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Research Article

Infant and Young Child Feeding Practices in Three Communities in Obio-Akpor Local Government Area

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Abstract: Optimal infant and young child feeding is the key to their optimal growth and development. This paper aimed to evaluate infant and young child feeding practices among mothers in Alakahia, Choba and Aluu communities in Obio-Akpor Local Government Area (LGA). This was a cross sectional community based study conducted in Alakahia, Choba and Aluu communities in Obio-Akpor LGA in Port Harcourt Metropolis between January to April 2014. A 22 itemed structured questionnaire was administered to mothers whose last babies were between 0 to 23 months old. Questions asked covered infant and young child feeding practices and socio-demographics. Data was analyzed using SPSS version 17 statistical software. Three hundred and sixty five mother child pairs participated in this study; mean age of mothers (years) and babies (months) were 29.04±3.77SD and 8.688±7.33SD respectively. Three hundred and fifty five (97.2%) babies were breastfed. Exclusive breastfeeding rate before 4 months, between 4 to 6 months, at 6 months and after 6 months were 33.3%, 27.1%, 22.5% and 17.7% respectively. Two hundred and four (55.9%) babies received complementary feeds before 6 months of age. Majority (80%) of the mothers who stopped breastfeeding before the survey, stopped when their babies were between 6 to 12 months old. Ninety seven (26.6%) babies were bottle fed. Social class of parents had no relationship with exclusive breastfeeding (p=0.498) or bottle feeding (p=0.792). Infant and young child feeding practices among mothers in Alakahia, Choba and Aluu communities were sub-optimal.
Keywords: Infant, Young child, Exclusive breastfeeding, Bottle feeding, Feeding practices, Obio-Akpor

INTRODUCTION

The World Health Organization (WHO) declared that 10.6 million under-fives die annually globally, with malnutrition directly or indirectly responsible for 60% of these deaths and that majority of the deaths occurred in children within the first year of life and is associated with inappropriate feeding practices [1].

The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) had recommended early initiation of breastfeeding within one hour of life; exclusive breastfeeding for the first six months of life, followed by timely introduction of safe, adequate, appropriate and nutritious foods at 6 months of age and continued breastfeeding up to age 2 years and beyond as optimal infant and young child feeding practices [2]. These optimal feeding practices ensure that the child's nutritional requirements are met and optimal growth, development, health and survival for the first two years of life are achieved. About 800,000 under-fives could be saved annually if all children between the ages of 0 to 23 months are optimally breastfed [3].

However, available data show that not all infants and young children are being optimally fed according to the WHO/UNICEF recommendations. Globally, only 38% of infants 0 to 6 months are exclusively breastfed [3]. In Nigeria, the exclusive breastfeeding rate for children less than 6 months is 17%, complementary feeds are being introduced early, with 23% of children under 6 months and 38% of children aged 4 to 5 months consuming solid or semi-solid foods in addition to breast milk [4]. The direct consequences of these inappropriate feeding practices is the poor nutritional status of Nigeria's under-fives as revealed in the most recent Nigeria Demographic and Health Survey [4]. The data revealed that 37% of under-fives in Nigeria are stunted; with 21% severely stunted. The prevalence of stunting increases with age from 16% at age 6 months to 46% between 24 to 35 months. Additionally 18% of Nigerian children are wasted with wasting peaking at age 9 to 11 months [4].

This data however represents information gathered from a national survey. There is scarcity of data on infant and young child feeding practices in Alakahia, Choba and Aluu communities in Obio-Akpor Local Government Area (LGA) of Rivers State. These

three communities are unique in the sense that they play host to a federal University, a tertiary hospital and a Comprehensive Health centre. These health facilities have been at the fore front of the campaign for mothers in Port Harcourt Metropolis to adopt optimal infant and young child feeding practices. Since the members of these communities are expected to utilize these health facilities, one would expect the best feeding practices from mothers with infants and young children. This study therefore aimed to assess the infant and young child feeding practices in Alakahia, Choba and Aluu communities in Obio-Apor LGA.

MATERIALS AND METHODS

This was a cross sectional descriptive study carried out between March and April 2014 in three communities in Obio-Akpor LGA in Port Harcourt Metropolis, one of the major centres of economic activities in Nigeria, and one of the major cities of the Niger Delta located in Rivers State [5]. The Local Government Area covers a 260km^{2}and the 2006 censors puts its population as 878,890 [6]. The people of Obio-Apor belong to the Ikwere ethnicity, but since Port Harcourt is a Cosmopolitan town, people from other ethnic groups also reside there.

The study was conducted in Alakahia, Choba and Aluu communities, which were purposively chosen because they are the host communities of University of Port Harcourt, University of Port Harcourt Teaching Hospital and a comprehensive health centre. The sampling method used for subject selection is the convenient sampling technique. The subjects were mothers with babies aged between 0 to 23 months who attended monthly women meetings in Catholic and Anglican churches in the three communities. The minimum sample size for this study was calculated using the formula [7]

$$n = \frac{Z^2(pq)}{E^2}$$

Where n = minimum sample size
p= Prevalence of exclusive breastfeeding at 6 months of 17%[4]
q= 100-p
E= Margin of error tolerated at 5%
Z= 1.96 at 95% confidence level

$$n = \frac{1.96^2 \times 17 \times (100-17)}{5^2} = 217$$

Thus minimum sample size of 217 was calculated.
Allowance for Design Effect (DE) = Sample size x1½ = 326
Allowance for attrition (10%) =33
Minimum sample size =326 + 33 = 359

The following selection criteria were used to recruit subjects. The first is mothers with babies aged between 0 to 23 months and the second is that mothers must consent to participate in the study. A total of 365 mother and child pairs were eventually recruited for the study. A 22 itemed structured self-administered questionnaire was used for data collection. The questionnaires were distributed by trained final year medical students and in the evident that any mother could not read, the students assisted such mother in filling the questionnaire. The questions asked covered socio-demographics, if the mothers practiced breastfeeding and exclusive breastfeeding, the duration of exclusive breastfeeding, age at commencement of complementary feeds and the duration of breastfeeding. Questions were reviewed by three Community Health Physicians and pretested on 40 mothers in another community not involved in the study. The questionnaires were retrieved immediately after they were filled. Data was analyzed using SPSS version 17 statistical software and results were presented as descriptive statistics. Chi Square Test was used to test associations between variables. Only p values less than 0.05 were considered as statistically significant.

Ethical Approval

The Ethics Committee of University of Port Harcourt Teaching Hospital and the administrative heads of the churches gave ethical approval for the study.

RESULTS

A total of 365 mothers participated in this study. Their ages ranged between 19 to 43 years with a mean age of 29.04±3.77SD. Three hundred and fifty (95.9%) mothers had secondary education and above. The fathers' ages ranged between 26 to 47 years, with a mean age of 35.76±4.069. Three hundred and fifty-seven (97.8%) fathers had secondary education and above. Ten (2.7%) mothers belonged to Social Class 1, 58 (15.9%) Social Class 2, 142 (38.9%) Social Class 3, 150 (41.1%) Social Class 4 and 5 (1.4%) belonged to Social Class 5. The ages of their babies ranged from 0 to 23 months, with mean age 8.688±7.333SD. There were 195 (53.4%) females and 170 (46.6%) males with male to female ratio of 1:0.9.

Three hundred and fifty five (97.2%) babies were breastfed, while 10 (2.7%) were not. Reasons given by the mothers for not breastfeeding the 10 (2.7%) babies were babies refused to suck 5(50%), mother had health problems 3(30%), breast milk refused to flow 1 (10%) and child was adopted 1(10%).

Out of the 355 (97.2%) babies who were breastfed, 240 (67.6%) were exclusively breastfed, while 115 (32.4%) were not. Out of the 240 babies who were exclusively breastfed, 118 (49.2%) were still on exclusive breastfeeding at the time of the survey, while 122 (50.8%) had stopped exclusive breastfeeding. Exclusive breastfeeding rate before 4 months, between 4 to 6 months, at 6 months and above 6 months were 33.3% (80/240), 27.1% (65/240), 22.5% (54/240) and

17.7% (41/240) respectively. Out of the 118 (49.2%) babies who were still on exclusive breastfeeding at the time of the survey, 80 (67.8%), 20 (16.9%) and 18 (15.3%) were less than 6 months, 6 months and above 6 months of age respectively.

Out of the 122 (50.8%) babies who had stopped exclusive breastfeeding at the time of the survey, 30 (24.6%) stopped exclusive breastfeeding before 6 months of age, 53 (43.4%) stopped at 6 months of age and 39 (32.0%) stopped exclusive breastfeeding after 6 months of age.

The three most common reasons given by the mothers for stopping exclusive breastfeeding before 6 months of age were breast milk alone was no longer enough for child 56.7% (17/30), mother had to return to work 26.7% (8/30) and breast milk was not flowing well 16.6% (5/30).

Two hundred and four (55.9%) babies received complementary feeds before 6 months of age.

At the time of the survey, 220 (62.0%, 220/355) babies were still being breastfed, while 135 (38.0%, 135/355) had stopped breastfeeding. Out of the 135 (38.0%) babies who had stopped breastfeeding, 8 (5.9%) stopped before 6 months of age, 108 (80%) stopped between 6 to 12 months of age, 18 (13.3%) stopped between 13 to 19 months of age and 1 (0.7%) stopped at 20 months of age.

Ninety seven (26.6%) babies were bottle fed, while 268 (73.4%) were not. Majority (99%, 96/97) of mothers who bottle fed their babies did it for convenience. There is no statistically significant relationship between social class of parents and bottle feeding (χ^2=1.692,p=0.792). Social class also had no positive association with exclusive breastfeeding (χ^2=7.367, p=0.498).

DISCUSSION

The study has revealed a high rate (97.2%) of breastfeeding amongst the mothers, showing that breastfeeding is universal in Alakahia, Choba and Aluu communities in Obio-Akpor LGA in Port Harcourt Metropolis. This high rate is similar to what has been reported in previous studies in Nigeria [4, 8, 9] and in other parts of the world [10, 11].

A previous study showed that exclusively breastfeeding infants for the first 6 months of life has the potential for preventing 13 % of under-five deaths in developing countries, [12] because it causes a 2 to 3 fold reduction in deaths from diarrhea, acute respiratory infections, [13, 14] and malnutrition [14] which are the leading causes of under five mortalities in developing countries [15]. In this study, though the crude exclusive breastfeeding rate (67.6%) is high, comparable to what was reported in other studies [16,17], not up to one quarter of the babies were exclusively breastfed for up to 6 months of age. This shows that majority of the mothers in these three communities were not meeting the optimal duration of exclusive breastfeeding of 6 months recommended by WHO and UNICEF [2]. However, the low rate of exclusive breastfeeding for the first 6 months of life revealed in this study, is slightly higher than the current national average of 17% [4], though this previous study is a national survey which involved a larger proportion of respondents. It is similar to the 20% 6 months exclusive breastfeeding rate reported in Benin, Edo State, Nigeria [18]. This is not surprising because both states are in the Southern part of Nigeria. However, it is lower than the 31% and 58.3% 6 months exclusive breastfeeding rate reported in Nasarawa State in Northern Nigeria [8] and India [16] respectively. These differences in observation may be due to the fact that majority of the mothers in the two previous studies were rural women who were mostly self-employed or full time house wives who probably had more time for breastfeeding. Moreover, a previous study done in Nigeria had reported that their respondents admitted that they could not complete the 6 months exclusive breastfeeding because they were civil servants and had to resume work [19].

The commonest reason (56.7%) given by the mothers in this study for stopping exclusive breastfeeding before 6 months of age is that breast milk alone was no longer sufficient for their babies. Another study done in Kenya also reported insufficient breast milk as the commonest reason for early cessation of exclusive breastfeeding and commencement of complementary feeds by their respondents [11]. Breastfeeding education during antenatal visits, religious services and community meetings will improve the six months exclusive breastfeeding rates in these communities. This fact is corroborated by the report of a previous study done in India, which showed the positive influence of breastfeeding education during antenatal visits in reduction of faulty breastfeeding practices [20].

The results also showed a gradual decline in exclusive breastfeeding rate with increase in age of the babies from 33.3% before 4 months of age, 27.1% between 4 to 6 months and 22.5% at 6 months of age. Other researches had also made similar observations [16, 17, 19].

The WHO/UNICEF recommendations for only 6 months of exclusive breastfeeding is based on the fact that after the first 6 months of life, children need more vitamins, minerals, protein and carbohydrates than are generally available from breast milk alone. [21]In our study, 17.7% of the mothers practiced prolonged exclusive breastfeeding beyond 6 months of life. This prolonged exclusive breastfeeding may be a contributory factor to the high prevalence of under-five

malnutrition reported in a national survey in Nigeria [4].

The study further revealed that more than half of the mothers introduced complementary feeds to their babies before 6 months of age, which again is against the WHO/UNICEF recommendation of timely introduction of safe, adequate, appropriate and nutritious foods at 6 months of age. This inappropriate feeding practice was also reported in other studies done in Nigeria [4, 8, 19, 22, 23] and in other countries [10, 11] and has been blamed as one of the causes of under-five malnutrition, especially in the developing countries where the complementary feeds are nutritionally inadequate [2, 3, 8, 19]. Unfortunately, the type and nutritional content of the complementary feeds were not assessed in this study.

One of the optimal feeding practices recommended by WHO/UNICEF is continued breastfeeding up to 2 years and beyond [2]. This recommendation is based on the fact that breast milk still remains an important source of energy and nutrient between 6 to 23 months of age [3]. It is capable of providing half or more of a child's energy needs between 6 to 12 months of age and one third of energy needs between 12 to 24 months of age. Additionally it is a critical source of energy and nutrient during illness [3]. In this study, majority (80%) of the mothers who had stopped breastfeeding at the time of the survey stopped between 6 to 12 months of age. This short duration of breastfeeding has been identified as one of the factors associated with a high prevalence of stunting among under-fives in China [24].

The results in this study indicate that more than one quarter of the mothers fed their babies with feeding bottles. This is comparable to the 21%, 23.4% and 28% reported in Nasarawa [8], Kebbi and Niger States [25] respectively, all in Northern Nigeria, but is much lower than the 35.3% and 58.1% reported in North west Nigeria and Kaduna State [25] also in Northern Nigeria. The differences in observation could be due to the fact that with the exception of the Nasarawa study, the rest were state surveys involving a larger proportion of respondents. These findings show that bottle feeding is a common practice in Nigeria. Bottle feeding has been linked with diarrhea in infancy because the feeding bottles are difficult to clean and dirty bottles are a major source of infections [26].

A national survey done in Nigeria showed that mothers in higher socio-economic class were more likely to practice exclusive breastfeeding than mothers in the lower and middle social classes [27]. Another study also done in Nigeria showed that mothers in higher socio-economic class were less likely to practice exclusive breastfeeding compared to mothers in the middle and lower socio-economic class [23]. Our finding disagrees with the report of both studies because in our study mothers' social class had no relationship with their practice of exclusive breastfeeding. The authors have no logical explanation for these differences in observations.

The major limitation of this study is that information sought was based on recall and is subject to over or under reporting. Another limitation is that the type of complementary feeds given to the babies was not assessed for their nutrient adequacy.

In conclusion, infant and young child feeding practices in Alakahia, Choba and Aluu communities were sub optimal. Though breastfeeding rate was high, exclusive breastfeeding at 6 months of age was low. Complementary feeds were introduced early and majority of the mothers who stopped breastfeeding at the time of the survey, stopped when their babies were between 6 and 12 months of age. More than a quarter of the babies were bottle fed.

Breastfeeding education should be organized for mothers in their churches, community meetings and breastfeeding education should be intensified in the ante natal clinics. There is also a need for crèches at work places to enable mothers continue exclusive breastfeeding after resuming work or increasing time for maternity leave.

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