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## Research Article

# Exclusive Breastfeeding Practice and Associated Maternal Socio-Demographic Factors among Mothers Attending Imo State Specialist Hospital, Owerri, South-Eastern Nigeria

## Abstract

**Introduction:** Breast milk is unique and contains the entire nutritional requirement a new born infants needs for the first year of life. Exclusive breastfeeding is defined as the consumption of no other food or liquids except breast milk and drops or syrups consisting of vitamin-mineral supplements or medicines for at least 4 months and if possible the first 6 months of life. The aim of this study was to determine the socio-demographic factors associated with exclusive breastfeeding practice in Imo specialist hospital, Owerri, south-eastern Nigeria.

**Methods:** A cross sectional survey was adopted for this study and 450 randomly selected mothers of infants who visited Imo State Specialist Hospital for post-natal care were recruited for the study. A structured questionnaire was used to collect information on socio-demographic characteristics and infant exclusive breastfeeding pattern. Only mothers who gave their consent were recruited and confidentiality of information was maintained throughout the study period.

**Result:** The result indicated that majority of the mothers 192 (42.7%) were aged between 25 – 29 years and 225 (50%) attained tertiary education. Most of the mothers were either trader 167(37.1%) or civil servant (36.0%). The result indicated that 78 (17.3%) of the mothers exclusively breastfed their baby's for at least 4 months, while only 27 (6.0%) of the mothers exclusively breastfed their infants for up to 6 months. Initiation of breast milk to infant revealed that 174 (38.7%) of the mothers initiated breastfeeding less than an hour after delivery, 150 (33.3%) initiated breastfeeding within 2 – 24 hrs. Socio-demographic factors associated with exclusive breastfeeding practice (4 – 6 months) includes age ( $\chi^2 = 28.8149$ ,  $p < 0.001$ ), educational attainment ( $\chi^2 = 7.6934$ ,  $p < 0.021$ ) and average monthly income ( $\chi^2 = 30.8472$ ,  $p < 0.001$ ).

**Conclusion:** In view of the findings of this study, Mothers should be well informed about the benefits of exclusive breastfeeding on the child. Health care providers should also be trained on the principles of exclusive breastfeeding so that they can inform mothers on the best way to practice exclusive breastfeeding. Government should make policies to extend the period of maternity leave from 3 months to 6 months as this will help employed mothers achieve a complete exclusive breastfeeding practice and reduce the problem of child morbidity and mortality in Owerri in particular and Nigeria in general.

## Introduction

Breast milk is unique and the best food for new born infants for the first year of life or longer [1]. Exclusive breastfeeding is defined as the consumption of no other food or liquids except breast milk and drops or syrups consisting of vitamin-mineral supplements or medicines for at least 4 months and if possible the first 6 months of life [2]. World Health Organization (WHO) and American Academy of Pediatrics recommend that exclusive breastfeeding is the perfect nutrition for infants globally. According to their reports, it is sufficient to support optimal growth for the first six months of life [3-5]. Infants who are exclusively breastfed for at least 6 months, also experience fewer illnesses from gastrointestinal infections compared

with their counterparts that received human milk substitute (HMS) from 3 or 4 months of age. Also, neonatal deaths were 22% lower among infants who were initiated to breastfeeding within the first hours of birth [6]. The benefits of breastfeeding for both mothers and infants are well recognized in Nigeria and efforts made by the government to promote breastfeeding have contributed to its resurgence in Nigeria. Despite these proven benefits of breastfeeding, reports suggest that duration of lactation is not increasing; level of exclusive breastfeeding practices in Nigeria is low, while, initiation of breastfeeding after birth is generally delayed. Brown, (2007), opined that these facts of breastfeeding vary significantly with race, ethnic differences, and availability of health care facilities, work place, and community characteristics [1]. In Nigeria there is sparse information

on the influence of socio-demographic factors on exclusive breastfeeding practice, more especially in south-eastern part of the country. Therefore this study was designed to elucidate information on the practice of exclusive breastfeeding and associated maternal factors in Owerri, south-eastern Nigeria.

## Materials and Methods

A cross sectional survey design was used to investigate mothers of infants aged 6 - 12 months who brought their baby to the post natal clinic, Imo state specialist hospital, Owerri, for various reasons between february – May 2016. Information was obtained on breastfeeding patterns for each infant and basic mother's socio-demographic characteristics.

Four hundred and fifty (450) randomly selected mothers of infants aged 6 - 12 months, visiting the centre for their child's immunization and other child's welfare counseling were randomly selected for the study. The following inclusion criteria were defined for participation: Child must be within the age range 6 -12 months at the time of selection. This group was selected to ensure they had finished exclusive breastfeeding and closer enough to remember and give accurate responses as regards their practice. Mothers who gave consent for the study; guardian must be the infant's mother.

A structured questionnaire was used to collect information on socio-demographic characteristics and breastfeeding practices among mothers of selected infants. The questionnaire was prepared in english and was self-administered. Ethical clearance for the study was obtained from the medical director, Imo State Specialist Hospital, Owerri. The study was conducted in accordance with regulations for health surveys. Specific oral information on the purposes of the study was given to mothers, and their oral consents obtained before inclusion in the study. Confidentiality of information was maintained throughout the study.

The data collected, was subjected to statistical analysis by classifying them into some purposeful and usable categories through coding operation, editing and tabulation using statistical package for social sciences (SPSS) version 21 software. Analyses were performed based on the computation of various frequencies and percentages, while chi-square was done for test of statistical significance for associated maternal factor, all analysis were considered statistically significant at  $p < 0.05$ .

## Result

### Socio-demographic characteristics of the mothers

The socio-demographic characteristics of the mothers revealed that majority 192 (42.7%) of the mothers were within the age group 25 – 29 years and the least 12 (2.7%) were aged 39 years & above. All the mothers had formal education; half 225 (50.0%) attained tertiary education while 54 (12.0%) attained only a primary education. Most mothers were either trader 167 (37.1%) or civil servant 162 (36.0%) while only a few 9 (2.0%) were famers. More than half 240 (53.3%) of the mothers said they earn income of less than 10,000 Naira (\$ 33.3) per month while only 27 (6.0%) admitted earning above 70,000 Naira (\$ 233.3) per month (Table 1).

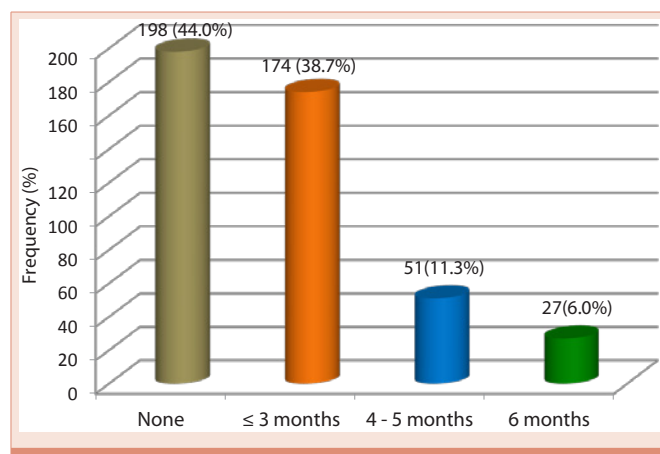
### Exclusive breastfeeding practice among mothers

The result indicated that of the 450 mothers studied, majority of 441 (98.0%) of the mothers' breastfed their babies while very few 9 (2.0%) did not breastfeed at all. Also the result indicated that more than half 252 (56.0%) were breastfed exclusively for some time before introducing complementary feeding. Furthermore, the result revealed that 174 (38.7%) were exclusively breastfed for 3 months or less, 51 (11.3%) were exclusively breastfed for at least 4 – 5 months. However, only 27 (6.0%) infants were exclusively breastfed for six months as recommended by World Health Organization (Figure 1). Therefore, the prevalence of exclusive breastfeeding for at least 4 months was 17.3 percent, representing 78 mothers out of a total of 450 participants (Figure 2).

Two-fifths of mothers 174 (38.7%) reported that they initiated breast milk within the first hour after delivery, 150 (33.3%) initiated

**Table 1:** Socio-demographic characteristics of mothers.

Socio-demographic characteristics	Frequency (N=450)	Percentage (%)
<b>Age (years)</b>		
< 20	15	3.3
20 – 24	81	18.0
25 – 29	192	42.7
30 – 34	99	22.0
35 – 39	51	11.3
< 39	12	2.7
<b>Educational attainment</b>		
Primary	54	12.0
Secondary	171	38.0
Tertiary	225	50.0
<b>Mothers occupation</b>		
Farmer	9	2.0
Trader	120	26.7
Civil servant	117	26.0
Private worker	42	9.3
Artisan	27	6.0
Student	45	10.0
Housewife	90	20.0
<b>Mothers average monthly income</b>		
< N10,000	240	53.3
N11,000 – N30,000	117	26.0
N31,000 – N50,000	36	8.0
N51,000 – N70,000	30	6.7
Above N70,000	27	6.0



**Figure 1:** Duration of Exclusive Breastfeeding.

breast milk after 1-24 hours, 84 (18.7%) initiated breast milk within 25 – 47 hours while 42(9.3%) initiated breast milk 2 days after delivery (Figure 3).

### Socio-demographic factors associated with exclusive breastfeeding practice

The result indicated that exclusive breastfeeding was practiced more by 33.3 percent of mothers aged less than 20 years, followed by 17 (20.9%) those aged 25 - 29 years while the 5.1% of those aged 30 – 34 and 3.9 percent of those aged 35 – 39 years practiced exclusive breast feeding. There was a statistically significant ( $p < 0.001$ ) association between maternal age and exclusively breastfeeding practice.

Majority of 49 (21.8%) of mothers who had tertiary education practiced exclusive breastfeeding, followed by 25 (14.6%) of those who attained secondary education. The least was recorded among those who attained only primary education. There was a significant ( $p < 0.021$ ) association between educational attainment and exclusive breastfeeding practice.

Maternal occupation indicated that 22.2 percent of farmers exclusively breastfed their babies, followed by 17 (18.9%) of housewife and 18.5 percent of artisans. There was no significant ( $p > 0.05$ ) association between maternal occupation and exclusively breastfeeding practice.

Eighteen (50.0%) of those who earned between N31,000 (\$103.3) – N50,000 (\$ 166.7) monthly practiced exclusive breastfeeding, followed by 21 (17.9%) of those who earned N11,000 (\$ 36.6) – N30,000 (\$ 100) and 5 (16.7%) of those who earned N51,000 (\$170) – N70,000 (\$ 233.3) monthly. This was also found to be statistically significant ( $p > 0.001$ ) (Table 2).

### Discussion

#### Breastfeeding patterns of infants

This study found that almost all the mothers (98.0%) breastfed their children, indicating that breast milk is generally accepted as an ideal food for infants and virtually all mothers can breastfeed if giving adequate support by the family and health professionals. This finding is similar to previous reports of 97.3% breastfeeding practice in Nigeria [7], and 90%, in South Asian countries including Nepal, Myanmar, Bangladesh and Sri Lanka.

There was observed decline in the duration of exclusive breastfeeding, with very few (6.0%) infants, breastfed exclusively for

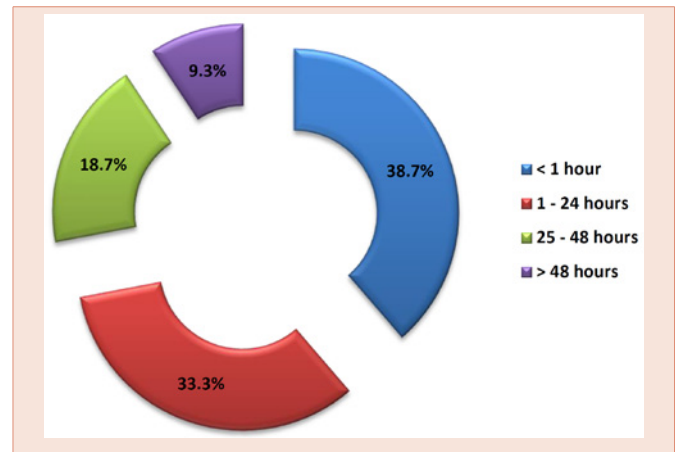


Figure 3: Time to initiation of breast milk.

Table 2: Association between socio-demographic factors and Exclusive Breast feeding practice.

Socio-demographic factors	Practice of Exclusive breastfeeding (4 - 6 months)		Total
	Yes % (N = 78 = 372)	No % (N)	
<b>Age (years)</b>			
< 20	5 (33.3)	10 (66.3)	15
20 – 24	17 (20.9)	64 (79.1)	81
25 – 29	48 (25.0)	144 (75.0)	192
30 – 34	5 (5.1)	94 (94.9)	99
35 – 39	2 (3.9)	49 (96.1)	51
< 39	1 (8.3)	11 (91.7)	12
<b>Chi-square = 28.8149, df = 5, p &lt; 0.001*</b>			
<b>Educational attainment</b>			
Primary	4 (7.4)	50 (92.6)	54
Secondary	25 (14.6)	146 (85.4)	171
Tertiary	49 (21.8)	176 (78.2)	225
<b>Chi-square = 7.6934, df = 2, p = 0.021*</b>			
<b>Mothers occupation</b>			
Farmer	2 (22.2)	7 (77.8)	9
Trader	20 (16.7)	100 (83.3)	120
Civil servant	20 (17.1)	97 (82.9)	117
Private worker	6 (14.3)	36 (85.7)	42
Artisan	5 (18.5)	22 (81.5)	27
Student	8 (17.8)	37(82.2)	45
Housewife	17 (18.9)	73 (81.1)	90
<b>Chi-square = 0.6489, df = 6, p &lt; 0.996</b>			
<b>Mothers average monthly income</b>			
< N10,000	31 (12.9)	209 (87.1)	240
N11,000 – N30,000	21 (17.9)	96 (82.1)	117
N31,000 – N50,000	18 (50.0)	18 (50.0)	36
N51,000 – N70,000	5 (16.7)	25 (83.3)	30
Above N70,000	3 (11.1)	24 (88.9)	27
<b>Chi-square = 30.8472, df = 4, p &lt; 0.001*</b>			

KEY\_\* means statistically significant.

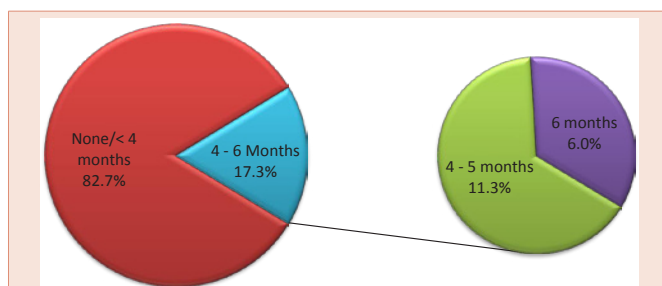


Figure 2: Prevalence of Exclusive breastfeeding (4 - 6 months).

the first six months of life and a rate of 17.3 percent being exclusively breastfed for up to 4 – 6 months of life. This finding is lower compare to the rate of exclusive breastfeeding reports by previous studies [7,8]. The unacceptable low rate of exclusive breastfeeding could be attributed to the fact that most of the mothers are trader and civil

servants, they can't leave their work for 6 months without supporting their family financially in a poor Nigerian economy, other factors may be due to delay in the initiation of breastfeeding, lack of husband/mother in-law support, early nutrition transition, pressure from marketing of breast milk substitute and host of other socio-economic factors.

It was also observed in this study that infants were fed with water or fruit alongside with breast milk (mixed feeding or pre-lacteal feeding) in their early stage of life, which could be possibly attributed to cultural norm, belief and ignorant of mothers and thereby displacing breastfeeding and exposing infants to malnutrition and food contamination. This finding is consistent with previous report [9,10].

Only 38.7 percent of the mothers initiated breast milk within one hour after delivery, this finding is higher compared to previous reports of 20% of babies being initiated to breastfeeding within one hour in Cameroon, 23 % in Nigeria by some other researchers, Somalia 26%, Chad, Indonesia and Pakistan having 29% [8]. However, the finding is lower compared to the corresponding rate for Indian is 41%, Ghana (46%), Bangladesh (47%), Zimbabwe (65%) and Sri Lanka (80%) [8]. Early initiation of breastfeeding is very important to the baby, this ensures that the infant receives the colostrums ("first milk"), which is rich in protective factors. Delay in early initiation of breastfeeding could be linked to caesarean mode of delivery, poor nutrition of mother, poor knowledge of mother, and host of socio-cultural practices. This also affects the duration of exclusive breastfeeding practice.

### Association between socio-demographic factors and exclusive breastfeeding practice

It was observed that young mothers practiced exclusive breastfeeding more compared to their older counterparts. A higher proportion of those aged less than 30 years practiced exclusive breastfeeding when compared with those aged 30 years and above. This was found to be statistically significant ( $p < 0.001$ ). with result in line with findings of other studies which reported that the age of nursing mothers is a factor that significantly influences the practice of exclusive breastfeeding [11-14], it is also in line with the report of Ogunba and Akinyele, 2012 ; and Agho et al., 2011 [15,16]. This may be due to the fact that majority of the older mothers might have larger number of children to care for and were distracted by their occupation, family duties, school involvement, and previous knowledge and experience that are hard to change.

It was observed that higher educational level of mothers in the study was statistically ( $p = 0.021$ ) association with exclusive breastfeeding of infants. This finding is in agreement with previous researches that suggested that the mother's education is one of the most important factors in promoting a healthy family life and good nutrition [17]. It is believed that with higher education mothers are exposed to adequate health information especially as regard importance of exclusive breastfeeding.

This study found that many of the mothers had occupation. There was no significant ( $p > 0.05$ ) association between occupation of mother and exclusive breastfeeding practice in the study. This could

be on account that mothers working outside their home only stay off work for few (less than 3) months and return back to work or business early for them to make money to feed other members of the family, which leads to early introduction of other foods to infants and living the infants at the care of older siblings, or baby sitter. I think this period of leave for employed mothers should be increased from 3 months to 6 months, this will health most mother achieve a more complete exclusive breastfeeding period. This finding collaborates with previous study that employment of women in the formal sector contributed to the reduced desire and confidence of mothers, particularly the younger and literate, to breast feed their infants [18]. More so aggressive promotion of infant formula and breast milk substitutes by commercial industries contribute greatly to the decline in exclusive breastfeeding practice.

This study found that 50.0% of mothers who breastfeed their infant exclusively earned between N31,000 (\$ 103.3) – N50,000 (\$ 166.7) per month. There was a statistical significant ( $p < 0.001$ ) association between mothers income and the practice of exclusive breastfeeding on children. Children born in high economic status families had higher risk of stopping exclusive breastfeeding compared to those in middle economic status families [19]. Also those of very low economic status can't maintain exclusive breastfeed due to poor nutrition of the mother.

### Conclusion

Exclusive breastfeeding is a unique and essential practice that promotes healthy growth and development of an infant especially at the first four to six months of life. The first year of life of infants represent an especially challenging period for their nutrition and health due to rapid growth and metabolic rates which increase their nutrient requirements during this period. This study revealed an unacceptable low rate of exclusive breastfeeding for the first four to six months of life. This could be due to factors influencing exclusive breastfeeding practices among mothers which includes socio-demographic factor (maternal age, educational attainment and monthly income) as found in this study.

In view of the findings of this study, Mothers should be well informed about benefits of exclusive breastfeeding. Health care providers should also be trained about principles of exclusive breastfeeding so that they can inform mothers on the importance of exclusive breastfeeding. Government should organize workshops for mothers so that they can be educated on the benefits of exclusive breastfeeding as this will help reduce the problem of child morbidity and mortality. Also there is need to increase the period of leave from 3 months to 6 months for employed mothers. Telecommunication industries should help in mounting proper information to promote and inform mothers worldwide to practice exclusive breastfeeding of the child and limit or avoid the use of bottle for the feeding of the child.

However, further research work need to be done on longitudinal study of infant feeding practices among low-income mothers in their household to capture the trend and pattern of infant feeding in cultural context. Also further studies need to be carried out on the influence of other factors such as unplanned pregnancy, nutritional



status of the mothers, family and peers influence, household size, other infant feeding options and income level of the husband on exclusive breastfeeding practice.

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