



A CROSS SECTIONAL STUDY ON BREASTFEEDING AND COMPLEMENTARY FEEDING PRACTICES AMONG LACTATING MOTHERS IN ILE IFE, NIGERIA.

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ABSTRACT

Infants worldwide are supposed to be fed on breast milk exclusively within the first six months of life and subsequent complementary feeding in addition until about 2 years. The study investigated how breasts and complementary feedings were practiced among lactating mothers attending a primary health centre, at Enuwa, Ile Ife Osun State Nigeria. The study was a cross sectional survey conducted in a primary health care facility centre in Ile Ife, Nigeria. Two hundred lactating women were recruited into the study by convenience sampling method. The data was collected by semi structured pretested questionnaire that elicited information on breast and complementary feeding pattern of respondents with children not older than two years. Data was analyzed using a software of Statistical Package for Social Sciences (SPSS) version 16. Of the 200 nursing mothers interviewed, 61% were between the ages of 21-35, 95% of the mothers were married. About 65.5% of the respondents were artisans and traders, while 62.5% among them were secondary school leavers. About 82% exclusively breastfed their babies, while 54% initiated breastfeeding within 30 minutes of birth and 50% practiced complementary feeding at ≥ 6 months). About 76% had their source of information on the importance of breast and complementary feeding from the health facility. About 75% preferred 18 months as duration of breastfeeding, while 89.5% breastfed on demand, 97.5% knew the benefits of breast milk and 51% practiced good hygiene. About 23.5% weaned their children on family diet. The study showed that lactating mothers had good exclusive breast feeding and an average healthy complementary feeding practices.

KEY WORDS: Nutrition, Exclusive breastfeeding, Complementary feeding, mothers,

INTRODUCTION

The practice of breast feeding and healthy complementary feeding of children under two years is very crucial to their developments in life.[1] Nutrition plays a vital role in the health of both children and adults in the community at large. The nutritional adequacy of complementary foods is essential to the prevention of infant morbidity and mortality, including malnutrition and overweight. [2] The linear growth retardation acquired early on in infancy cannot be easily reversed after the second year of life.[3] From 6 to 24 months, children need complementary foods in addition to breast milk to ensure that they continue to grow and thrive.[4] Complementary feeding is the introduction of other foods after exclusive breast feeding at about the age of six months until the two years when the child is weaned from breast milk.[1] Breast milk alone can be used to properly feed infants in the first six months of life, but from then on, complementary feeding is necessary. In this context, providing infants with optimal feeding should be the key objective of a global strategy to guarantee the nutrition safety of an entire population.[5] While the practice of breast feeding appear to be compromised in many developing countries due to lack of adequate information and poverty, complementary feeding on the other hand appears to be initiated either too early or later. This was observed in a study conducted by Santorelli G et al who noticed the variation in the introduction of complementary feeding among ethnic groups in United Kingdom.[6] Over 50% of Nigerian infants are given complementary foods too early and they are often of poor nutritional value mostly inadequate in terms of energy, protein and micronutrients such as iron, zinc, iodine and vitamin A. [7] The frequency of feeding is usually low, while the quantities given are less than that required for the ages of the children.[7] Good nutrition is one of the basic components of health and as particulars of optimal child development survival and maintenance of health throughout life. The nutritional and health status of infants depends mainly on the feeding practices of the community. Early life is a period of rapid growth with the weight of infant doubling by 6 months and tripling by one year of age. [4] In Nigeria, malnutrition is widespread, for example, 43% of all children less than five years of age are stunted, 9% wasted and 25% are underweight.8 The rate of exclusive breastfeeding in the first 6 months of life is between 15% and 17% in Nigeria which could account for malnutrition in the region.[8,9] This is similar in most developing countries. The contray is the case with developed countries. In a study conducted in northeast England 94% commenced any

form of breast feeding while 66% of motherhers continued exclusive breast feeding in the first six months.[10] .

The well being of the individuals make up a community which determines collective health and productivity, in much the same way it is the children of today that are grown up adults in respective communities tomorrow. Breastfeeding and adequate complementary feeding practices are known to be the best way to feed infants by providing the psychological and health benefit to both the mother and child. Although health professionals are in charge of promoting it and mothers are responsible for putting it into practice. The final success of this action also depends on the definition of appropriate governmental policies with the participation and support of civil society as a whole.[9] WHO 2001 reported 54% of all childhood mortality was attributable directly or indirectly to malnutrition. Sub-Saharan Africa has a high prevalence of stunting, low weight for and acute malnutrition.[11] It is estimated that among children living in the 42 countries with 90% of global child deaths, a package of effective nutrition intervention could save 25% of childhood death each year.[11]

The study was conducted to assess the breastfeeding and complementary feeding practices of lactating mothers in Ile Ife Nigeria.

METHODOLOGY

The study was conducted in Ife Central Local Government Area of Osun State, South West of Nigeria and it is located approximately 70km from Ibadan, the largest city in Nigeria and West Africa. The community has a population of approximately 200,000 people mainly composed of people of Yoruba ethnicity. Other ethnic groups such as Igbo and hausa are also residents of Ile-Ife. Christianity, Islam and traditional religion are the main religious beliefs of the people. The people are mainly farmers, traders, artisans and civil servants, most of whom are staffs of Obafemi Awolowo University, school teachers and local government workers.

Enuwa primary health care center is one of the 14 primary health care centers in Ife Central local government which serve the people in Enuwa, Moore and Ita-akogun areas. Other primary health care centers in Ife Central include Aderemi, Ilode, Gbalefefe, Ireto 1, Ireto 2. There are 2 secondary health facilities: The Seventh Day Adventist Hospital and The State Hospital, Sabo. The Obafemi Awolowo University Teaching Hospital with her urban comprehensive health

center in Eleyele, Ile-Ife, serves as the tertiary referral center for the above mentioned health facilities.

STUDY DESIGN

A descriptive cross sectional study design was employed.

STUDY POPULATION

Lactating mothers and their children up to 24 months. Exclusion criteria are children above 2 years and non-lactating mothers.

SAMPLE SIZE DETERMINATION(Kish and Lesley)

The sample size was determined using the sample size formula for simple proportion

$$\text{Sample size, } n = \frac{(Z)^2 pq}{d^2}$$

Where, $q = 1 - p$

n = is the desired sample size

Z = the standard normal deviate usually set at 1.96, which corresponds to the 95% confidence level.

P = the proportion or a best guess about the value of the proportion of interest in a situation whereby the entire population is more than 10,000.

d = how close to the proportion of interest the estimate is desired to be i.e. 0.05 (the degree of accuracy desired)

Therefore,

$P = 13\%$ (prevalence of women practicing exclusive breast feeding in Nigeria; NDHS, 2008)

$$n = \frac{1.96^2 \times 0.13 \times (1 - 0.13)}{0.05^2}$$

=173.79, approximately 200 to the nearest tens.

SAMPLING TECHNIQUE

Enuwa was picked using the non-probability sampling technique, convenience sampling. Being a cross sectional study we used two Mondays and we recruited serially all eligible respondents (all lactating mothers with their children, 0-24 months).

DATA COLLECTION METHOD

Quantitative data was collected using interviewer administered semi structured questionnaires on breast and complementary feeding practices among respondents.

A pre-tested questionnaire was used, pretested at Primary Health Center, Aderemi, Ile- Ife all lactating mothers coming to the primary health care center were interviewed until the sample size of 20 was reached. A pre-test run was done to test the validity of the questions. Information was collected from eligible respondents using self administered and interview administered questionnaires. The respondents were interviewed at the primary health center on their clinic days. They were all interviewed on a one- on- one basis and questions were interpreted in Yoruba language when necessary.

DATA PROCESSING ANALYSIS

The structured questionnaires used in the collection of data were mostly precoded. Each question is awarded 10 points and a maximum score of 100% can be scored on each subheading in the questionnaire, the score of 70% and above is graded as very good, 60-69% is good, 40 - 59% is fair and 40 or less is poor. Data was entered using the statistical package for social sciences (SPSS) version 16.0 appropriate descriptive and inferential statistics were employed. Frequencies and percentages were determined and the results were presented with appropriate tables and charts.

ETHICAL CONSIDERATION

Ethical clearance obtained from the ethical review committee of Obafemi Awolowo University, Ile Ife, Nigeria. The study was entirely voluntary for all participants and could withdraw at any stage. However, Informed consent was gained from all the respondents and they were assured of confidentiality.

RESULTS

TABLE 1: THE SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS.

VARIABLES	FREQUENCY (N =200)	PERCENTAGE (100%)
AGE OF THE BABY:		
	101	50.5
<4 MONTHS	44	22
4-6 MONTHS	55	27.5
>6 MONTHS		
AGE OF THE MOTHER:		
<20	46	23
21-35	122	61
>35	32	16
LEVEL OF EDUCATION:		
NO FORMAL	1	0.5
PRIMARY	21	10.5
SECONDARY	125	62.5
TERTIARY	53	26.5
AVERAGE MONTHLY INCOME:(In Naira Nigerian Currency)		
<18,000	106	53
18-30,000	38	19
30-50,000	37	18.5
50-100,000	8	4
>100,000	2	1
NO RESPONSE	9	4.5
TYPE OF MARRIAGE:		
POLYGAMOUS	35	17.5
MONOGAMOUS	82.5	82.5
MARITAL STATUS:		
SINGLE	5	2.5
MARRIED	190	95
DIVORCED	1	0.5
SEPARATED	4	2.0

Characteristics of Respondents

The demographic characteristics of the respondents are presented in Table1. The mothers ranged in age

from 15 to 40 years. With respect to age, participation was highest amongst mothers aged between 21 and 35 years. Approximately 95% (n=190) of the participants were married, 62.5% (n=125) had at least some secondary education, and 90%(n=180) were employed.98(49%) of their babies were male and 102(51%) of their babies were females.

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TABLE 2: Knowledge of mothers about duration of Exclusive breastfeeding

VARIABLE	FREQUENCY	PERCENTAGE (%)
<4 MONTHS	10	5
4-<6 MONTHS	93	46.5
≥6 MONTHS	97	48.5
TOTAL	200	100

From table 2, a total of 200 respondents,97(48.5%) had a knowledge on exclusive breast feeding for ≥6 months,93(46.5%) for 4- <6 months and 10(5%) for <4months.

The mean and standard deviation was gotten.1 standard deviation above the mean was considered adequate and 1s.d below the mean was considered inadequate. The mean value was considered moderately adequate.

From the above table,majority of lactating mothers have a moderately adequate nutrition knowledge score 102(51%).

TABLE 3: TYPES OF BREASTFEEDING PRACTICES

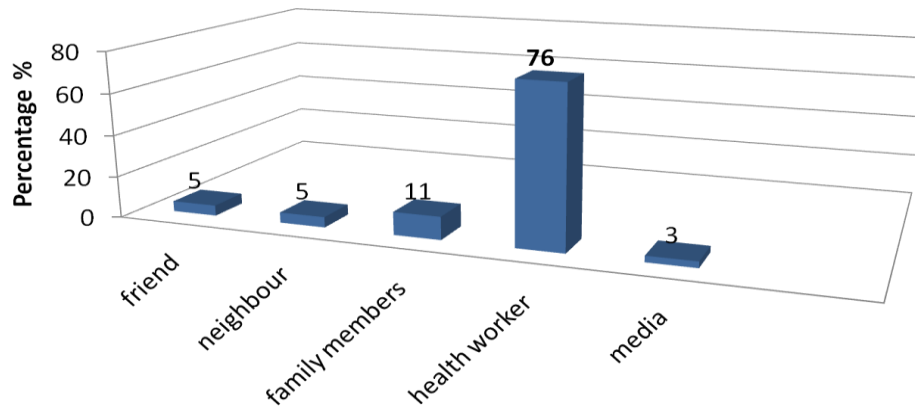
VARIABLES	FREQUENCY (N=200)	PERCENTAGE (100%)
Time of initiation of breastfeeding		
>24 hours	33	16.5
30 min- 24 hours	59	29.5
<30 minutes	108	54.0
Children given colostrum		
Given	184	92.5
Not given	16	7.5
Prelacteal feed		
Nothing	171	85.5
Others	29	14.5
Frequency of breastfeeding		
Mother's convenience	21	10.5
Child's demand	179	89.5

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Table 3 shows the types of breastfeeding practices among lactating mothers. Majority of lactating mothers 108 (54.5%) initiated breastfeeding within 30 minutes of birth, a higher percentage (92.5%) gave colostrums, which is the first expressed breast milk rich in antibodies that can readily boost the defence mechanism of the child against diseases, 171(85.5%) gave nothing as a prelacteal feed and 179 (89.5%) breastfed on child's demand.

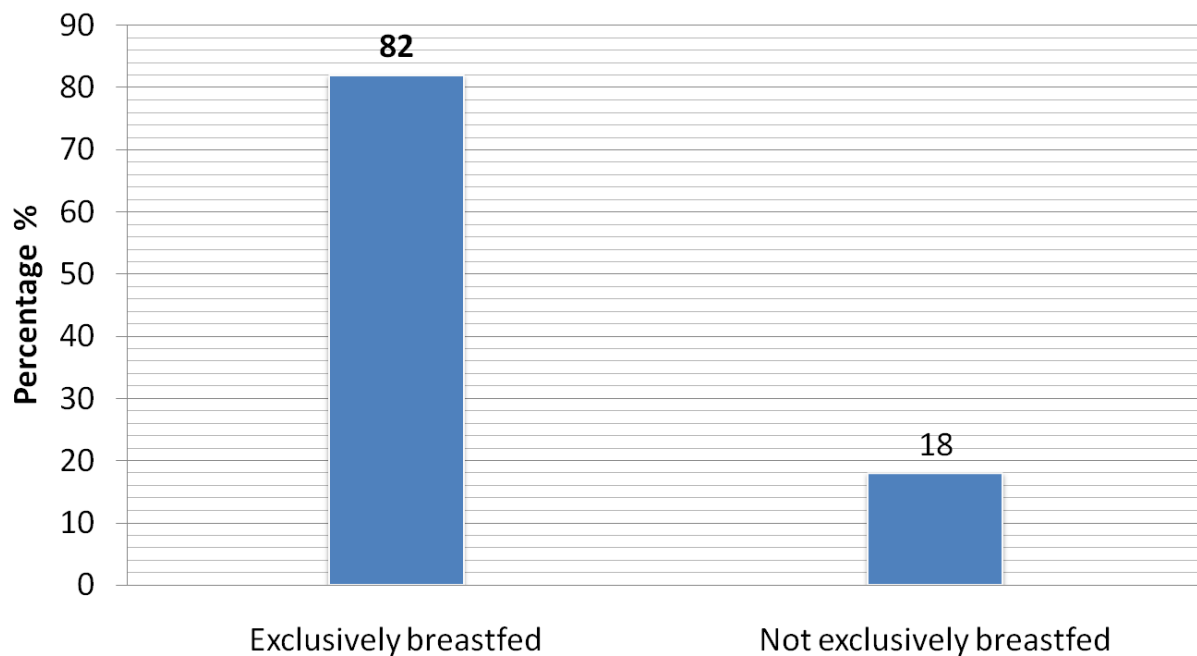
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FIGURE 1: SOURCE OF INFORMATION(n=200)



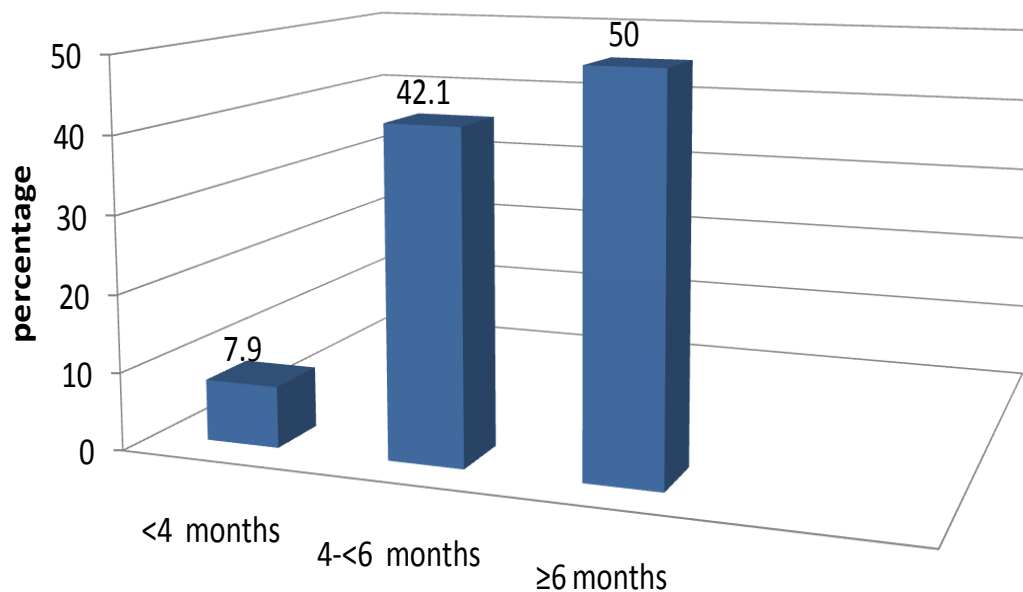
The descriptive analysis findings showed that majority of the lactating mothers received information on breastfeeding and complementary feeding from the health workers 152(76%).

**FIGURE 2:
PRACTICE OF EXCLUSIVE BREASTFEEDING(N=111)**



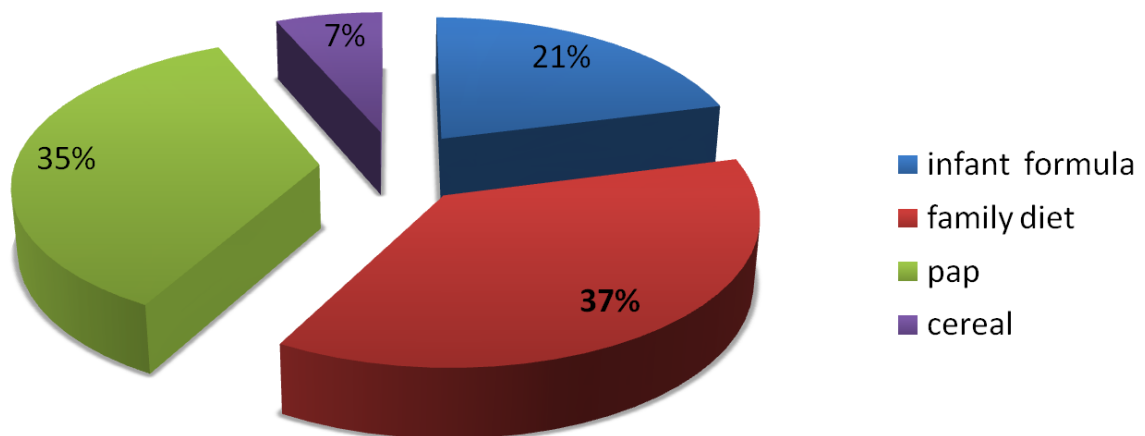
Of the respondents who have breastfed above 6 months, 82% exclusively breast feed for 6 months while 18% did not practice exclusive breast feeding.

FIGURE 3: INTRODUCTION OF COMPLEMENTARY FEEDING AMONG LACTATING MOTHERS(n=200)



From the chart above figure, the prevalent time of complementary feeding was ≥ 6 months old among mothers who have commenced weaning

FIGURE 4: KIND OF FEEDS INTRODUCED BY LACTATING MOTHERS(n= 114)



Most respondents reported the use of family diet as means of complementary feeding for their children as shown in the figure above.

DISCUSSION

This cross sectional study was done to evaluate the breastfeeding and complementary feeding practices among lactating mothers attending a primary health centre in Nigeria. These feeding practices are very vital to the developmental milestones in the growing children at any age .

In this study the types of breastfeeding practices among lactating mothers revealed that above half (54.5%) initiated breastfeeding within 30 minutes of birth, which is in consonance with a study conducted in Sri Lanka which reported 56.3% of infants breastfed within the first hour of birth.[12]

A higher percentage (92.5%) gave colostrums, which is the first expressed breast milk rich in antibodies that can readily boost the defence mechanism of the child against diseases. This is an improvement on a study carried out by Akuegbu which reported that 74.6% of mothers gave colostrum to their children when breastfeeding was initiated.[13]

In some cultural practices among women in developing countries, especially in rural areas, they will rather discard the first expressed breast milk due to taboos.

A good percentage (89.5%) breastfed their children on demand which is a good breastfeeding practice that enhances bonding between the mother and the child and also helps to meet the nutritional demand of the child. This is in agreement with a study conducted in Rawalpindi, a city of Punjab in Pakistan, which reported 85.8% of babies were breastfed on demand by their mothers.[14] This is equally closely related to a study carried out in Anambra located in the south south geopolitical zone of Nigeria where 82.5% breastfed their babies on demand. [13]

In this study, 82% of mothers with babies above 6 months, practiced exclusive breastfeeding. This is an improvement in the region compared to a study conducted by B.O. Ogunba in 2006 at the same region which reported that 24% of children were exclusively breastfed.[15]

The variations of breastfeeding pattern in most African countries and the developing countries at large are often influenced by a number of factors such as cultural taboos, level of literacy, the occupation of mothers, access to adequate health information by mothers among several others.. In the study area the significant improvements recorded with respect to compliance with exclusive breastfeeding could have been as a result of public health campaigns to sensitize mothers on the necessities of exclusive breastfeeding especially at the various health facility centres.

The growing baby after six months of age requires additional meal with breast milk to meet its nutritional demand. This is another phase in the feeding pattern of children for that age.

Complementary feeding varies from the introduction of liquid diets such as pap to cereals or the use of infant formula. Again there are variations on what is given to the child from various socio cultural background. Most liquid diet commonly given to children in Nigeria is pap made from maize or guinea corn. However, In Ghana, Davis, Tagoe-Darko & Munkuria 2003 observed that

in most African countries, the traditional complementary food fed to infants is a fermented maize porridge called koko (equivalent of pap).[16]

In this study most mothers, 37%, introduced their children to family diet such as bland diet like amala a local meal made from yam flour. Other reported using pap, and cereals. This is consonance with a study conducted in UK as reported by Burt NM, that most of the children were fed with the prevalent local food in the region as complementary feeding.[17]

In a typical African setting local available food grown or sold in close small markets are easily accessible to the majority of the less privilege who may not be able to afford the high cost of refined food products sold in the larger markets. Emphasis should be laid more on the utilization of food products which are cheaper and equally rich in basic nutrients essential for the growth of the babies.

CONCLUSION AND RECOMMENDATION

Majority of the mothers practiced exclusive breastfeeding with timely initiation of breastfeeding while few among them gave prelacteal feeds. The prevalent complementary feed is family diet followed by maize gruel (pap) and were introduced at or after 6 months.

It is recommended that mothers begin infant feeding education as soon as they get pregnant, so that they can make well informed decisions on how to feed their babies.

Activities to promote exclusive breastfeeding should also be intensified and focused on specific groups of women or locations in which poor breastfeeding practices are prevalent.

The practices of discarding the colostrum should be discouraged and its importance should be emphasized by health workers to mothers in the regular ante natal clinic.

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