

FACTORS AFFECTING PRACTICES AND ATTITUDE OF NURSING MOTHERS TOWARDS EXCLUSIVE BREASTFEEDING OF THEIR INFANTS 0-12 MONTHS IN IHIOMA ORLU LOCAL GOVERNMENT AREA OF IMO STATE

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ABSTRACT

Background: Inappropriate infant feeding practices has long been observed in our society and it is one of the global problems responsible for about one-third of the cases of malnutrition worldwide.

Objective: This study assessed the factors affecting practice and attitude of nursing mothers towards exclusive breastfeeding of their infants (0-12 months) in Ihioma Orlu Local Government Area Imo State.

Methodology: A total of 331 Nursing mothers paired with their children 0 – 12 months were randomly selected using open ballot selection, from households in Ihioma Orlu L.G.A, Imo State. A structured questionnaire was administered to the Nursing mothers to obtain information relevant to the study. Data obtained were analyzed using descriptive statistics and Chi square analysis to determine the relationship between variables at significant level $p=0.05$ using Statistical Package for Social Sciences version 22.

Result: Result shows that 49.5% of Nursing mothers aged 30-39years, 72.2% were married, 56.5% had higher institution, 47.4% were civil servant, 20.8% trader, 42.3% earned a monthly income of ₦10,000-₦30,000, 35.3% of mothers initiate breastfeeding within one hour after delivery, 56.5% discard Colostrum, 59.2% practice exclusive breastfeeding, with 55.5% breastfed exclusively for a duration of first six months of birth, 32.6% fed the children on only breast milk, 25.1% on complementary food, 16.0% on only infant formula, 66.5% introduce other foods other than breast milk to the child at 6 months after delivery, 73 (22.1%) were delivered through cesarean section, 60 (18.1%) of the children were born with low birth weight (Less than 2.5kg). There is significant relationship between exclusive breastfeeding and age of children ($X^2=11.164$; $P=0.001$), age of mothers ($X^2=11.755$; $P=0.019$), initiation of breastfeeding after delivery ($X^2=38.570$; $P<0.001$), birth weight ($X^2=12.569$; $P=0.028$) and type of food fed to the child ($X^2=57.539$; $P<0.001$).

Conclusion: This study depicted high prevalence of inappropriate infant feeding practices among mothers, were initiation of breast feeding, type of food fed to the child, age of mother and child are the observed factors affecting practice of exclusive breastfeeding among mothers in the study area.

Keyword: *Practices, Attitude, Mothers, Breastfeeding, Infants*

INTRODUCTION

Breastfeeding is an unequalled way of providing ideal nutrition for the healthy growth and development of infants. The global public health recommendation is that infants should be exclusively breastfed for the first 12 months of life to achieve optimal growth, development and health [1]. Exclusive breastfeeding in the first six months of life stimulates babies' immune systems and protects them from diarrhea and acute respiratory infections, two of the major causes of infant mortality in the developing world and improves their responses to vaccination [2]. Exclusively breastfed infants obtain most of the nutrients required to support growth until six months [3]. Vitamin D which is insufficient in breast milk is

supplemented by exposure to sunlight for the skin to synthesize it while iron and zinc are supplemented and given orally [2; 3]. Exclusive breastfeeding during the initial months of life and continue breastfeeding through at least the first year of life is associated with substantial reduction in the burden of infections [3]. Breastfeeding reduces the mother's risk of fatal postpartum hemorrhage, the risk of breast and ovarian cancer, and anaemia [4]. Proper birth spacing and breastfeeding allows the mother to recuperate before she conceives again. In many Sub-Saharan Africa societies, exclusive breastfeeding is considered by far the best feeding option for women of unknown HIV status and for most HIV positive

mothers [3]. The rate of exclusive breastfeeding is less than 50%, in the developing world, where less than 40 % of infants under 12 months old receive the benefits of exclusive breastfeeding [4]. The rate is particularly low in Africa, where less than one third of infants under 6 months old are exclusively breastfed [4].

In Nigeria breastfeeding practices continue to fall well below the WHO/UNICEF recommendations for developing countries [11, 13]. There has been a major increase in exclusive breastfeeding in 19 African countries including Rwanda (88%), Tanzania (41%) and Malawi (57%) among others. In Kenya however, rates of exclusive breastfeeding remain low with only 32% of infants below six months being exclusively breastfed, improving from only 13% in 2003 whereas in Nigeria, proportion of children less than 6 months who were exclusively breastfed decreased from 17% in 2003 to 13% in 2008 [2, 5, 8, 13]. The proportion of children less than six months who received complementary foods increased from 18% to 35% [13,]. Various factors associated with sub-optimal breastfeeding practices have been identified in various settings. These include maternal characteristics such as age, marital status, occupation, and education level; antenatal and maternity health care [6]. Others are health education and media exposure, socio-economic status and area of residence; and the child's characteristics including birth weight, method of delivery, birth order, and the use of pacifiers [5, 6].

Approximately 1.5 million young infants die each year as a result of lack of knowledge about exclusive breastfeeding benefits, poor attitude of mothers towards exclusive breastfeeding and improper infants and young child feeding practice [1]. This study investigated the factors affecting practice and attitude of nursing mothers towards exclusive breastfeeding of their infants 0-12 months in Ihioma Orlu LGA Imo State. This study would generate information on factors affecting the practice and attitude of nursing mothers towards exclusive breastfeeding of their infants.

METHODOLOGY

AREA OF THE STUDY

This study was carried out in Ihioma Orlu L.G.A in Southeast Nigeria Imo State with an estimated population of 420,000 (Census 2006). It is a home for enterprise and industry which gave it the unofficial label of the commercial capital of Imo state. Many successful Nigerian businessmen, industrialist and champions of industries hail from this local government. Communities in Ihioma include Umuagi, Okwuobula, Umuzor, Ebenese and Umuoma.

RESEARCH DESIGN

This study adopted a cross sectional analytical study designed, with a multi stage random sample selection

of 331 nursing mothers and infant (0-12 months) pair from households and communities in Ihioma Orlu LGA Imo state.

POPULATION OF THE STUDY

The target populations are mothers with their infants 0-12 months residing in Ihioma Orlu LGA Imo state.

Inclusion criteria

All nursing mothers with infants 0-12 months old, residents in Ihioma Orlu LGA at the period of this study and gave their consent to participate in the study.

Exclusion criteria

HIV positive mothers with infants 0-12 months old, not breastfeeding their infants and willing disclosed this information was excluded from the study.

SAMPLING TECHNIQUES

A sample size of 331 nursing mothers with their infant 0-12 months paired were randomly selected from communities and households in Ihioma Orlu L.G.A Imo State using multi stage sampling techniques. Nursing mothers recruited for this study, were those whose consent were obtained to participate in the study.

DATA COLLECTION

A questionnaire with both open and closed ended questions was administered to mothers with children 0-12 months to collect information on infant characteristics (sex and age), maternal demographic characteristics (age, education and marital status), maternal socio-economic characteristics (occupation, income, house type, rent and ownership of items), maternal knowledge on breastfeeding, source of breastfeeding information, maternal delivery experience, factors affecting exclusive breastfeeding, attitude of mothers towards exclusive breastfeeding, infant feeding practices, infant morbidity, maternal morbidity and breastfeeding complication.

VALIDATION OF INSTRUMENT

The major instruments used for this study were the questionnaire. The questionnaire was designed in short and simple words covering the focus of the study and aiming at the realization of the stated objectives.

DATA ANALYSIS

Data obtained were analyzed using Statistical product and service solution (SPSS) version 22, data were analyzed using descriptive statistics into frequency and percentage and inferential statistics using Chi-Square test with a significant level of 0.05.

RESULTS

Table 1 shows the demographic and socio-economic characteristics of mothers. The age of the mothers ranges from 18 – 50 years and above, approximately half (n = 164; 49.5%) of the mothers were within the age of 30 to 39 years, and 98 (29.6%) were 18-

19years, 239 (72.2%) were married, and 29(8.8%) single mothers or mothers living with partners, 187 (56.7%) attend higher institution/tertiary institution, and 82(24.8%) attend secondary school, less than one

third 157 (47.2) were civil servants, and 69(20.8%) were traders, 220 (66.5%) earned a monthly income of less than N30 000.

Table 1: demographic and socio-economic characteristics of mothers

Variable	Frequency	Percentage
Age of the Mother		
<18years	22	6.6
18-29years	98	29.6
30-39years	164	49.5
40-49years	44	13.3
50years and above	3	0.9
Marital Status		
Single	29	8.8
Married	239	72.2
Divorced	14	4.2
Widow	20	6.0
Living with partner	29	8.8
Mother Highest Education		
No formal education	48	14.5
Primary school	14	4.2
Secondary school	82	24.8
Higher institution/tertiary institution	187	56.7
Occupation		
Trade	69	20.8
Farmer	47	14.2
Civil servant	157	47.2
Artisan	9	2.7
Missionary worker	5	1.5
Student/ apprentice	28	8.5
Unemployed	16	4.8
Income		
<N10,000	80	24.2
N10,000-N30,000	140	42.3
N31,000-N60,000	84	25.4
N61,000-N90,000	8	2.4
N91,000-N120,000	6	1.8
Above N120,000	2	0.6
No Response	11	3.3

More than half 207 (62.5%) of the children were male while 124 (37.4%) female, 258 (77.9%) were delivered through Spontaneous vaginal delivery (SVD), while 73 (22.1%) were through cesarean section, 60 (18.1%) of the children were born with low birth weight (Less than 2.5kg) and 15 (4.5%) were Macrosomia baby (birth weight of 4.0kg and above) (table 2).

Table 2: Child's demographic and other characteristics

Variable	Frequency	Percentage
Sex of the child		
Male	207	62.5
Female	124	37.5
Delivery Method		
Spontaneous vaginal delivery	258	77.9
Cesarean section	73	22.1
Birth Weight of the child		
<2.5kg (Low birth weight)	60	18.1
2.5-3.9kg (Normal birth weight)	256	77.4
>=4.0kg (Macrosomia)	15	4.5

Table 3 depicted infant feeding characteristics by mothers, with Only 35.3% of mothers initiate breastfeeding within one hour after delivery, 56.5% discard the first dirty yellow breast milk (Colostrum) that comes out after delivery, 69.8% of the children were still breastfeeding, approximately half (49.9%) of the children were breastfed less than 10 times day and night, with 50.1% of them been breastfed on-demand (10-12 times) day and night, 59.2% practice exclusive breastfeeding, with 55.5% breastfed exclusively for a duration of first six months of birth, 32.6% fed the children on only breast milk, 25.1% on complementary food, 16.0% on only infant formula, 66.5% introduce other foods other than breast milk to the child at 6 months after delivery, 48.0% intended to stop breastfeeding at 7-12 months of child's age or after delivery, with one out of three (33.8%) that intended to stop breastfeeding the child at beyond 12 months.

Table 3: Infant feeding characteristics by mothers

Variable	Frequency	Percentage
Initiation of Breastfeeding of the Child after Delivery		
Within one hour	117	35.3
2-23 hours	110	33.2
2-7days	56	16.9
Above7 days	8	2.4
Never	40	12.1
Colostrum		
Discarded it	187	56.5
Fed it to the baby	144	43.5
Still Breastfeeding		
Yes	231	69.8
No	100	30.2
Frequency of Breastfeeding		
<4 times	46	13.9
4-6times	29	8.8
7-9times	90	27.2
10-12times (On demand)	166	50.1
Practice Exclusive Breastfeeding		
Yes	196	59.2
No	135	40.8
Duration of Exclusive Breastfeeding		
0-3 months	47	23.8
4-5 months	41	20.7
Up to 6 months	110	55.5
Types of Food fed to the child		
Breast milk only	108	32.6
Breast milk and water only	25	7.6
Breast milk and infant formula	33	10.0
Infant formula only	53	16.0
Complementary food (breast milk and other foods)	83	25.1
Family food and solid food	29	8.8
Introduction of other Foods to the child		
0-3 months	56	16.9
4-5 months	55	16.6
6 months after delivery	220	66.5
Age Intended for cessation of Breastfeeding		
Less 7 months	60	18.2
7-12 months	159	48.0
Above 12 months	112	33.8

Table 4 shows the relationship between practices of exclusive breastfeeding, and initiation of breastfeeding, Birth weight, Type of food fed to the child. Two out of every five (42.3%), 36.7% children who were initiated to breastfeeding within one hour and 2-23 hours after delivery respectively were exclusively breastfed compared with more than one quarter (25.2%), 28.1% of children who were

initiated to breastfeeding within one hour and 2-23 hours after delivery respectively but were not breastfed exclusively. There is significant ($X^2=38.570$; $P<0.001$) relationship between initiation of breastfeeding after delivery and exclusive breastfeeding. One out of every five (20.4%) children with low birth weight (Less than 2.5kg) were breastfed exclusively compared 14.8% of children

who also had low birth weight (less than 2.5kg) but were not breastfed exclusively. There is significant ($X^2=12.569$; $P=0.028$) relationship between birth weight and exclusive breastfeeding, More than five out of every eleven (47.4%) children whom were fed on only breast milk were exclusively breastfed compared to 11.1% who were also fed on only breast milk but were not breastfed exclusively, 36.3% of

children whom were fed on complementary food but were not exclusively breastfed compared to 17.3% who were also fed on complementary food and were equally breastfed exclusively. There is significant ($X^2=57.539$; $P<0.001$) relationship between the type of food fed to the child and exclusive breastfeeding practices.

Table 4: Relationship between practices of exclusive breastfeeding, initiation of breastfeeding, Birth weight, Type of food fed to the child.

Variables	Exclusive breastfeeding		Total	X ² -value	P-value
	Yes	No			
Initiation of breastfeeding of the child after delivery	Within one hour	83 42.3%	34 25.2%	117 35.3%	38.570 ^a 0.000
	2-23 hours	72 36.7%	38 28.1%	110 33.2%	
	2-7 days	29 14.8%	27 20.0%	56 16.9%	
	above 7 days	5 2.6%	3 2.2%	8 2.4%	
	None	7 3.6%	33 24.4%	40 12.1%	
	Total	196 100.0%	135 100.0%	331 100.0%	
Birth weight	Less than 2.5kg	40 20.4%	20 14.8%	60 18.1%	12.569 ^a 0.028
	2.5-3.9kg	145 74.0%	111 82.3%	256 77.4%	
	4.0kg and above	11 5.6%	4 3.0%	15 4.5%	
	Total	196 100.0%	135 100.0%	331 100.0%	
Type of food	Breast milk only	93 47.4%	15 11.1%	108 32.6%	57.539 ^a 0.000
	Breast milk and water only	15 7.7%	10 7.4%	25 7.6%	
	Breast milk and infant formula	16 8.2%	17 12.6%	33 10.0%	
	Infant formula only	30 15.3%	23 17.0%	53 16.0%	
	Complementary food (breast milk + Other foods)	34 17.3%	49 36.3%	83 25.1%	
	Family food or solid food	8 4.1%	21 15.6%	29 8.8%	
	Total	196 100.0%	135 100.0%	331 100.0%	

There is significant ($X^2=11.164$; $P=0.001$) relationship between age of children and exclusive breastfeeding, as most (71.9%) of the children who were exclusively breastfed were within the age group 0-6 months, compared with 54.1% who were within the same age group 0-6 months and were not breastfed exclusively. More than half (54.1%) and 29.6% of the mothers aged 30-39 years and 18-29 years respectively practiced exclusive breastfeeding on their children compared with 43.0% and 29.6% who also aged 30-39 years and 18-29 yrs respectively do not practice exclusive breastfeeding on their children. There is significant ($X^2=11.755$; $P=0.019$) relationship between age of mothers and practices of exclusive breastfeeding (Table 5).

Table 5: Relationship between practices of exclusive breastfeeding, age of the child and age of the mother

Variables		Exclusive breastfeeding			X ² -value	P-value
		Yes	No	Total		
Age group in months	0-6 months	141 71.9%	73 54.1%	214 64.7%	11.164 ^a	0.001
	7-12 months	55 28.1%	62 45.9%	117 35.3%		
Total		196 100.0%	135 100.0%	331 100.0%		
Age (yrs)	<18 yrs	14 7.1%	8 5.9%	22 6.6%	11.755 ^a	0.019
	18-29 yrs	58 29.6%	40 29.6%	98 29.6%		
	30-39 yrs	106 54.1%	58 43.0%	164 49.5%		
	40-49 yrs	16 8.2%	28 20.7%	44 13.3%		
	50 yrs and above	2 1.0%	1 .7%	3 .9%		
Total		196 100.0%	135 100.0%	331 100.0%		

DISCUSSION

This research work investigated the factors affecting practice and attitude of nursing mothers towards exclusive breastfeeding of their infants (0-12months) in Ihioma Orlu L.G.A, Imo State. Out of three hundred and sixty structured questionnaires distributed to the Nursing mothers in Ihioma Orlu L.G.A, Imo State. Three hundred and thirty-one was completely filled and returned. Most of the nursing mothers in this study were married women, aged between 18 and 39years. This finding is consistent with studies carried out in Kenya, India and Nigeria [2, 7, 9]. Most respondents were married, as would be expected from a study of this nature, because of the culturally and traditionally demand of women of this age group go into marriage, and start bearing children, nurturing and caring for their children. This study observed that most of the nursing mothers were educated, with majority being civil servants and traders by occupation. Occupation of mothers is a factor that affects exclusive breastfeeding practices, duration of maternity leave in Nigeria; do not encourage optimizing exclusive breastfeeding practices for the first six months and poverty that makes mothers to resume trading earlier than usual after giving birth. This finding is in line with Ukaegbu et al., [10], Anoshirike et al., [11]. Majority of nursing mothers earned a monthly income of less than N30,000. Education and Occupation of nursing mothers could be linked to the low income monthly

earning observed in this study. This could link to women having weaker or no control over household resources, tighter time constraints, less access to information and health services, poorer mental health and lower self esteem. These factors are thought to be closely tied to women's own nutritional status and the quality of care they give, and in turn, to children's birth weights and quality of care they give. This study observed that approximately one out of every five children was born with low birth weight (Less than 2.5kg). Surprisingly, Most of the children who were born with low birth weight were breastfed exclusively. This significant increase in the rate of exclusive breastfeeding among children who were born with low birth weight (LBW) in this study could be due to nutrition knowledge of mothers acquired both in the health facilities and in other channels on the benefits of EBF and breast milk being an idea food required for the child for growth and development especially LBW babies. It was also observed in this study that more of the nursing mothers delivered their baby through cesarean section. This could delay the initiation of breastfeeding.

Despite current evidence and knowledge about the benefits of colostrums, most culture still resort in discarding this first breast milk on the commonest reason that colostrum was dirty and therefore harmful to the new born, hence most mothers, who cannot

wait for the few days that the 'clean and safe milk' is expected, resort to expressing the milk and discarding same [11]. In this study, it was observed that more than half of the nursing mothers discarded the first breast milk (Colostrum) that comes out after delivery, with majority of them Many delayed initiation of breastfeeding of their children beyond 2 hours to more than 7 days after delivery, this finding is low compared to previous study by Anoshirike *et al.*, [11] which reported that, slightly above half (53%) of the infants were put to breast within one hour after birth, 48.2% reported in Anambra State [12], Delay initiation of breastfeeding within one hour after birth or discard of first milk after delivery deprives infants of colostrum that has anti-infective properties, and exposes them to unnecessary death.

This study revealed that more than half of the nursing mothers practiced exclusive breastfeeding to the optimal period of first six month of the child's life. This finding is high compared to previous report in Nigerian Demographic Health Survey [13] that reported estimated rate of EBF in Nigeria at 13%, 35.4% of nursing mothers who initiated breastfeeding within one hour after birth in this study is higher compared to 20.1% reported by NDHS [13]. Despite, breastfeeding being a cultural practice, EBF still suffers longstanding traditional practices conflicts, which hinder its acceptability and practices in different culture despite its obvious benefits. It was observed that early initiation of breastfeeding by nursing mothers significantly increased the rate exclusive breastfeeding practice of children in this study. Introduction of other foods to the child significantly reduced the rate of exclusive breastfeeding in this study. This could be due to market pressure and advertisement of this breast milk substitute imposed and for the fact that mothers introduce other foods such as complementary food, too early as observed in this study due to socio-economic factors such as resuming back to work, poverty, lack of support and other factors. Some mothers were under pressure to introduce complementary foods earlier than recommended, which is similar to findings from this study. Furthermore, a general lack of community support for adequate infant and young child feeding was noted [14], which could also contribute to more mothers stopping breastfeeding before the child is 12 months of age as observed in this study.

This study also observed that more of the older mothers practice exclusive breastfeeding compared to the young mothers. This could be attributed to their level of experience and for the fact that young mothers are cautious of their breast sagging as a result of breastfeeding, fear and embarrassment of breastfeeding in public places due to their dressing. This study revealed that breast milk is a unique food for the child, and all mothers can breastfeed, however

this study observe 196 (59.2%) practice of exclusive breast feeding on infants. Also replacement feeding during the first 6 months of life, home modified animal milk and commercial infant formula are some of the feeding options described. So mothers are aware of the feeding options and choose what was suitable, acceptable and what they can afford. The issue still goes back the status of women in society as it makes by far the greatest contribution to gap in children's nutritional status. In relation to knowledge on infant nutrition and infant feeding practices, as knowledge increases practices improves. This implies that there is a change in infant feeding for every unit change in the level of infant nutrition. In other words it means that knowledge on nutrition has a positive influence on the infant feeding practices. Lack of money to buy food for the child can often leads to the Nursing mothers either over diluting the child's food or reducing the quantity of meal fed to the child, these affects infant feeding practices negatively and result to malnutrition. Anderson [15] recommends weaning of infant at six months following exclusively breastfeeding especially to HIV positive mothers. However, mothers may find it difficult to stop breast feeding earlier than the normal and it is therefore, important to prepare mothers considering early cessation of breast feeding to be given sufficient preparation and support [15], through information on knowledge of infant nutrition. Most of the children were introduced to complementary food earlier than six months. This is contrary to UNICEF [16] recommendation, which state that at six months of age infants should start to receive complimentary foods in addition to breast milk. These should be safely prepared from locally available foods that are rich in energy and micronutrients to meet the infant's changing nutritional requirement.

CONCLUSION

This study observed increasing rate of exclusive breastfeeding way higher compared to that observed in Nigeria, though nursing mothers still discard colostrum with the believe that it is not good for the child, high prevalence of low birth weight and cesarean section delivery were also observed in this study. Factors such as initiation of breastfeeding after delivery, birth weight, type of food, age of both mother and child were significantly associated with exclusive breastfeeding rate in this study. Hence there is more to be done on educating the nursing mothers on the implications of discarding colostrum or delaying or denying these children the first immunization and other health benefits of the colostrum.

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