Socio-demographic factors affecting the practice of exclusive breastfeeding in South-South, Nigeria.

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ABSTRACT

Background: According to the convention on the Right of a Child, every infant has the right to good nutrition. The nutritional well-being of a population is both an outcome and indicator of national development. Nutrition is, therefore, an issue of survival, health and development of current and succeeding generations. Objective: The objective of this study was to identify the socio-demographic factors affecting the practice of exclusive breastfeeding in South-South of Nigeria. Methods and Materials: A semi-structured interviewer administered questionnaire was distributed using a systematic random sampling technique to 276 mothers who brought their infants to Child Welfare Centre located in South-South Region of Nigeria. The dependent variable was exclusive breastfeeding while the independent variables were maternal marital status, ethnic group, residence, employment, education, monthly income, religion and parity. Findings: The mean age of the mother was 30.2 with a standard deviation of 7.9. Statistically significant socio-demographic factors affecting maternal exclusive breastfeeding practice were maternal age ($X^2 = 22.09, p < 0.0001$), Maternal education level ($X^2 = 35.87, p < 0.0001$), Maternal employment type ($X^2 = 48.75$,p <0.0001), Maternal Resident ($X^2 = 13.63$,p<0.0001), Ethnic group $(X^2=14.30,p=0.0003)$, Maternal monthly income $(X^2=17.52,p<0.0001)$, Maternal spouses' occupation $(X^2=35.91,p<0.0001)$ However, Marital status $(X^2=0.75,p=0.745)$, Religion $(X^2=0.80,p=0.66)$, Maternal Parity $(X^2=1.82,p=0.176)$, were not statistically significance. **Conclusion:** The socio-demographic factors identified in this study to affecting exclusive breastfeeding in South-South of Nigeria were maternal age, maternal education level, maternal employment type, maternal residence, maternal monthly income and maternal spouses' occupation. These factors should be considered in exclusive breastfeeding intervention programs.

Keywords: Affecting, Exclusive Breastfeeding, Socio-demographic factors, South-South, Nigeria

Introduction

According to the convention on the Right of a Child, every infant has the right to good nutrition.[1]The nutritional well-being of a population is both an outcome and indicator of national development. Nutrition is, therefore, an issue of survival, health and development of current and succeeding generations.[2] Highly nutritious food like breast-milk has been reported to be the natural and best nutrition for the babies.[2]The infants obtain this through breastfeeding. Review evidence has shown that, on a population basis, exclusive breastfeeding for the first 6 months of life is the optimal way of feeding infants.[3]There-after infants should receive complementary foods with

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continued breastfeeding up to 2 years or beyond.[3] This is because of the overwhelming benefits of breastfeeding to both the infants and the mother. For the infants the advantages of exclusive breastfeeding include being a perfect food for the infant, guarantees safe, fresh milk, protection against infections, noninfectious and allergic disorders, reduction of the risk of childhood obesity, and enhancement of cognitive functions as well as increases bonding with mothers.[2] As for the mothers, the merit of exclusive breastfeeding are; the promotion of faster involution of the uterus, reduction of post-partum bleeding, enhancement of faster return to pre-pregnancy weight, decrease risk of breast and ovarian cancer, increase bonding with the infant, enhancement of self-esteem in the maternal role as well as delays the menstrual cycle.[4] Despite these evidence based merits of exclusive breastfeeding, it is worrisome to state that only about 38% of infants aged 0-6 months worldwide are exclusively breastfed. This is similar to other findings in West African countries. For instance, even though Nigeria has a strong breastfeeding culture with about 97.3% of the children being breastfed for some period of time, the mean duration of exclusive breastfeeding is only half a month.[5]A national survey carried out in Nigeria in 2003 indicated that exclusive breastfeeding for infants less than 4 months and less than 6 months were 22.3% and 17.2% respectively.[5]At a time when International Communities and Nigerian agencies were showing much concern about this unacceptably low exclusive breastfeeding practices, the rate further dropped in 2008 to 16.7% and 13.1% for infants less than 4 months and less than 6 months respectively.[6] This abysmally low exclusive breastfeeding practice prompted many researchers to look into the factors that affect exclusive breastfeeding with the aim of fashioning out appropriate interventions that could assist in addressing this challenge. Socio-demographic factors have been reported to affecting exclusive breastfeeding. Some of these factors include maternal age, residence, marital status, religion, education, occupation, monthly income and the tribe.[7,8-12]

Even though reports on socio-demographic factors affecting exclusive breastfeeding are available in Nigeria, little or nothing is known about it at the area where this study was carried out.

The objective of this study was to identify the sociodemographic factors affecting the practice of exclusive breastfeeding in South-South of Nigeria.

Materials and methods

University of Uyo is one of the tertiary health facilities in the South-South of Nigeria. It provides healthcare services to the people of the area. One of its main medical out-reach centers is the Maternal and Child Health located in Uyo; a capital city in the South-South of Nigeria. The Maternal and Child Health Center serves mainly eleven (11) Political wards, and eighty three ((83) Villages. The study was carried out at this Maternal and Child Health Centre between October and December 2011. A sample size of 271 pair of mother and child was calculated using the exclusive breastfeeding rate of 22.9%[13] obtained from previous study; and a total of two hundred and seventy six eligible pair of mother and child were recruited through a systematic random sampling technique, and a semi-structured interviewer administered questionnaire were used after a signed consent had been obtained from the mothers. The questionnaire evaluated their socio-demographic characteristics (such as age, marital status, residence, educational level, employment type, parity of the mothers and the occupation of the respondents' spouses) and maternal exclusive breastfeeding practice. In this study, exclusive breastfeeding was defined as the infant having received only breast milk from the mother (either directly from the breast or expressed) and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements, or medicines form birth to the period of the study. Younger mother means mother less than or equal 29years, while older mother refers to mother more

than 29years old. Currently married means married mothers, while not currently married refers to being single, separated or divorced. High level education means having tertiary education, while low level education refers to no formal education, primary or secondary education. Unskilled employment refers to trading, complete house wife, farming or others, while skilled employment means civil servants/professionals. The occupation classification of the subjects' spouses was obtained using the system of Boroffka and Olatawura.[14]

A pre-test study involving ten (10) pair of mother and child was carried out before the study was commenced. The appropriate corrections were effected on the questionnaire before it was administered to the respondents by the author and trained assistants.

The inclusion criteria for the mother include being the biological mother of the infant and have to be free of any self-reported medical condition making any breastfeeding or exclusive breastfeeding inadvisable or difficult. Approval for the study was obtained from Research and Ethical Committee of University of Uyo Teaching Hospital, Uyo, Nigeria.

Estimated sample size

The sample size was determined using the formula below.[15]

$$n = \frac{(z_1 - a)^2 P(1 - P)}{d^2}$$

Where:

Minimum sample size

Constant at 95% confidence interval from two tables which is 1.96 for two tailed

Best estimate of population prevalence obtained from literature review, which is

 $22.9\%^{10}$.

Precision which at 95% confidence interval is 5%.

$$n = \frac{(1.96)^2 \quad \text{X} \quad 0.229(1 - 0.229)}{(0.05)^2} = 271$$

However, 276 mothers were recruited for the study.

Data analysis

The data was analyzed using Epi info statistical package version 3.2.2 CDC, Atlanta Georgia, USA. The frequency and percentages of various sociodemographic factors were determined. Tables were used to show data distribution as appropriate. The level of statistical significance was taken as p < 0.05. A statistician was engaged to assist with the analysis of the data that was obtained.

Results

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One hundred and seventy six mother –infant pairs were recruited during the period of the study.

Table 1: Shows the age distribution of the mothers. The maternal age ranged between 16 and 50 years with

the mean age of 30.2 and a standard deviation of 7.9. About half of the mothers (52.9%) were thirty years and below.

Table 1:Age distribution of mothers

Maternal age (years):	Frequency (n)	Percentage (%)
16-20	29	10.5
21-25	56	20.3
26-30	61	22.1
31-35	70	25.4
36-40	31	11.2
41-45	15	05.4
46-50	14	05.1
Total	276	100

Table 2: Shows the socio-demographic characteristics of the mothers. The mothers that were currently married accounted for the majorities (86.6%) while those that were either divorced or separated were only 0.4%. Few mothers had no formal education (4.0%), while a little more than half (54.3%) had tertiary education. On the employment status, about a third of the mothers (35.9%) were either traders or self-employed, while the house wives were very few (0.7%). Almost all the mothers were Christians (96.0%), while the rest were Moslems (4.0%). Most of

the mothers resided in the urban areas (81.2%), while the remaining was in the rural areas. The Ibibios were the major ethnic group in this study (62.3%), while the Orons accounted for only 7.5%. More than half of the mothers' (58.0%) earned above 5,000 naira as monthly income. Majority of the mothers (90.6%) had less than five children, while the remaining had five or more children. A third of the respondents' husbands (33.7%) were in occupation group 2, while only 4.3% were in group 4.

Table 2: Socio-demographic distribution of mothers

Characteristics	Frequency (n)	Percentage (%)
Marital Status		
Single	36	13.0
Married	239	86.6
Divorced/separated	01	0.4
Total	276	100
Education		
No formal	11	4.0
Primary	45	16.3
Secondary	70	25.4
Tertiary	150	54.3
Total	276	100
Employment type		
Trading/self employed	99	35.9
Civil servant	93	33.7
Farming	43	15.6
House wife	02	0.7
Others	39	14.1
Total	276	100
Religion		
Christianity	265	96.0
Islam	11	04.0
Total	276	100

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Table 2: Socio-demographic distribution of mothers continued

Characteristics	Frequency (n)	Percentage (%)		
Residence				
Rural	52	18.8		
Urban	224	81.2		
Total	276	100		
Ethnicity				
Ibibio	172	62.3		
Annang	54	19.5		
Oron	21	07.5		
Others	29	10.5		
Total	276	100		
Monthly income				
<5,0000 naira	116	42.0		
>5,0000 naira	160	58.0		
Total	276	100		
Parity				
<5 children	250	90.6		
5 or more children	26	09.4		
Total	276	276		
Occupation of husbands ^{xx}				
Group 1	78	28.3		
Group 2	93	33.7		
Group 3	57	20.6		
Group 4	12	04.3		
No husband	36	13.5		
Total	276	100		

^{**} Represents occupation classification of the subjects' spouses which was done using the system of Boroffka and Olatawura as follow:

- Group 1. Consists of professionals with university degrees (teachers, doctors, lawyers, scientists, and high government officials).
- Group 2. Consists of professionals without university degrees (teachers, administrators, higher clerical and supervisory personnel, large scale farmers, entrepreneurs, and armed forces)
- Consists of clerks, motor vehicle drivers, mechanics, tailors, butchers, soldiers, policemen and small Group 3. scale entrepreneurs.
- Consists of cooks, barbers, domestic servants, gas station attendants, goldsmith, palm wine tapers, and Group 4. small scale farmers.

Table 3: Shows the association of socio-demographic factors with exclusive breastfeeding practice. Variables that were significantly associated with exclusive breastfeeding practice include younger maternal age, high level education, skilled employment, rural residence, belonging to Ibibio tribe, higher monthly income, and mothers whose husbands were in occupation group 1.

Older mothers aged above 29years were more likely to practice exclusive breastfeeding, compare to younger years who were aged 29 below($X^2=22.09, df=1, p<0.0001$). Similarly, high level

education had a strong association with exclusive breastfeeding practice, compare to low level education($X^2=48.75$,df=3,p<0.0001). Furthermore, mothers with skilled employment type were more likely to practice exclusive breastfeeding, compared to those with $type(X^2=48.75,df=3,p<0.0001).$ unskilled employment Mothers that were residing in urban areas were more likely to practice exclusive breastfeeding, compare to those that were in rural areas($X^2=13.63$,df=2,p<0.0001). Mothers that were of Ibibio ethnic group had a strong association with exclusive breastfeeding practice, compare to those from the other $tribes(X^2=14.30,df=1,P=0.003)$. In addition, the respondents that earned 5,000 naira or more monthly were likely to

practice exclusive breastfeeding, compare to those that earned less than 5,000 naira monthly(X^2 =17.55,df=1,p<0,0001). The mothers that their spouses belong to occupation group 1 were likely to practice exclusive breastfeeding, compare to those in other occupation

groups (X^2 =35.91,df=6,p<0.0001). However, maternal marital status (X^2 =0.75,df=1,p=0.745), religion(X^2 =0.80, df=2,p<0.66), and parity(X^2 =1.82,df=1,p=0.176.) were not statistically significant.

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Table 3: The socio-demographic factors compared with exclusive breastfeeding practice.

Variable	Exclusive breastfeeding		Total	\mathbf{X}^2	df	P- value
	Yes n (%)	No n (%)	n (%)			
Maternal age (years):						
29 or below	12 (09.7)	112 (90.3)	124 (44.9)			
>29	51 (33.6)	101 (66.4)	152(55.1)	22.09	1	< 0.0001
Marital status:	31 (33.0)	101 (00.1)	132(33.1)	22.09	•	(0.0001
Single parenting	07 (19.4)	29 (80.6)	36 (13.0)			
Married	56 (23.4)	183 (76.6)	239 (86.6)			
Divorced/separated	0 (0)	01(100)	01 0.(0.4)	0.75	2	0.745
Education level:	0 (0)	01(100)	01 0.(0.4)	0.75	2	0.743
No formal	01 (9.1)	10 (90.9)	11 (4.0)			
Primary	02 (4.4)	43 (95.6)	45 (16.3)			
Secondary	05 (7.1)	65 (92.9)	70 (25.4)			
Tertiary	55 (36.7)	95 (63.3)	150 (54.4)	35.89	2	< 0.0001
Employment type:	55 (55.1)	75 (05.5)	150 (54.4)	33.07	-	.0.0001
Traders/self employed	06 (6.1)	93 (93.9)	99 (35.9)			
Civil servants	43 (46.2)	43 (53.8)	93 (33.7)			
Complete house wives	05 (11.6)	38 (88.4)	43 (15.6)			
Farming	01 (50.0)	01 (50.0)	02 (0.7)	48.75	2	< 0.0001
Others	08(20.5)	31 (79.5)	39 (14.1)	40.75	2	<0.0001
Religion	00(20.3)	31 (77.5)	37 (14.1)			
Christianity	62(23.2)	205(.876)	267(96.7)			
Islam	01(12.5)	08(87.5)	09(3.1)	0.80	1	0.66
Residence	01(12.3)	00(07.3)	09(3.1)	0.80	1	0.00
Rural	03(5.8)	49(94.2)	52(18.8)			
Kurar Urban	60(26.5)	164(73.5)	224(81.2)	13.63	1	< 0.0001
Ethnic group:	00(20.3)	104(73.3)	224(01.2)	15.05	1	<0.0001
Ibibio	43 (25.0)	129 (75.0)	172(62.3)			
Annang	08 (14.8)	46 (85.2)	54 (19.6)			
Annang Oron	06 (14.8)	21 (100)	21 (7.6)	14.30	2	0.003
Others	12 (41.4)	17 (58.6)	29 (10.5)	14.50	4	0.003
Monthly income:	14 (41.4)	17 (30.0)	47 (10.3)			
<5,000naira	13 (11.2)	103 (88.8)	116(42.0)	17.52	1	< 0.0001
<5,000nana >_5,000 naira	50 (30.4)	110 (69.6)	160(58.0)	17.34	1	<0.0001
>_5,000 narra Parity	30 (30.4)	110 (09.0)	100(36.0)			
rarny <5 children	60(23.9)	191(76.1)	251(90.9)	1.82	1	0.176
<5 cmaren 5 or more	03(12.0)	22(88.0)	25(90.9)	1.04	1	0.170
5 or more Occupation of Husbands		22(00.0)	43(90.9)			
		60(57.7)	104(27.7)			
Group 1	44(42.3)	60(57.7)	104(37.7)			
Group 2	12(15.4)	66(84.6)	78(28.3)			
Group 3	05(6.0)	77(94.0)	82(29.7)	25.01	6	-0.0001
Group 4	02(16.7)	10(83.3)	12(4.3)	35.91	6	< 0.0001

DISCUSSION

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Many reports have attempted to identify some sociodemographic factors that influence exclusive breastfeeding practice. This has become relevant because of the downward trend observed in the rate of exclusive breastfeeding. This is thought to enable intervention programs to be directed appropriately. In the present study, some socio-demographic factors have been linked to the practice of exclusive breastfeeding. The study noted that higher exclusive breastfeeding practice was recorded in older mothers, while the younger ones recorded much less. This was similar to reports from Mauritius,[16] Hong Kong[17]and Nigeria[18]. The observed poor association between exclusive breastfeeding and younger mothers in this study may be due to lack of will power by younger mothers in South-South of Nigeria, as they can easily be influenced by family members, friends' and neighbors. In addition, this study found no significant association between marital status and the practice of exclusive breastfeeding. This is in contrast to reports from Calabar, Nigeria [13]. In the report, being married was positively associated with exclusive breastfeeding practice [13]. Other authors concurred with the Calabar report [7][10].. The reason for the observed disparity in the study was not clear because being married gives advantages in terms of money, encouragement to lead a healthy lifestyle; it also gives a social and psychological support-all of which are protective of health. Furthermore, the current study also showed that mothers with high level education practiced exclusive breastfeeding more than mothers with low level education. This is in agreement with previous studies. In China [19], and Ethiopia[20] higher education was identified as having a positive correlation with exclusive breastfeeding. The positive association might be because higher education attainment is linked to better understanding and easy access to information on health issues. The present study also noted a strong positive association between exclusive breastfeeding and skilled employment. The mothers that had skilled employment achieved high exclusive breastfeeding rate compared to unskilled employment. This is a finding of major interest in this study because other reports are at variance [9][21,22].The increasing awareness about exclusive breastfeeding and the building of crèches even in work places in South-South of Nigeria, might have been responsible for these higher rates of exclusive breastfeeding among the respondents that had skilled employment type. This study also revealed that mothers who had rural residence had low exclusive breastfeeding rates compared to mothers that resided in urban centers. The trend noted here was in conflict with what was reported in Malaysia [23] and Saudi

Arabia [24]. The observed difference reported in this study might be because rural mothers in the Nigerian South-South Geo-political Zone have low education, poor access to the media and public awareness on exclusive breastfeeding practice. Another striking finding was that no mother from the Oron ethnic group practiced exclusive breastfeeding. There is no clear reason to support the zero exclusive breastfeeding rates among the Oron mothers. However, this may be attributable to cultural and traditional affiliations of the people. In addition, it has been reported that the prevalence of HIV infections in Oron is one of the highest in Nigeria. This may have contributed to the mothers not breastfeeding their infants for the fear of transmitting the infection. The Ibibio ethnic group in this study had a higher exclusive breastfeeding rate when compared with other ethnic groups. The reason for this observed difference may be the urbanized nature of the Ibibio people which probably gave them the advantage of accessing health related programs. Furthermore, a positive correlation was documented in this study between exclusive breastfeeding and high income. This was in tandem with reports from Ethiopia [25] and Norway [22]. Higher socio-economic status is linked to better education, and hence the acceptance of health preventive measures. In addition, this study showed a weak association between maternal parity and exclusive breastfeeding. Other researchers have reported otherwise [18] [22]. In Anambra State, Nigeria, it was noted in a study that exclusive breastfeeding was positively associated with higher parity [18]. Other authors in Norway agreed with the above finding [22]. The Norway study clarified that multiparous women were more likely to practice exclusive breastfeeding for a long duration of time [22]. The reason for the observed disparity in this study might be because of the deep cultural affiliations of the perceptions about people, wrong exclusive breastfeeding practice and differences in methodology implored in the study. Even though little or no information was available on the association between maternal spouses' occupation and the practice of exclusive breastfeeding, the current study has revealed that there was a strong association between those whose spouses were in occupation group1 and the practice of exclusive breastfeeding. The occupation group 1 consists of professionals with university degrees (teachers, doctors, lawyers, scientists, and high government officials). This group of people may have positive influence on their spouses on health promotive measures. More research work is however advocated in this direction. The limitations identified in the study include; the questionnaire used for this study was supposed to be self-reported diagnostic tools. Its

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interpretation to the respondents may reduce the accuracy of the responses. Secondly, multiple logistic regression analysis of identified socio-demographic factors of exclusive breastfeeding was not done and that may reduce the strength of the association between

Findings of this cross-sectional study should form the basis of a longitudinal study on exclusive breastfeeding whereby the socio-demographic factors affecting exclusive breastfeeding can be examined more closely.

Conclusion

The socio-demographic factors affecting exclusive breastfeeding in this study were maternal age, maternal education level, maternal employment type, maternal residence, maternal monthly income and maternal spouses' occupation. These indicate the need to consider these factors in public health awareness and interventions.

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