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EFFECT OF BREAST AND COMPLEMENTARY FEEDING KNOWLEDGE AND PRACTICES AMONG NURSING MOTHERS IN ORUMBA NORTH LOCAL GOVERNMENT AREA OF ANAMBRA STATE

by

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Abstract

Good breast and complementary feeding is essential for all infants as their growth rate development determined by the quality of breast and complementary feeding the received during the early stages in life. Inadequate breast and complementary feeding affects child's growth and development in all ramifications. Since infants depend on their mothers principally for good breast and complementary feeding to survive this study examines the effect of breast and complementary feeding knowledge and practice among nursing mothers in Orumba North Local Government Area of Anambra State. The study adopted descriptive survey design. The study adopted descriptive survey design. It has a population of 282 mothers of age who were nursing children between birth and 24 months of age who were available for post natal and immunization services at the primary health centres in the area. Instrument for data collection was structured questionnaire and anthropometric measurements of infants. It was face validated and pilot tested for reliability test to test strategy. Four research questions were projected and answered. Frequency and percentages was used in answering the research question. The result showed an adequate breast and complementary feeding knowledge and practices of nursing mothers in the area. It was also observed that the complementary food combinations of mothers were adequate in energy and nutrients, though they lack variety. Most of the infants also had adequate good health status. The researcher recommended among others that appropriate health education be given to nursing mothers for them to have knowledge and adequate infant feeding care practices that will promote good health of their children.

Key words: Breastfeeding, complementary, feeding, mothers, practices.

Introduction

Adequate feeding practices of infants and young children are necessary measures adopted or employed to feed a young child from birth, up to 2 years of age and beyond, to ensure that the child gets the right nutrients required to survive and enhance proper growth and development. The first two years of a child's life are particularly important. The child grows and develops rapidly. If the child is property fed, he is expected to double his birth weight by the 4^{th} month, and triple it by the first birthday. The brain too requires a lot of nutrients to attain maximum growth during this period. According to

Adeyemi (2005) the period of birth to 2 years is a "critical window" for the promotion of optimal growth, health and behavioral development. Optimal nutrition during this period lowers morbidity and mortality, reduce the risk of chronic disease and forester better development overall. In fact, optimal breast and complementary feeding are so critical that they could save about 222, 000 lives per year (WHO, 2013).

Breast milk is the best food for babies, providing sufficient nutrients for growth, development and for prevention of both infectious diseases in infancy and chronic (non-communicable) diseases later in adult life (Galles & Camus, 2006). WHO (2002) recommended exclusive breastfeeding as the ideal practice which ensures that all the child's nutritional needs from birth to about six months of age are met. Exclusive breastfeeding is feeding infants only breast milk, be it directly from breast or expressed, with no addition of any liquid or solids apart from drop or syrups. Evidence shows that not more than 38% of infants worldwide are exclusively breastfed during their first four months of life (WHO, 2013). Nigeria has 20% rate of exclusive breast feeding (Elizabeth, 2008).

It is estimated that non - exclusive breastfeeding in the first six months of life resulted in 1.4 million deaths and 10% of disease in under five. Non-exclusive breast feeding also has long term impact, including poor school performance, reduced productivity, and impaired intellectual and social development. It can also increase the risk of dying due to diarrhea and pneumonia among O'- 5 months old infants by more than two - folds (Tesfaye, Teffer, Mulusew, Kebede and Sibhatu. 2012). Though exclusive breastfeeding is widely recognized as the optimal means of feeding for infants during the first few months of life, after six months of age breastfeeding also becomes inadequate for the increased physiological requirements of the infant for energy and specific macro and micro nutrients. Complementary foods should be introduced.

Complementary foods are adult foods other than breast milk given to infants who are modified in colour, texture and flavor, which contains the nutrients required of the child (Felicity and Savage, 2000). Complementary feeding is the gradual introduction of adult or family foods in semi - solid forms (like pap, mashed potatoes, beans, yam) etc. to babies without stopping breastfeeding (Enyioha, 2005). The transition from exclusive breastfeeding to complementary feeding typically 6 to 24 months of age, is the time malnutrition starts in many infants. Contributing significantly to high prevalence of malnutrition in children under five years of age worldwide (WHO 2004). Majority of children (7 - 24 months) in Nigeria are under - nourished due to introduction of the weaning cereal gruel (pap) to supplement breast milk. Starting complementary feeding too late is dangerous. This is because if the child does not get the extra food needed to fill the energy and nutrient gaps, the child stops growing and the risk of malnutrition and micro nutrients deficiencies increase (WHO, 2000). Giving complementary food too soon is also dangerous. This is because a child does not need those foods and they may displace breast milk the child receives less of the protection from breast milk, so the risk of illness increases (Ujiri, 2004). The food given will only fill up the child's stomach and provide less nutrients because they are usually thin and watery (WHO, 2000).

Adequate nutrition during infancy and childhood; is fundamental to the development of the child's fall potentials.

This study focuses on mother's knowledge and practices of breast and complementary feeding so as to ensure adequate child health, and reduce mortality and morbidity among children.

Purpose of the Study

The main purpose of the study was to determine the effect of mother's knowledge and practices of breast and complementary feeding in Orumba Local Government Area of Anambra State. Specifically, the study determined:

1. Effect of mothers' knowledge and practice of breastfeeding on healthy growth of infants.
2. Effect of mothers' knowledge and practice of complementary feeding on healthy growth of infants.
3. Effect of the type of contemporary foods used by mothers for healthy growth of infant.
4. Effect of breastfeeding status and frequency of sickness during infant.

Research Questions

1. To what extent does mothers' knowledge and practice of breastfeeding affect the healthy growth of infants?
2. To what extent does mothers' knowledge and practice of complementary feeding affect the healthy growth infants?
3. What type of contemporary foods do mothers use for the healthy growth of infants?
4. What are breastfeeding status of infants and the frequency of sickness during breastfeeding?

Method

The study was a descriptive survey carried out in Orumba North Local Government Area of Anambra State of Nigeria. The population of the study consists of 282 mothers who have children between birth and 24 months who had at least a child previously and attending post natal or expanded programme on Immunization at Primary health centers at Nanka and Awgbu at the period of this study. There was no sampling. The whole population of 282 respondents were used. Instrument for data collection was questionnaire made of five bio data parts and anthropometric measurement of infants. The questionnaire was validated by three health educators and one medical doctor. It was pilot state for reliability in Orumba North Local Government Area using respondents of equivalent to the sample. A value of 0.88 was obtained for the cronbach Alpha for which the researcher took the instrument as reliable for the investigation. The researchers administered the questionnaire by hand. A total of 282 copies were distributed, duly completed and returned and anthropometric measurements were measure by researcher and research assistant. The data obtained were analyzed using frequency distribution and percentages.

Results

Table 1: Socio - Demographic Characteristics of the Respondents
No 282

Characteristics	Frequency	Percentage
Age	93	32.97
26-35	153	54.25
36-45	33	11.70
46-55	3	1.06
Total	282	100.0
Marital status	24	8.51
Married	255	90.42
Divorced	-	-
Widowed	3	1.06

Total	282	100.0
	15	5.32
Primary	42	14.89
Secondary	153	54.26
Tertiary	72	25.53
Total	282	100.0
Occupation of respondents Full time house wife	24	8.51
Trading	156	55.31
Farming	9	3.19
Civil servants	42	14.89
Students	51	18.09
Total	282	100.0
Number of children 1 - 4 children	234	82.98
5-7 children	36	12.77
8-12 children	6	2.12
Total	282	100.0
Age of youngest child 1 - 6 months	216	76.60
7-12 months	45	15.96
13-24 months	21	7.44
Total	282	100.0
Antenatal attendance	261	92.55
No	19	7.38
Total	282	100.0
Received teaching an infant feeding Yes	267	94.68
No	15	5.32
Total	282	100.0
Source of infant feeding teaching Clinic	132	65.85
Radio/TV	39	9.51
Relations	48	11.70
Friends	33	8.04
Women meeting	30	7.31
Total	282	100.0

Majority (54.25)% of the mothers were aged 26 - 35 years, 32.97% were aged 15-25 years, the least number 1.05% were aged 46 - 55 years. Among the respondents 90.42% were married, Majority of the respondents (54.26%) had secondary school education. About 55.26% of the respondents were traders. Most of the respondents 82.98% had between 1-4 children. Age of the youngest children of the respondents 76.60% had babies birth to 6 months. About 92.55% of the respondents attended antenatal clinics during pregnancy, a good number of the respondents 94.68% received teachings on infant feeding at the clinic.

Table 2: Anthropometric distribution of the infants
No 282

Arm circumference (CM)	Frequency	Percentage
13-14	84	29.78
15-16	130	46.09
> 16	68	24.11
Total	282	100
Weight (kg)	24	8.51
4.1 -6.0	99	35.10
6.1 -9.0	129	45.74
9.1-11	30	10.64
11.1- above	-	0.00
Total	282	100
Height (cm) 30-60	115	40.78
61-80	161	57.00
>80	6	2..12
Total	282	100

Table 2 shows anthropometric data of the infants. Almost half (46.09%) of the babies had arm circumferences of between 15 and 16 cm. About 45.74% of the infants weighed between 6.1-9kg, while about 35.10% weighed between 4.1 - 6kg. Majority (57.1%) of the infants studied had a length of 61 - 80cm

Research Question 1: To what extent does mothers' knowledge and practice of breastfeeding affect the healthy growth of infants?

Table 3: Effect of Mothers knowledge of breastfeeding
No 282

	Frequency	Percentage
a) Breast milk is the natural and healthiest food for baby		
Yes	270	95.74
No	12	4.25
b) Breast milk provides protection against most childhood diseases Yes	264	93.60
No	18	6.38
c) Breast milk protects the mother against certain diseases Yes	207	73.40
No	75	26.59
d) Breastfeeding is economical for the mother, family and the nation Yes	276	97.87
No	6	2.12
e) Breastfeeding helps in child spacing Yes	225	79.78
No	57	20.21
f) Breast milk alone is enough for babies from birth to 6 months Yes	258	91.48
No	24	8.51

Table 3 shows that mothers were knowledgeable about breastfeeding/milk. The table indicates that 95.74% of mothers knew that breast milk is the natural and healthiest food for babies. About 93.60% of the respondents knew that breast milk provides protection against most child hood diseases. About 79.78% of the respondents have the knowledge that breastfeeding helps in child spacing. Majority of the respondents knows that breast milk alone is enough for babies from birth to six months of age.

Research Question 2: To what extent do mothers' breast feeding practices effect the growth of infants?

Table 4: Effect of mother's knowledge on breastfeeding practices
No 282

	Frequency	Percentage
a) Breast initiation period after delivery		
Within 1 hour	132	46.80
2-5 hours	39	13.82
6-24 hours	63	22.34
Next day	48	17.02
b) Did you give your baby colostrums Yes	26.2	92.90
No	30	10.63
c) Nature of breast feeding from birth to 6 months Breast milk only	150	53.19
Breast milk + water	78	27.65
Breast milk + water + formula	54	19.14
d) The first thing given to baby after delivery Plain water	15	5.31
Coconut water	138	48.93
Glucose water	30	10.63
Breast milk	93	32.97
Infant formula	3	1.06
e) Number of times breastfed per day As baby demands	225	90.42

As mother desires	6	2.12
Every 3 hours	18	6.38
5 times	3	1.06
f) When do you stop breastfeeding Birth - 3 months	9	3.19
4-6	51	18.08
7-9	6	2.12
10-12	93	32.97
13-24	123	43

Table 4 shows that 46.80% of the respondents initiated breastfeeding within one hour after delivery. While only 17.02% initiated the next day after delivery. Majority 92.90% gave their babies colostrums. Over half (53.19%) practiced exclusive breastfeeding. Almost half of the respondents (48.93%) gave their babies coconut water at birth. Most (90.42%) of the mothers breastfed their babies as many times as the baby demanded. Majority (32.97% and 43.61%) terminates breastfeeding from 10-24 months.

Research Question 3: To what extent does mothers knowledge of complementary foods/feeding effect the healthy growth of infants?

Table 5: Mothers knowledge of complementary foods/feeding
No 282

	Frequency	percentage
a) Age at which complementary food is introduced		
Birth - 3 months	57	20.21
4-6	99	35.10
7-9	102	36.17
10 and above	24	8.51
b) Meaning of complementary food Yes	255	90.42
No	27	9.57
c) Breast milk is continued on complementation Yes	249	88.29
No	33	11.70
d) Starting complementary food too late is dangerous Yes	228	80.85
No	54	19.14
e) Starting complementary food too early is equally dangerous Yes	228	80.85
No	54	19.14

Table 5 shows the knowledge of complementary feeding/foods of the respondents. About 20.21%, 35.10% and 36.17% of the respondents introduced complementary foods to their babies of the age of birth - 3months, 4-6 and 7-9 months respectively. Most (90.42%) of the respondent knew the meaning of complementary food. Majority (88.29%) of the respondents continued breastfeeding with complementary food. Many of the respondents (80.85%) knew that starting complementary feeding too late or too early is dangerous.

Table 6: Complimentary foods used by mothers

No 282

		Frequency	percentage
a)	Complementary food used	21	6.54
	Infant formula e.g cereal	12	3.73
	Pap only	129	40.18
	Pap + milk	111	34.57
	Pap + soya bean milk	6	1.86
	Pap, milk + sugar	12	3.73
	PAP +CRAYFISH	9	2.80
	Custard + milk	6	1.86
	PAP & groundnut	15	4.67

	Family food+pap	150	49.50
	Orange	3	0.99
	Mango	3	0.99
	Pineapple	42	13.86
	Paw-paw	36	11.88
	Green leaf vegetable	54	17.82
	Apple	15	4.95

Table 6 shows that majority (40.18% and 34.57%) of the respondents were complementing breast milk with pap + milk and pap and soya bean milk respectively. Almost half (49.50%) were complementing with orange. About 17.82% were giving green leaf vegetable.

Table 7: Complementary feeding practices of mothers

	Frequency	Percentage
a) Continue breastfeeding in addition to complementary feeding	249	88.29
No	33	11.70
b) Mode of feeding adopted Bottle feeding	177	57.28
Plate spoon	123	39.80
Hand	9	2.91
c) Care of the feeding utensils Wash with cold water and soap	90	31.25
Soak wash with hot	171	59.37
Wash with cold	27	9.37
d) Number of	42	14.89
3-4 times	189	70.21
5-6 times	18	6.83
More than 6 times	27	9.57
e) Who prepares the food Mother	246	87.23
Older children	6	2.12
Caregiver	18	6.38
Any adult around	12	4.25
f) Handwork before preparation and feeding Yes	279	98.93
No	3	1.06
g) Storage of the prepared food Refrigerator	27	9.57
Food flask	189	70.21
Feeding bowl	33	11.70
Cooking pot	34	12.05
h) Source of baby's food Family food (always)	60	21.27
Family food	54	19.14
Separately prepared	122	43.26
Separately prepared	66	23.40
i) Source of drinking water Tap water	42	14.89
Package water	96	34.04
Well	6	2.12
Stream	-	-
Boiled	138	48.93

Table 7 shows the complementary feeding practices of the respondents. Majority (88.29%) of the respondents continued breastfeeding as the use complementary food. Over half (57.28%) of the respondents were using feeding bottle. About one third (31.25%) of the respondents wash the utensils with cold water and soap.

Over half (59.37%) in addition wash with half water. About two thirds (70.21%) of the respondents feed their babies 3-4 times daily. Majority (87.23%) of the respondents prepared the complementary foods by themselves. Almost all (98.93%) of the respondents practice hand wash before preparing and feeding the children. More than two thirds (70.21%) store the prepared baby food in food flask. Almost half (43.26%) of the respondents prepare the baby's food separately always. Drinking water for the babies about half (48.93%) boiled, babies water, 34.04 used package water (pure water).

Research Question 4: What are the breastfeeding status of infant and the frequency of sickness during breastfeeding?

Table 8: Infant health status frequency of sickness in the past one month
No 282

	Frequency	Percentage
Never	119	42.19
Once	136	48.22
Twice	21	7.44
More than twice	6	2.12

Table 8 shows the infants health status. The table indicates that over half (62.19%) of the babies did not fall sick within the previous month reviewed. About 38.22% of the babies were sick once within the last one month.

Discussion

The age of most mothers was 15-35 year young mothers, level of education mostly primary and secondary levels, their occupation was mainly trading (58.31%), and almost non -employment of care givers in their infant feeding and care needs, in addition to the good teachings gotten from the health centers affected their infant feeding knowledge and practices positively. Almost half of their initiated and continued infant feeding as recommended by (WHO, 2002). This is m line with Ford and Labbok (2007) observations, that the demographic characteristics of mothers affect the initiation and duration of infant feeding practices.

Hofvander (2003) observed that the practice and duration of breast feeding have declined in many parts of the world for variety of cultural reasons including modernization. Orumba community with its attendant business nature is not reflecting exactly that. Almost half of the respondents initiated and continued breastfeeding as recommended by (WHO, 2002).

Michaelson, Arthur and George, (2000) recommended that transitional food offered to infants should have energy and nutrient densities. Ebrahim (2007) and Ene-Obang (2001) had shown that cereal when supplemented with legumes provides high quality protein. Majority of the women (74.75%) introduced pap and milk or pap and soya bean milk as their infants first solid food. These combinations though adequate in energy and nutrients lack variety.

Most of the infants had adequate nutritional status and met the World Health Organization (WHO, 2006) standards for length and weight for ages the values of the babies arm circumference and weight for length also showed no evidence of acute malnutrition. This disputes the report of Felicity and Savage (2000) of high prevalence of malnutrition during the complementary feeding period. This disagrees with the findings of Brown (2005) which noted a marked increase in the danger of gastroenteritis in developing countries during complementary feeding period. This must have been because the mother were preparing the food and handling the feeding utensils themselves. It could also be that since must mothers were traders they adopted exclusive breastfeeding for its economical and convenience nature. WHO (2004) reported that breastfed babies were less likely to become sick. The infant health status finding is in agreement with that.

Conclusion

Mothers' knowledge and practices of breast and complementary feeding in Orumba LGA of Anambra state is quite encouraging. Infant health status is equally good. This success is mostly due to the demographic characteristics of the mothers and the primary health facilities and services available to the communities in the LGA. Mothers should do their families, themselves, children and the society good by ensuring a 100%

participation in exclusive breast feeding and using the health services available.

Recommendation

There is still need for an improvement in the infant feeding practices in the area.

1. The government should support mothers by paying salaries to the working mothers and non-governmental organizations where mothers struggle to get money for their babies and themselves.
2. Educating mothers during ante-natal and post natal on the exclusive breastfeed.
3. Professional in the area of child development should be involved in rendering services at the center.
4. The existing staff should be re-trained from time to time to educate mothers attending ante-natal and post natal on health issues concerning breasting and contemporary feeding of their infants.
5. The media should transmit teachings/talks on infant health and feeding practices more often.

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