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RESEARCH ARTICLE

THE PRACTICE OF BREASTFEEDING AMONGST ANTENATAL CLINIC ATTENDEES AT A PRIMARY HEALTH CARE FACILITY IN PORT HARCOURT

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ABSTRACT

Background: For most of human history breastfeeding has been the natural and normal means of feeding infants. Over the years there have been attempts at introducing substitutes for breast milk and formula milk despite its deficiencies has become popular. **Objective:** To evaluate the practice of breastfeeding amongst antenatal clinic (ANC) attendees at a Primary Health Centre (PHC) in Port Harcourt. **Methodology:** The study was cross sectional involving 200 hundred ANC attendees at a PHC in Port Harcourt, from 1st November, 2006 to 30th April, 2007. Questionnaires were administered during the study period. Information were retrieved and analyzed using SPSS 15.0 version. **Results:** There were a total of 200 respondents in this study. The mean age was 28-years + 2 SD; 75.5% of the mothers accepted the fact that exclusive breastfeeding of the newborn baby was the best feeding option. However, only 9% opted to breastfeed for over one year, 40.2% of the mothers discontinued breastfeeding after their babies were weaned, while 24.7% stopped because they became pregnant. Over two-third (66.7%) of the babies had diarrhea after their mothers stopped breastfeeding. Ninety-nine percent of the mothers intended to breastfeed in future. **Conclusion:** Breastfeeding of the newborn was widely practiced by most of the respondents but the full benefits of breastfeeding were not achieved because of faulty practices by the mothers. There is need to educate ANC attendees by care givers, with the ultimate goal of achieving better breastfeeding practices.

INTRODUCTION

The practice of breastfeeding is peculiar to mammals, for they possess mammary glands (breasts) with which to suckle their offspring in their early life. Man is no exception, for he normally possesses a pair of mammary glands. Throughout mammalian evolution a noteworthy feature of species survival has been the establishment of a maternal supply of nutrient adapted to the infant's requirement, and a mothering instinct or bonding, which ensures the growth and health of the infant and the survival of that specie. Each mammalian specie produces milk that is nutritionally and immunologically tailored for its young. In rare cases, such as phenylketonuria and galactosaemia, some infants cannot metabolize human milk or other milk products. For most of human history breastfeeding has been the natural and normal means of feeding infants. In the early years of human specie breastfeeding was as common as it was for other mammals feeding their young. There were no alternative foods for their infants, with the lactating females having no choice but to breastfeed the children in shared breastfeeding. There have been attempts at introducing substitutes for breast milk, some of which have achieved a measure of success. Infant formula was first developed by Henri Nestle in the 1860s¹ and has since received a huge boost, with the resultant alteration in the practice of breastfeeding. Man has on a massive scale interfered with nature with respect to breastfeeding and has now began to analyze his meddling. Breastfeeding is presently being encouraged worldwide, particularly in third world countries, because of the increased

incidence of diarrhoeal diseases associated with bottle feeding, coupled with the problem of infant mortality. In the developing countries babies who are not breastfed are 5.8 times more likely to die in the first month of life than breastfed babies (World Health Organization, 2000). Most federal teaching hospitals in Nigeria are becoming "baby friendly", with mothers encouraged to breastfeed their babies. The Baby Friendly Hospital Initiative (BFHI) is concerned with the protection, promotion and support of breastfeeding worldwide (World Health Organization, 2000). Before an institution is designated as being "baby friendly", it requires a careful assessment completed by a trained external team to confirm that it is truly carrying out all the required steps and conforming to the international code of marketing of breast milk substitutes (Naylor *et al.*, 2001). The BFHI has shown itself to be an effective method of improving breastfeeding practices (Ojofeitimi *et al.*, 2000). Early contact of mother and baby after birth is associated with more affectionate behaviour of mothers towards their babies. Mothers who began breastfeeding early have fewer problems with breastfeeding (WHO, 1998), and are likely to breastfeed more often (Van Den Bosch and Bullough, 1990). Early breastfeeding also reduces the baby's risk of hypoglycaemia, which can cause convulsions or death. Exclusive breastfeeding is defined as the provision of breast milk only, without any other food or liquid such as commercial breast milk substitute, animal milk, porridge, tea, water, and so on. Breast milk contains all the nutrients a baby requires for the first 6 months and changes over time to meet the baby's changing nutritional needs.

Exclusive breastfeeding also benefits the mother. Breastfeeding promotes mother-baby bonding, helps the uterus to involute, reduces the risk of anaemia by the lactational amenorrhoea, and is cost effective (Piwoz and Preble, 2000). For women less than 6 months post-partum with no return of menses, exclusive breastfeeding has the added benefit of providing a contraceptive method (lactational amenorrhoea method) that is 98% effective, and can help women increase interval between births and reduce newborn morbidity and mortality (Rutstein, 2000). Other health benefits of breastfeeding to the mother include a reduction in the risk of breast and ovarian cancers. The drawbacks of breastfeeding include non-availability of the mother, failure of lactation, inability to breastfeed as a result of poor health of the mother, and passage of drugs and other substances taken by the mother to the baby through breast milk. With respect to technicality, breastfeeding is much easier than bottle feeding in as much as the mother is not required to make up a formula mixture according to the manufacturer's instructions, and sterilizing bottles is not a problem. Other difficulties with bottle feeding especially in the developing world include the part played by factors such as the non-availability of clean water for mixing the formula, or fuel to boil water. This work was carried out on antenatal patients who registered for antenatal care at a primary health care facility in Port Harcourt, which is not designated "baby friendly". Questionnaires were given to them to fill prior to their receiving health talk on breastfeeding. The scourge of HIV/AIDS and the feeding options for the babies of mothers living with HIV/AIDS was left out of the questionnaire because proper counselling by trained health workers is required for good understanding, bearing in mind the guidelines of the World Health Organization (WHO) (WHO/UNAIDS; Elen G Piwoz *et al.*, 2006), with the hope of reducing maternal to child transmission (MTCT). It is suggested that breastfeeding may account for more than one-third of all infants infected in areas such as sub-Saharan Africa where breastfeeding is universal and HIV is highly prevalent (Ibekwe and Ikeme, 2001; Kuhn and Stein, 2005). Breastfeeding as a route of MTCT was known by 52% of mothers at antenatal booking prior to being counselled on HIV/AIDS at a federal medical centre (Abiodun *et al.*, 2007), while only 24.4% of antenatal patients knew this at Nnewi (Igwegbe AO, Ilika, 2005).

MATERIALS AND METHODS

The study took the form of questionnaire survey. The questionnaires were interviewer administered to pregnant women at antenatal booking of the index pregnancy during the study period, from 1st November, 2006, to 30th April, 2007, prior to being counselled on breastfeeding. Mothers who had counselling on breastfeeding in the past were not excluded. All antenatal attendees at booking, except those opting out for personal reasons, were recruited for the study at booking. The primary health centre where this study took place was Model Primary Health Centre, Churchill, Borikiri, Port Harcourt.

The sample size was calculated using the formula

$$N = Z^2Pq/d^2$$

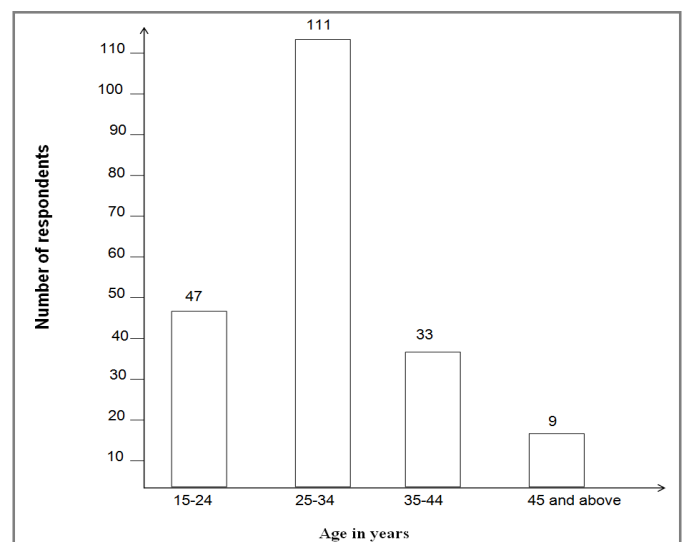
Where n= sample size, Z = degree of confidence = 1.96, P = prevalence from previous study which in this case 15, q = 1 - P, d = error margin = 0.05

N = 196 approximately = 200

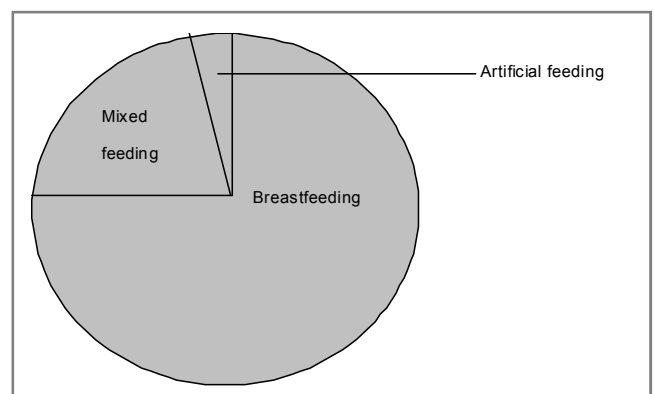
The questionnaires were kept simple to ensure the respondents understood the questions and the options, and allowing them to make a choice. Data collection and statistical analysis were done with SPSS 15.0 version of the computer software, with the Chi square test used for statistical significance at P<0.05.

RESULTS

There were a total of 200 respondents in this study and all were Nigerians, with 55% falling within the age group 25-34 years, and 18.5% had tertiary level of education. 75% of the respondents knew that exclusive breastfeeding of the newborn baby was the best feeding option, but only 37% were willing to breastfeed their babies for 4-6 months, though not specified if exclusively or not. Majority of the mothers, 94.5%, had prior advice or information on breastfeeding before coming for antenatal registration in the index pregnancy, mostly (92%) from clinics/hospitals. 68.4% of the respondents affirmed that their jobs and other responsibilities affected the frequency and duration of breastfeeding their babies, 72% were willing to breastfeed on demand, and an overwhelming number, 97%, were against wet nursing. For mothers whose babies had diarrhoea, the diarrhoeal episodes were more frequent in 66.7% after breastfeeding had been discontinued.



Graph I. Bar chart showing age distribution of respondents



Exclusive breastfeeding=151 respondents=75.5%
 Artificial feeding=2 respondents=1.0%
 Combined (mixed) feeding=47 respondents=23.5%

Graph II. Pie chart indicating choice of feeding for newborns by respondents

Table 1. Relationship between maternal educational status and choice of feeding for newborns

Education	Choice of Feeding			Total
	Exclusive Breastfeeding	Artificial feeding	Combined feeding	
None	2(100%)	-(0%)	-(0%)	2(100%)
Primary	21(77.8%)	-(0%)	6(22.2%)	27(100%)
Secondary	104(77.6%)	-(0%)	30(22.4%)	134(100%)
Tertiary	24(64.9%)	-(5.4%)	11(29.7%)	37(100%)
Total	151	2	47	100

Table 2. Relationship between maternal educational status and duration of breastfeeding

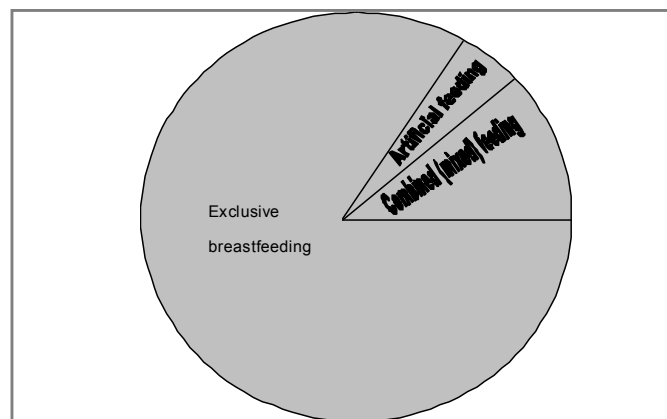
Education	Duration of Breastfeeding					Total
	< 1 Months	1-3 Months	4-6 Months	Up to 1 Year	> 1 Year	
None	-	-(0%)	2(100%)	-(0%)	-(0%)	2(100%)
Primary	-	-(0%)	4(14.8%)	16(59.3%)	7(25.9%)	27(100%)
Secondary	-	6(4.5%)	48(35.8%)	69(51.5%)	11(8.2%)	34(100%)
Tertiary	-	4(10.8%)	20(54.1%)	13(35.1%)	-(0%)	37(100%)
Total	-	10	74	98	18	200

Table 3. Relationship between employment status and method of breastfeeding

Employment	Method of breastfeeding			Total
	On demand	Time-tabled	Breasts engorged	
Unemployed	9(45%)	9(45%)	2(10%)	20(100%)
Employed	73(74.5%)	23(23.5%)	2(2%)	98(100%)
Housewife	38(77.6%)	5(10.2%)	6(12.2%)	49(100%)
Student	24(72.7%)	5(15.2%)	4(12.1%)	33(100%)
Total	144(72%)	42(21%)	14(7%)	200

Table 4. Relationship between babies who had diarrhoea and the choice of feeding

Choice of feeding	Breastfeeding	Artificial feeding	Combined feeding	Total
Diarrhoea	25	2	6	33
% Total	75.8%	6.1%	18.2%	100%



Exclusive breastfeeding= 84.6%= 305⁰; Artificial feeding= 3.9%= 14⁰; Mixed feeding= 11.5%= 41⁰

Graph III. Pie chart depicting choice of feeding for newborns by primigravid women

DISCUSSION

In this study most of the respondents were within the age group 25-34 years, and were married with children. Almost all, with the exception of two, had formal education, with the majority having secondary education. Education is one of the most important factors influencing decisions taken by people. Irrespective of the educational qualification most of the women indicated breastfeeding was the best method for feeding newborns. Most (94.5%) of the respondents had prior advice or information on breastfeeding before registering for antenatal care in the index pregnancy. Most of the women indicated their willingness to breastfeed for up to a year only. None of those with tertiary education was willing to breastfeed for over a year. This was statistically significant.

Higher education of mothers was associated with higher exclusive breastfeeding rates at Ile-Ife, with three-quarter of the mothers from a BFHI facility exclusively breastfeeding, as compared with 35% from a non-BFHI hospital (Ojofeitimi *et al.*, 2004). On demand breastfeeding was preferred by most (72%) of the women in this study irrespective of their educational or employment status and was statistically significant. Egbuonu *et al* in Onitsha found out that 100% of the mothers exclusively breastfed on discharge following childbirth, but dropped to 3.9% at 6 months (Egbuonu *et al.*, 2005). Among the primigravid respondents, numbering 26(13%), most (84.6%) felt breastfeeding was the best method for feeding newborn babies, 11.5% listed mixed feeding, while 3.9% felt feeding with infant formula was the best method and this was statistically significant, and is likely to influence their

breastfeeding practice upon delivery. Some of these respondents, 23 (11.5%), were single mothers, and some were adolescents. Little is known about the breastfeeding practice of young adolescent mothers, however it seems plausible that many have difficulty being available, and for long enough for their infants (World Health Organization, 1988; Motil *et al.*, 1997). This may be because of family and community problems as a result of disapproval of the adolescents' behaviour, with consequent increased neonatal and infant mortality in the children of adolescents (Treffers *et al.*, 2001; Cooper *et al.*, 1995). Some women preferred timetabled or scheduled breastfeeding because of their jobs or other commitments. 31.5% of the women who had children indicated that their jobs or other commitments affected the frequency and duration of breastfeeding their babies. These mothers tend to introduce mixed feeding early. It probably would have been better if they could express their breast milk into receptacles, which was to be used to feed their babies in their absence. But 93% of the mothers, irrespective of their employment or educational status despised this. The national figure as at 1999 for mothers who ever breastfed their babies was 96%, and the mean duration of feeding was 19 months, but only 20% breastfed their babies exclusively for less than 4 months; 21% of mothers did bottle feeding (Maternal and Child Nutrition, 2000). In this study 99% of the respondents expressed desire to breastfeed their newborn babies, but only 10.6% were willing to breastfeed for over 1 year, 36.9% only willing to breastfeed for 4-6 months.

Eighty-three percent (83%) of the mothers were willing to breastfeed their babies within 24-72 hours after birth, but 17% were unwilling. Varied reasons were given by those who were willing to breastfeed within 24-72 hours after childbirth, most recognizing the fact that colostrum is very nutritious and made the baby strong and healthy. Others did so because suckling by the baby increased lactation and also would feed their babies on demand. Those not willing to breastfeed within 24-72 hours of childbirth gave reasons of poor breast milk flow within that time frame, colostrum not being healthy for the baby to consume, delivery by caesarean section and baby being observed or receiving treatment at the neonatal unit, with mothers having restricted access. In a study in Port Harcourt, parity, attendance at the antenatal clinic, receipt of breastfeeding information, and use of analgesics during labour did not show any statistical association with the time of initiation of breastfeeding (Awi *et al.*, 2006).

Early initiation of breastfeeding is taken as initiating breastfeeding within 30 minutes of delivery in the case of vaginal delivery, or within 30 minutes of recovery of postoperative consciousness in the case of those delivered by caesarean section. Several reasons were put forward for discontinuing to breastfeed a baby, most opting to stop when the babies were of age for weaning, mothers becoming pregnant, and mothers having to go back to work. These were disheartening reasons. Pregnancy being given as reason for discontinuation of breastfeeding can be markedly reduced by teaching the women family planning methods and effective methods of contraception, including lactational amenorrhoea method. In a study in Onitsha, with resumption of sexual activity after childbirth, only 5% of mothers resorted to contraceptive practice other than lactational amenorrhoea method (LAM) (Cooper *et al.*, 1995). LAM is 98% effective (Rutstein, 2000), but cannot be completely relied on as an effective method of contraception when the baby is above 6

months of age, exclusive breastfeeding is not practiced, and when menstruation had returned. The combined oral contraceptive pills are not appropriate for breastfeeding mothers because oestrogen can affect the quantity and quality of breast milk (Hatcher *et al.*, 1994). Instead, breastfeeding clients who want to use oral pills should be provided with a progestin-only pill, or advised on other acceptable methods of contraception for nursing mothers. Women who do not breastfeed lose the contraceptive effect of breastfeeding, and need counselling to choose another method (Stecklov, 1999). There is a high contraceptive awareness but low contraceptive use among breastfeeding Nigerian mothers (Ijadunola *et al.*, 2005). Virtually all, 97%, of the respondents declined allowing another woman to breastfeed their babies in their absence, be it female relatives or neighbours, which was not an uncommon practice in the past. Their unwillingness to allow this stems from fear of disease transmission and transfer of personality traits from the women to their babies, doctors not advising on it, and their religion being against it.

This response was not unusual, especially with the HIV/AIDS pandemic, with transmission of the virus through breast milk. Breast milk has anti-infective agents which protect the breastfed infants from diarrhoea. Thirty-three (33) respondents admitted to their babies having had diarrhoea. Most of these babies had diarrhoeal episodes when they were above 6 months of age, after breastfeeding was stopped, and this was statistically significant. Mothers should be encouraged to breastfeed for as long as possible, or for 1-2 years, so that their babies would benefit from the anti-infective agents for a longer period. But at the same time other foods, be it commercial or local weaning foods, need to be added so that the nutritional requirements are met (Ijarotimi and Ogunmesore, 2006).

Conclusion

Most of the respondents in this study were willing to breastfeed their newborn, which was not unexpected, knowing the universal nature of breastfeeding in sub-Saharan Africa. But the problem is the significant number of respondents who were to lose out of the full benefits of breastfeeding because of faulty practices, most especially mixed feeding, early weaning and early discontinuation of breastfeeding. A public health campaign can greatly improve the practice of breastfeeding. The campaigns should target all social groups, including men, future parents, grandparents, health care providers, traditional birth attendants, religious groups and employers, because of their influence on women. The Baby Friendly Hospital Initiative (BFHI) is commendable and has improved breastfeeding practices in centres so designated (Otaigbe *et al.*; Ojofeitimi *et al.*, 2000). Spreading such designated centres to peripheral health care facilities would benefit mothers who patronize these centres and they become better educated and encouraged to improve on their breastfeeding practices. While this study was on there were preliminary works for improving the infrastructure of primary health care facilities in the state which were generally dilapidated, with the effect of dwindling patronage from the public. This study spanned six months but only two hundred new antenatal attendees were able to be recruited for the study. Infrastructural development is commendable but it should be remembered that the human resource is the most valuable resource in the health care system, with the need for capacity development for there to be improvements in the services rendered, which includes counselling and support services on breastfeeding.

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