was employed. First, two of the 20 LGAs were selected, followed by the selection of five wards each from the selected LGAs and the selection of one street from each ward. Next was the houses; the starting point was determined by simple random sampling, and then moved in consecutively higher numbers. The final stage was the selection of eligible respondents from the houses.

As the interview of respondents went on, more streets were selected and the process continued until the desired sample size was met. Only one respondent in each house was interviewed and if there was more than one, simple random sampling was done to select only one. The mother was questioned on her youngest child and an equal proportion of women were interviewed in each ward.

Data collection was done with a semi-structured, interviewer-administered questionnaire which was pre-tested in another LGA among 20 of a similar group of women.

Results

Three hundred and fifty-two (58.7%) of the respondents were between 26 and 35 years and majority were married, 470(78.3%). One-third of them had two children while one-tenth had at least five children. Only 37 (6.2%) had no formal education while the rest had at least primary education. Almost one quarter (23.5%) of them was unemployed.

The majority, (91.8%) of respondents breastfed their babies and 59.2% of them commenced within one hour postpartum. Eighty-two percent of the women practiced exclusive breastfeeding (EBF). As much as 43.1% of them practiced EBF for less than six months, 52.9% for six months and 4% for more than six months. The mean duration for EBF was 5.2 ± 1.8 months. Two hundred and eighty-eight (64.4%) of respondents who had ANC at formal health institutions as against 38 (35.6%) of

them who did not, initiated breastfeeding within one hour of delivery. Mothers who had ANC at a health facility were three times more likely to initiate breastfeeding within one hour than those who did not ($p < 0.001$, OR 3.27, 95% CI 2.03-5.29).

Institutional delivery was also a significant determinant in the initiation of breastfeeding within an hour of child birth. Women who delivered at the health facility were three times more likely to initiate breastfeeding within one hour than women who did not ($p < 0.001$, OR 3.63, 95% CI 2.38-5.53) (Table 1).

Table 1: Associations between place of antenatal care, place of delivery and initiating breastfeeding within one hour

Variable	Initiated BF within 1 hour (%)			χ^2	p	OR (95% CI)
	Yes	No	Total			
<i>Had formal ANC</i>						
Yes	288 (64.4)	159 (35.6)	447	23.93	<0.001*	3.27* (2.03-5.29)
No	31 (35.6)	56 (64.4)	87			
Total	319	215	534			
<i>Had institutional delivery</i>						
Yes	283 (66.1)	145 (33.9)	428	37.12	<0.001*	3.63* (2.38-5.53)
No	43 (35.0)	80 (65.0)	123			
Total	326	225	551			

*Significant

The youngest group of mothers (16-25 years) practiced EBF for six months more than their older counterparts (62.2%) with no significant difference. Parity was significantly associated with EBF for six months. From parity of two, as the number of children increased, practice of EBF for six months decreased ($p = 0.020$) As the educational level increased, the likelihood of a woman

practicing EBF for six months increased with a significant difference. Using 'no formal education' as a reference point, mothers who had secondary education as their highest educational level were six times more likely to practice EBF for six months (OR 5.69, 95% CI 2.03-17.9) Those who had more than secondary education were eight times more likely to practice EBF for six months (OR 7.65, 95% CI 2.58-24.28) (Table 2)

Table 2: Associations between socio-demographic variables and practice of exclusive breastfeeding for six months

Variable	Practiced EBF for 6 months (%)			χ^2	p	OR (95% CI)
	Yes	No	Total			
<i>Age (year)</i>						
16 – 25	46 (62.2)	28 (37.8)	74	2.42	0.300	1
26 – 35	149 (54.0)	127 (46.0)	276			
36 – 45	62 (60.8)	40 (39.2)	102			
<i>Number of children</i>						
1	30 (49.2)	31 (50.8)	61	11.75	0.020*	1
2	96 (62.3)	58 (37.7)	154			
3	64 (60.4)	42 (39.6)	106			
4	53 (58.2)	38 (41.8)	91			
≥ 5	14 (35.0)	26 (65.0)	40			
<i>Education</i>						
No formal	5 (17.9)	23 (82.1)	28	24.11	<0.001*	1
Primary	43 (48.9)	45 (51.1)	88			
Secondary	145 (60.9)	93 (39.1)	238			
Post secondary	64 (65.3)	34 (34.7)	98			

*Significant

More than half (60.2%) of the women who had ANC at the health facility practiced EBF for six months as against 37.3% of those who did not. Mothers who had ANC at a health facility were three times more likely to practice EBF for six months than those who did not

($p = 0.001$, OR 2.54, 95% CI 1.49-4.35). Place of delivery was also significantly associated with the practice of EBF for six months. Mothers who had institutional delivery were two times more likely to practice EBF for six months than women who did not ($p = 0.01$, OR 1.81, 95% CI 1.15-2.86) (Table 3).

Table 3: Associations between place of antenatal care, place of delivery and practice of exclusive breastfeeding for six months

Variable	Practiced EBF for 6 months (%)			χ^2	p	OR (95% CI)
	Yes	No	Total			
<i>Had formal ANC</i>						
Yes	224 (60.2)	148 (39.8)	372	11.22	0.001*	2.54* (1.49-4.35)
No	25 (37.3)	42 (62.7)	67			
Total	249	190	439			
<i>Had institutional delivery</i>						
Yes	214 (59.9)	143 (40.1)	357	6.01	0.010*	1.85* (1.15-2.86)
No	43 (45.3)	52 (54.7)	95			
Total	257	195	452			

*Significant

Discussion

Application of child survival strategies such as breast feeding is a major way of bringing down the high Infant Mortality Rate in Nigeria in order to achieve the 4th Millennium Development Goal. A vast majority of our respondents breastfed their babies but their practices regarding breastfeeding were poor. These poor practices may compromise the nutritional status of their children. This is quite similar to the proportion of women who breastfed in another study among those who delivered in Hospitals in Australia (96%) and in a semi-urban community in Lagos (100%). In other studies conducted in other states in Nigeria, all the respondents breastfed their babies.^{15,16,17,18} This is not surprising since initiation of breastfeeding is almost universal in Nigeria.

More than half of the women (54.3%) initiated breastfeeding within one hour of delivery. Although this may not be considered adequate, it is higher than both our national and regional average (44% and 30% respectively).¹⁹ It may be due to the relatively high educational level of our respondents. In another southwest town in Nigeria (Ilesha) and northern town, Sokoto only 8% initiated breast feeding within one hour of delivery.^{18,20}

The positive influence of good health-seeking behavior is also evident in this study. Our results indicate that ANC and delivery at a formal health institution were factors which can significantly influence initiation of breastfeeding immediately after birth and the practice of EBF for 6 months. This is not surprising since many of the Primary Health Care Centers and hospitals have adopted Baby Friendly Hospital Initiative (BFHI). Moreover, research has shown that antenatal guidance and education concerning advantages of breastfeeding is significantly associated with initiation of breastfeeding within 1 hour of delivery.^{21,22} In a facility-based study in Port-Harcourt, southsouth region of Nigeria, it was found that the presence of more than one delivery assistant as well as the presence of a breastfeeding-trained delivery assistant in health facility enhanced the mothers' practice of early initiation of breastfeeding.²³ In other clinic-based Nigerian studies, significantly higher proportions of mothers who had ANC and delivery in health facilities practiced EBF.^{17,24} The women would have been repeatedly educated on good breastfeeding practices during their ANC visits and eventually, they put them into practice. These health workers are a positive influence in the adoption of best practices.

Most of our respondents practiced EBF. The prevalence is higher than the figure obtained in Anambra State, southeast Nigeria (37.3%).²⁴ It is also higher than the prevalence among another group of Yoruba mothers of South West, Nigeria (71.6%) and rural area of Sokoto (78.7%).^{18,20} Reports from Ile-Ife, another southwest town showed that only a small proportion (19%) of the nursing mothers practiced EBF. This means that the practice varies widely across Nigeria even among women of the same tribe.²⁵

In this study, the younger mothers practiced EBF more,

though with no significant differences. In China, younger age of mother was shown to be positively associated with EBF and in Northern (Jos), and eastern Nigeria (Anambra), the practice of exclusive breastfeeding increased with increasing age of women.^{24,26,27} Parity was found to be significantly associated with EBF. From parity of 2 and more, the practice of EBF decreased with the lowest proportion among grand multiparous women. It is possible that smaller family size afforded them more time, dedicated to the care and nurture of their babies. But the primiparous women also had lower prevalence of EBF. Undue pressure from their mothers-in-law to give other feeds maybe responsible for this.²³

Despite the high prevalence of EBF, only about half of the mothers practiced it for the recommended 6 months. The practice of EBF for 6 months was commonest among the youngest age group and least common among the oldest age group but the difference was not significant. They were probably no longer strong enough to cope with this very demanding practice unlike the younger mothers. The younger mothers were probably at the optimum age for best maternal health outcomes and so more likely to have good practices. Other Nigerian studies showed that maternal age and parity did not confer any advantage in breast feeding practices.^{17,18}

The benefits of maternal education are buttressed by the findings from this study. As the educational level increased, the likelihood of a woman breastfeeding her baby exclusively for 6 months increased. This is similar to the result obtained from the study in Jos where better educational status of the women was associated with increased practice of EBF. However, in rural Sokoto and Ilesha, educational attainment did not have significant effect on EBF for 6 months.^{20,18} Being rural areas, it is likely that the women may have low educational attainments.

Conclusion

Though there is high prevalence of breastfeeding, breastfeeding practices are still suboptimal in this region despite evidence of numerous benefits to both mother and child. Community-based breast-feeding promotion programs should remain a priority, with renewed emphasis on early initiation in addition to exclusiveness and duration of breast-feeding. Programmes to improve female education, family planning and health-seeking behavior for maternal healthcare are also key to good practice.

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