

Full Length Research Paper

Breast feeding pattern and the health of children in Ado – Ekiti local government area of Ekiti state, Nigeria

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This study investigated the different patterns of feeding infants and their corresponding effects on children's health. There are anti – effective properties present in human milk which help children to fight against many childhood diseases. The long –term effect of breast milk like intelligence, socialization and personality development of children supersedes its immediate result. Despite these advantages and awareness created by government and non – governmental organizations, many mothers still do not practice giving the breast milk in the appropriate way to their children, hence the need for the study. The research design was the survey type with its population consisting of all nursing mothers in Ado – Ekiti Local Government Area, out of which 200 were chosen as sample using random, accidental and purposive sampling techniques. A self constructed questionnaire was used for data collection. The data collected were analysed with the use of descriptive statistics and testing of hypotheses. The findings show that majority of the nursing mothers breastfed their children and that the different patterns did not have much impact on the health of the children. Based on the findings, it was recommended that more enlightenment programmes be embarked upon by the government on appropriate breast feeding and the general care of the infant in order to eradicate infant morbidity and mortality.

Key words: Breastfeeding, Health, Children, Nigeria.

INTRODUCTION

Breast feeding is a physiological process through which all mammals feed their babies. Hornby (2000) defines breast feeding as an act of feeding from the breast. According to Makanjuola (1996) breast feeding is the best type of feeding for infants particularly during the first six months of the child's life; because it provides the baby with the essential nutritional requirements when exclusively fed with the breast milk. While health according to WHO (1992) is defined as the state of complete physical, mental and social well being.

Rundall (1998) further complemented breastfeeding as the basis of children's sound health because during the early days of infancy, health and growth of a child depends mostly on adequate and proper breast milk intake.

Mother's milk contains anti – bodies against a large number of common infections. Therefore the pattern and

duration of breast feeding could be one of the most important determinants of the child's health status as declared by Csete, (1997). The infants can be fed mainly on breast milk for the first six months of life. They can be mix-fed, that is supplementing breast milk with canned milk for this early period. They can also be placed on artificial formulae during the same period of life.

The Baby – friendly Hospital Initiative Newsletter 1998 (BFHI) indicated that every where in the world, the positive advantages of breast feeding make it the best form of infant feeding. In the developing countries, it is not just a desirable option, but a necessity. It is essential for a child's survival and normal development. Breast feeding act occurs at both conscious and unconscious levels of human reasoning. This could be proved when one watches children at play particularly the female ones tend to play with their toys as if they are caring for living human beings. This is extended to animals too that breastfeed their offspring without any prior practice. Before the advent of artificial formulae, mothers depend solely on the

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breast milk for feeding their infants. The demand of civilization has made mothers to partially uphold this age long practice.

Despite the involvement of government and non – governmental organizations in encouraging mothers to practise exclusive breast feeding, some still fail to give the natural milk to their babies due to some reasons such as nature of mother's work, her socio – economic status, not enough milk, cultural beliefs, interest in retaining youthful outlook and many others.

Many employers and boss frown at mothers coming to work with their babies which disturb the nursing mothers psychologically and hence resolve to giving the babies artificial milk to lessen their problem. Mothers of high socio-economic status hold the erroneous believe that their affluence can be proved in the purchase of costly imported feed for their babies.

Some literate mothers see breast feeding as an archaic process particularly when in transit or outside their homes for any social function. They feel it belittles their status, breast feeding babies in the public or that urbanization erodes breast feeding and hence, should be relegated to the rural dwellers.

WHO AND UNICEF (1998) pointed out that the major clinical pediatric problem during the first few months of life involves the infant nutrition. The calorific requirements are largely provided by breast milk and partially by cow milk which must have been altered in composition to create a nutritious product similar to mother's milk. During the first two to three months of life, breast milk will usually fulfill all the nutritional needs of the infant.

Brown (1988) discovered that babies were deprived of God's gift which is the breast milk and that those who have the opportunity to breast feed, do not do it properly.

Heiser (1995) opined that increased breast feeding would save health care costs in any country. She went further to say that breast feeding helps to protect the baby from diseases like measles and pneumonia and infections especially asthma and eczema. A policy makers' meeting was convened in Florence, Italy 1990 to reinforce a world wide commitment to breast feeding as the best nutrition for babies. The declaration that emerged from the meeting is known as Innocenti Declaration which sets specific targets that would guide countries in their efforts to protect, support and promote breast feeding. In response to this declaration UNICEF and WHO established Baby Friendly Hospital Initiative (BFHI) programme in 1990 in an effort to re-establish the practice of breast feeding amongst women globally because breastfeeding is the friendliest thing we can do for our babies. In 1996, a health survey was carried out in the West Bank of Gaza in Palestine, the finding acknowledged breast feeding as an important determinant of the child's health.

The supplemental Nutrition Programme for Women, Infant and Children (WIC) which was established in 1972 encouraged mothers to breastfeed their babies in order to

promote and maintain their sound nutritional status. Useful base information about maternal and infant feeding practices is paramount to planning health service interventions designated to improve maternal and infant health. Maternal nutrition is an important component of breast feeding expectant and lactating mothers should eat balanced diet full of nutritious foods that will enhance lactation. The health and survival of a new born baby is dependent upon the health status of the mother and care rendered to the mother during 'pre' and 'post' natal stages. Proper breastfeeding yields positive effect on children's health status which eventually reduces or eradicates children morbidity and mortality.

Statement of the problem

Breast feeding, the age –long practice of feeding the infants seems not to be strictly adhered to today due to the demand of civilization. It has been observed that many youths are truants, cultists, robbers and heady individuals. A child that is fed on cow's milk may behave like an animal as if no human blood flows in his veins because the flesh to flesh contact that binds a mother to a child will be lacking. Radio and television jingles on the importance of exclusive breastfeeding seem to have little or no impact on the breast feeding pattern of many nursing mothers in our societies today. The working class mothers see exclusive breast feeding as an impossible task because of their out-door commitments.

From the personal experience of the researchers breast feeding pattern varies from one mother to another due to their socio-economic background, educational attainment and cultural misconception. Many mothers have been observed to despise the idea of feeding their infants on the natural milk in order to gratify their beauty urge of looking like teenagers so as to perpetuate youthful outlook. From the researchers' personal interaction with some couples it was discovered that the spouses of some nursing mothers give a pat on the back to their wives on the issue. Their belief is that they admire their spouses more with pointed breasts than with the slippers – like ones.

The inability of some nursing mothers to uphold breast-feeding of their infants and their negative comments made on the process has been a major source of concern to the researchers and the society.

In enhancing the purpose of the study, these general questions were raised; 1. What are the different patterns of breastfeeding the infants? 2. What features show vulnerability in children? 3. What is the probable period of occurrence?

With the following hypotheses: 1. There is no significant relationship between breast feeding pattern and the health of children 2. There is no significant difference in the breastfeeding pattern of literate and illiterate mothers.

3. There is no significant relationship between the socio-economic status of mothers and their breastfeeding pattern.

Research design

The design of this study was the survey type. The plan of the study involved the use of questionnaire to collect data in order to test hypotheses and answer research questions raised in it.

Population

The target population consisted of all current nursing mothers in Ado-Ekiti Local Government Area.

Sample and sampling technique

The sample consisted of 200 current nursing mothers in Ado-Ekiti Local Government Area of Ekiti State. The sampling procedure was a combination of random, accidental and purposive sampling techniques. It aimed at selecting the appropriate responses from current nursing mothers that are relevant to the study.

Research instrument

A self constructed instrument was used. It is titled 'Breastfeeding pattern and the Health of Children questionnaire (BFPHCQ). The instrument was in four major sections, the first section was on background characteristics, the second section sought information on infants' feeding patterns, the third section was based on the health of the infants while the fourth section sought information on the extent to which the nursing mothers have been informed about breast feeding.

Validity and reliability of the instrument

Specialists in Tests and Measurement, Guidance and Counselling, and those in the health sector ascertained the face and content validities of the instrument. A test – re-test method was used to establish the reliability, coefficient at 0.85.

Administration of the instrument

The administration of the instrument was done by the researcher with the assistance of some nurses and other health workers.

RESULTS AND DISCUSSION

Descriptive analysis

Question I: What are the different patterns of breastfeed-

Table 1. The different patterns of breastfeeding the infants.

S/N	Feeding Patterns	F	%
1	Breastfeeding alone	119	59.5
2	Breast-milk together with Artificial milk	68	34.0
3	Artificial milk alone without breast milk	13	6.5

feeding the infants? Data collected was analyzed using frequency counts and percentages as presented in Table 1.

Table 1 shows that many of the respondents 119 (59.5%) breastfed their babies exclusively while 81 (40.5%) did not, which means they might have mix-fed their babies. Out of 200 nursing mothers, only 13 (6.5%) did not breastfeed at all, with 187 (93.5%) giving the natural milk to their babies. A total of 68 (34.0%) respondents mix-fed their babies by combining the natural milk with the artificial milk, while 132 (66.0%) did not. In summary, majority of the nursing mothers still prefer giving the breast milk to their babies instead of the artificial milk.

Question 2: What features show vulnerability in children? In answering this question, data on scores of the health of the infants as perceived by the respondents were used as shown in Table 2a. While that on the difference in the health of children fed on the breast milk alone and those mix-fed or placed on the artificial milk were shown in Table 2b.

Analysis of Table 2a shows that 37 (18.5%) of the babies suffer from diarrhea disease while 163 (81.5%) did not. 21(10.5%) runs high body temperature, but 179(89.5% did not. 15(17.5%) looks frail, miserable and with brownish fluffy hair, while 185 (92.5%) looks healthy. 16 (8.0%) vomits after meals with 184 (92.0) not having the problem. 12 (6.0%) of the babies have stunted growth while 188 (94.0%) had normal growth. 25 (12.5%) suffers from mal-nutrition while 175 (87.5%) did not. 50 (25.0%) has swollen feet with 150 (75.0%) not suffering from lack of proper nutrients. Minority of the children were said to be obese 5 (2.5%) while 195 (97.5%) were not. From the analysis, it could be seen that minority of the babies suffer from these various degrees of illnesses.

Analysis of Table 2b shows that only 1(0.5%) exclusively breast fed baby had diarrhoea out of 37(18.5%). 3(1.5%) had high body temperature out of 21 (10.5%). While none of the babies fed on the breast milk had brownish fluffy hair. 7 (3.5%) usually vomited after meals out of 16(8.0%) which may be as a result of giving the breast milk in an unhygienic way. None of the exclusive breastfed babies had stunted growth or protruded tummy. 1(0.5%) had swollen feet out of the total 50 (25.0%) with none suffering from obesity.

In summary, many of the babies fed on the breast milk enjoyed better health over their counterparts that were mix-fed or placed on the artificial milk.

Table 2a. Features showing vulnerability in children.

S/N	Health status	Agreed		Disagree	
		F	%	F	%
1.	My baby often has diarrhoea	37	18.5	163	81.5
2	He runs high temperature	21	10.5	179	89.5
3	He looks frail, miserable with brownish fluffy hair	15	7.5	185	92.5
4	My baby usually vomits after meals	16	8.0	184	92.0
5	My baby does not grow to his mates' standard	12	6.0	188	94.0
6	He has protruded tummy with tiny legs	25	12.5	175	87.5
7	My baby usually has swollen feet	50	25.0	150	75.0
8	My baby is obese	5	2.5	195	97.5

Table 2b. Health of infants solely breastfed with those mix-fed or placed on artificial milk

S/N	Infants' Health Status	Breast milk only		Breast milk and artificial milk			
		Freq	%	Freq	%	Freq	%
1	My baby often has diarrhoea	1	0.5	2	1.0	34	17.0
2	He runs high temperature	3	1.5	6	3.0	12	6.0
3	He looks frail, miserable with brownish fluffy hair	-	-	-	-	15	7.5
4	My baby usually vomits after meals	7	3.5	1	0.5	8	4.0
5	My baby does not grow to his mates' standard	-	-	1	0.5	11	5.5
6	He has protruded tummy with tiny legs	-	-	-	-	25	12.5
7	My baby usually has swollen foot	1	0.5	2	1.0	47	23.5
8	My baby is obese	-	-	1	0.5	4	2.0

Table 3. The probable period of being vulnerable to diseases.

S/N	Vulnerability age	F	%
1	0-6 months	48	24.0
2	7-12 months	87	43.5
3	13-24 months	65	32.5

Question 3: What is the probable period of occurrence? In answering this question, data on scores of the probable age was used as shown in Table 3.

Analysis of Table 3 shows that 48 (24.0%) of the respondents were of the opinion that the significance of vulnerability is within the first six months of life. While 87 (43.5%) opined that it is between 7 – 12 months, with 65 (32.5%) choosing 13 – 24 months.

It could be seen that 7–12 months took the highest frequency because it is the period that infants change over to semi-solids and solid food taken by the rest of the family.

Hypotheses testing

This section deals with the testing of the three hypotheses generated for the study using the appropriate statistical tools and tested at 0.05 level of significance.

Hypothesis One

Ho 1: There is no significant relationship between breast-feeding pattern and the health of children. In testing this hypothesis data on breastfeeding pattern and the scores on the health status of children were correlated using Pearson Product Moment Correlation to determine the relationship between two variables. Table 4 shows the result of the analysis.

Table 4 shows that r_{cal} (.071) is less than r_{table} (.195) at 0.05 level of significance. Therefore, the null hypothesis is not rejected. This implies that breast-feeding pattern is not significantly related to the health of children.

Hypothesis Two

Ho 2: There is no significant difference between the breastfeeding pattern of literate and illiterate mothers. T-test was used for the summary of the breastfeeding pattern and the mother's literacy level. The result of the analysis is shown in Table 5.

Table 4 shows t_{cal} (.157) and t_{table} (1.960) at 0.05 level of significance. The null hypothesis is not rejected. There is no significant difference in the breastfeeding pattern of literate and illiterate mothers. This shows that the literacy level of nursing mothers has no significant influence on their breastfeeding pattern.

Table 4. Correlation between breastfeeding Pattern and the Health of Children

Variables	N	\bar{X}	SD	r-tab	r-tab
Breastfeeding pattern	200	19.30	1.06		
Health Status	200	28.31	3.43	.071	.195

P > 0.05

Table 5. T-test analysis of breastfeeding pattern and parents' literacy level

Group	N	X	SD	t-cal	t-tabl
Illiterate	44	19.27	.87	1157	1.960
Literate	156	19.30	1.11		

P > 0.05

Table 6. T-test analysis of breastfeeding pattern and parents socio-economic status.

Group	N	X	SD	df	r-tab	t-tab
Low	118	19.15	.88	198	2.305	1.960
High	82	19.50	1.25			

P < 0.05

Hypothesis three

Ho 3: There is no significant difference between the socio-economic status of mothers and their breastfeeding pattern.

This hypothesis was analyzed through the use of t-test. To test this hypothesis, mean score obtained by respondents of high and low income were subjected to t-test analysis. The result of the analysis is presented on Table 6.

Table 6 shows t-cal (2.305) and t-table (1.960) at 0.05 level of significance. The null hypothesis is therefore rejected since t-cal is greater than t-table. This shows that there is a significant difference between the breastfeeding patterns of parents from high and low socio-economic status. Their affluence in the society will determine their pattern of breastfeeding.

DISCUSSION

The findings of question one showed that a very high percentage of the nursing mothers breastfed their infants with just a handful not doing it. This result agrees with Divitt's (1993) submission on timely initiation of breastfeeding. This influences an infant's social relationship with others later in life.

Question 2 seeks to find out the features of vulnerability in children. The findings of the study showed that there are series of ailments that could cause morbidity and mortality in children. Though the result of this finding

showed that just a few of the children were affected despite the different feeding patterns. This is against the submission of Brown and Kesinro (1990) that supplementing breast-milk with non-nutritive fluids undermines breastfeeding and substantially increases the risks of illness and death from diarrhoea in children. Question 3 seeks to find out the highest percentage on the probable period of occurrence of illness which was found to be within 6 – 12 months which is the period the infant's meal is changed into semi-solid or even food that could be eaten by the other older members of the family.

This is in concordance with UNICEF, (1989) that the period of introducing semi-solids is a critical stage which often results in malnutrition, a disease of the child that does not have a diet that is adequate in quantity, quality and hygienically prepared.

The result of hypothesis one shows that the breastfeeding pattern is not significantly related to the health of children. The result of this finding is in support of Brown (1988) which stated that the superiority of human milk over any other milk for the nourishment of the human newborn and infant can hardly be challenged and over the years it has become more and more evident that it is the most ideal, safe and complete food for our young ones. Regrettably, despite all known facts on the value of human milk, breastfeeding has not been appropriately utilized in many areas. Many mothers though practice breastfeeding, but do not know its protective effects against infections, emotional bonding that influence an infant's social life and intelligence, which makes breast-

feeding the best nutrition for children. This finding shows that more information and guidance should be provided to all mothers on breastfeeding and its maintenance.

The finding of hypothesis two shows that there is no significant difference in the breastfeeding pattern of literate and illiterate mothers. The result of this study supports the submission made in the universal declaration of human rights (article 25 of 1990) that food, (breast milk inclusive) is a prerequisite for the fulfillment of the right to life as deprivation of it may lead to death. Whether a mother is literate or illiterate, she sees breastfeeding as an important factor in fulfilling her child's right to live.

The result of hypothesis three shows that there is a significant difference between the breastfeeding patterns of parents from high and low socio-economic status. Women of higher socio-economic status may be inclined to modern and acceptable way of catering for the infant. They have accessed to money to purchase necessary basic nutritional needs of the infants as compared to their under-privileged counter parts. WHO/UNICEF (1997) have this to say on the issue.-Iron and Zinc are key nutrients for babies. In most wealthy societies, iron fortified food is available but may be costly. Children in Industrialised areas may also have access to more animal products – meat, fish, eggs, cheese—that are not common in developing areas because these foods are richer in nutrients, they can be easily obtained in affluent population.

The study concluded that majority of the nursing mothers breastfeed their babies; and that the different breastfeeding patterns do not have much impact on the health of the children concerned. Breastfeeding is really universal because it is an age-long practice, however, most mothers do not have the knowledge of its immunological benefits and the long term effect on emotional stability and intelligence in adulthood.

Considering the findings of this study, it was discovered that many nursing mothers are not adequately informed about the breastfeeding process. They fail to take into cognizance that breast feeding helps children to form good social relationship with others later in life. And that it helps in maintaining and sustaining high intelligence quotient.

In the light of this, it is concluded that a lot still needs to be done in designing programmes that would ensure continuity of breastfeeding act. There is need to further strengthen educational programme on BFHI so that misconception and ignorance among nursing mothers are erased.

Recommendations

Based on the findings of this study, the following recommendations have been proffered: Counsellors, medical and paramedical personnel should educate and enlighten mothers on the physiology and management of lactation.

The data analysis of this study showed that majority of parents has never heard about the composition of breast milk or the importance of colostrums and its immunology properties. This enlightenment should start from the grass-root up to the national levels so as to incorporate the urban and the rural.

Effective counselling could enable nursing mothers know the immediate and post effect of appropriate breastfeeding on the children's health, cognitive domain and social development.

There should be seminar for both literate and illiterate mothers on breastfeeding art so that it can be embraced by all women, no matter the age or the marital status.

Mothers and other adults involved in infant upbringing should embrace the rules of hygiene. The use of polluted water and unsanitary utensils precipitates gastroenteritis in infants often leading to the syndrome of marasmus which accounts for a high death rate among children.

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