

Effect of Exclusive Breastfeeding Practice on the Nutritional Status of Nursing Mothers in Ilaro Town, Nigeria

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Abstract

Breastfeeding is an important public health tool for the primary prevention of child morbidity and mortality. WHO have recommended exclusive breastfeeding for the first six months after delivery, followed by introduction of complementary foods. This study elicits the effect of exclusive breastfeeding on the nutritional status of nursing mothers in Ilaro. Data were collected using random sampling and well-structured questionnaire. A total of 200 respondents gave data on exclusive breastfeeding practices. Descriptive (frequency and percentage) and inferential (chi-square) statistics were used to summarize data. Data were analyzed using (SPSS) VERSION 20.0. Socio-demographic characteristics results showed that, majority (49.0%) of the respondents were between the ages of 21-30 years while (9.0%) were above 40 years. Also, (87.0%) were married while few (2.5%) were divorced. The income of the respondents showed that (32.0%) earned between ₦11,000- ₦ 20,000 monthly. Majority (62.0%) of the respondents had a normal nutritional status. Above average (79.0%) practice exclusive breastfeeding. Significant association ($p < 0.05$) exists between BMI and age, marital status exclusive breastfeeding practice and breast milk secretion time. In conclusion that the respondents have normal nutritional status and also there was a good practice exclusive breastfeeding practice among nursing mothers. Enlightenment about exclusive breastfeeding among mothers should be emphasized.

Keywords: Breastfeeding, complimentary food, exclusive breastfeeding, nutritional status, nursing mothers.

INTRODUCTION

Exclusive breastfeeding, is basically administering only breast milk and nothing else, not even water except for medical reasons prescribed by the doctor or nurse for the first six months of life (UNICEF, 2010). Breastfeeding has been reported as an age-old practice which has not only being beneficial to the physiology, growth, and overall well-being of neonates but the physiology and health of women at all time (Stuart-Macadam and Dettwyler, 1995). Mother's milk has antibodies embedded in the colostrum which are not present in infant formula. All these antibodies protect the body and then improve the immune system of infant to enable them fight disease and infection. The human milk in the right proportion also helps to promote adequate growth and development of infant (Jones, 1993: Tiwari, Zahariya and 2008).

Furthermore, United Nations International Children's Fund (UNICEF) and World Health Organization began an international campaign called Baby Friendly Hospital Initiative which has ensured that cooperate organizations incorporate plans for

breastfeeding mothers (WHO, 2006). This initiative was meant to promote, protect and support breastfeeding. Most hospitals in Nigeria have Baby Friendly Initiative.

In situations where poor and suboptimal breastfeeding practices occur it results to child malnutrition which is a major cause of more than half of continues rice is child's mortality (Sokol *et al.*, 2007), exclusive breastfeeding is then important for infants' survival. Among over 6.9 million under five children who were reported dead globally in 2011, an estimated 1 million lives could have been saved by simple and accessible practices such as exclusive breastfeeding (WHO, 2012).

In Nigeria, an estimated 84% of children younger than 2 months are being exclusively breastfed. By age 4 to 5 months, nevertheless, only 49% continue had received exclusive breastfeeding. Over the years, a lot of work which has been put in place to promote exclusive breastfeeding had achieved lesser outcomes. So as to comprehend and appreciate the dynamics of the practice, a number of studies have been conducted in Nigeria and in many parts of the

world. Much of these studies have mainly focused on factors and barriers to exclusive breastfeeding practice (Aidam *et al.*, 2005; Otoo *et al.*, 2009; Senarath *et al.*, 2010). Moreover, several studies have looked at the health outcomes of exclusively and non-exclusively breastfed child (Duncan *et al.*, 1993; Coutsoudis *et al.*, 1999; Kramer, 2003); whereas others have also considered the role of husbands in breastfeeding decisions (Arora *et al.*, 2000; Susin, *et al.*, 2008).

This work is therefore necessary to assess the effect of exclusive breastfeeding practice on nutritional status of nursing mothers in Ilaro town. Furthermore, there is no information or study on working mothers in this area, hence a need for the study. This work would further contribute to knowledge by providing information with regards to exclusive breastfeeding practice among working (breastfeeding) mothers in this area which could serve as a reference for any form of intervention program either by ministry of health, government or non-governmental organization.

MATERIALS AND METHOD

The study was a cross sectional and descriptive with nature that involved working (breastfeeding) mothers in Ilaro. A total of two hundred (200) working breastfeeding mothers were randomly selected and contacted for this work. Two (2) private and two (2) General hospitals were used for this work. Effort was made to contact nursing mothers during their antenatal session from Ilaro state hospital, Hosanna hospital, Queens' hospital and Yewa south primary health care center. Fifty (50) respondents were randomly selected from each hospital.

Multi-stage sampling method was used in selecting nursing mothers from various hospitals. A validated structured questionnaire was administered to nursing mothers in Ilaro. They include; Section A: Socio demographics (Age, sex, ethnic group, religion, number of children) and socio economic (Monthly

income) characteristics of respondents. Section B: Anthropometry was carried out by measuring weight, height, BMI (kg/m^2). Body weight was measured using bathroom scales (Saca), with the subject putting very light cloths without shoes. Body weight was expressed in kilograms (kg). The bathroom scales were also calibrated before and during the study. Height/size was measured using height guage with the subject standing barefoot. Height was expressed in meters. BMI, which corresponds to the respondent's weight divided by the square of the height (kg/m^2) were used to classify underweight ($\text{BMI} < 18.5 \text{kg}/\text{m}^2$), normal weight, ($\text{BMI} \geq 18.5$ and $< 25.0 \text{kg}/\text{m}^2$), overweight ($\text{BMI} \geq 25.0$ and $< 30.0 \text{kg}/\text{m}^2$) and obesity ($\text{BM} \geq 30.0 \text{kg}/\text{m}^2$) as recommended by World Health Organization. Section C: Exclusive breastfeeding practice and knowledge of respondents was also gotten.

All the data collected were analyzed using the Statistical Package for Social Sciences (SPSS) version 20. Data from questionnaire were represented using descriptive statistics (Percentages, Frequency, mean values and standard deviation). Chi-square was used in establishing association between socio-economic status and Body Mass Index (BMI). Also, statistical significance of the p-value was set at $p < 0.05$.

RESULTS AND DISCUSSION

Table 1 below shows the socio-demographic and socio-economic characteristics of the respondents. Majority of the respondents (49.0%) were between ages of 21-30 years, some of the respondents (30.5%) were between 31-40 years, (9.0%) were above 40 years. Majority of the respondents (87.0%) were married, few (2.5%) were divorced while (10.5%) were single parent. More than half (78.5%) of the respondents were Yoruba, few of the respondent (12.0%) were Igbo while (7.0%) were Hausa. Almost half of the respondents (40.5%) were business women while (27.5%) were artisans.

Table 1: Socio- demographic and Socio-economic Characteristics of Respondents

Variables	Frequency	Percentage
Age		
15-20 years	23.0	11.5
21-30 years	98.0	49.0
31-40 years	61.0	30.5
>40 years	18.0	9.0
Total	200.0	100.0

Gender		
Male	0.0	0.0
Female	200.0	100.0
Total	200.0	100.0
Religion		
Christian	108.00	54.0
Islam	92.0	46.0
Total	200.0	100.0
Marital status		
Single	21.0	10.5
Married	174.0	87.0
Divorced	5.0	2.5
Total	200.0	100.0
Ethnicity		
Yoruba	157.0	78.5
Igbo	24.0	12.0
Hausa	14.0	7.0
Others	5.0	2.5
Total	200.0	100.0
Occupation		
Artisans	53.0	26.5
Civil servant	55.0	27.5
Business woman	81.0	40.5
Others (military/paramilitary)	11.0	5.5
Total	200.0	100.0

Table 2 below shows the socio-demographic and socio-economic characteristics of the respondents. Almost half of respondents (43.5%) possessed SSCE, Diploma (ND/HND) were (38.5%) while (15.0%) had Bachelor degree (B Sc). The income of the respondents showed that (32.0%) earned between

₦11,000- ₦ 20,000, (31.0%) earned ₦ 6,000- ₦10,000 while (5.0%) earned above ₦ 41,000. Above half of the respondents (55.5%) had 2-3 children, few (21.5%) had one child while (3.0%) had less than five (5) children.

Table 2: Socio- demographic and Socio-economic Characteristics of The Respondents

Variables	Frequency	Percentage
Level of education		
SSCE	87.0	43.5
Diploma (ND/HND)	77.0	38.5
B Sc.	30.0	15.0
Masters	4.0	2.0
Ph.D	2.0	1.0
Total	200.0	100.0
Monthly Income		
< ₦5,000	16.0	8.0
₦ 6,000- ₦10,000	62.0	31.0
₦11,000- ₦ 20,000	64.0	32.0
₦ 21,000- ₦ 30,000	36.0	18.0
₦ 31,000- ₦40,000	12.0	6.0
> ₦ 41,000	10.0	5.0
Total	200.0	100.0
No of children		
1 child	43.0	21.5
2-3 children	111.0	55.5

4-5 children	40.0	20.0
> 5 children	6.0	3.0
Total	200.0	100.0

Table 3 shows the nutritional status of respondents. Majority (62.0%) of the respondents had a normal

weight, (22.5%) of the respondents were overweight, few (4.5%) underweight while (11.0%) were obese.

Table 3: Nutritional status of the respondents

Variable	Frequency	Percentages
Underweight	9.0	4.5
Normal	124.0	62.0
Overweight	45.0	22.5
Obese	22.0	11.0
Total	200.0	100.0

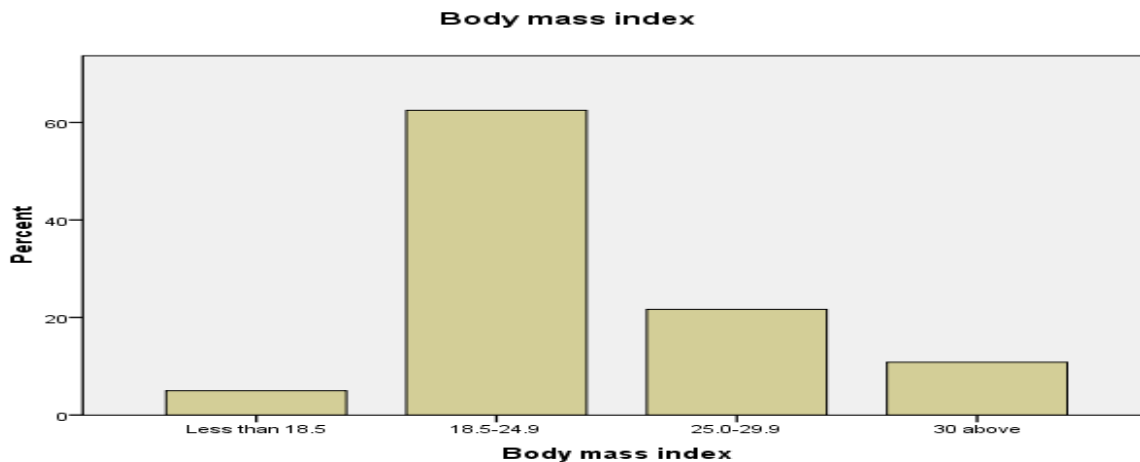


Table 4 shows the exclusive breastfeeding practice of respondents. More than half (80.5%) of the respondents fed their baby with breast milk as first food immediately after delivery, a few (19.0%) fed their baby with water while (0.5%) were fed with pap after deliver. Above average (60.0%) had their breastfed within one hour while (29.5%) breastfed

between one and twelve hours. Also, (89.5%) of the respondents breastfed their child sideways while (1.0%) breastfed their child while upright. More than half (53.5%) of respondents breast fed their baby for eleven to twenty minutes. Above average (79.0%) practice exclusive breastfeeding while (19.0%) do not practice exclusive breastfeeding.

Table 4: Exclusive breastfeeding Practice of Respondents

Variable	Frequency	Percentage
First food after delivery?		
Pap	1.0	0.5
Water	38.0	19.0
Breast milk	161.0	80.5
Total	200.0	100.0
Time of breastfeeding after birth		
< 1 hour	120.0	60.0
1-12 hours	59.0	29.5
12-24 hours	12.0	6.0
2-3 days	9.0	4.5
Total	200.0	100.0

Breastfeeding position		
Sideways	179.0	89.5
Other methods	19.0	9.5
Upright	2.0	1.0
Total	200.0	100.0
Child feeding pattern		
On demand	110.0	55.0
On schedule	43.0	21.5
Anytime	45.0	22.5
Once a day	2.0	1.0
Total	200.0	100.0
Breastfeeding timing		
1-10 minutes	62.0	31.0
11-20 minutes	107.0	53.5
21-30 minutes	23.0	11.5
31-40 minutes	8.0	4.0
Total	200.0	100.0
Exclusive breastfeeding practice		
Yes	158.0	79.0
No	38.0	19.0
Don't know	4.0	2.0
Total	200.0	100.0

Table 5 shows the association between socio-demographic characteristics and nutritional status (age and characteristics and the nutritional status of the respondents) while there is no significant association with other variables. reveals that there is a significant association at ($p < 0.05$) between variables.

Table 5: Association between BMI and Socio-economic Characteristics

Variable	Body Mass Index				χ^2	p-value
	Underweight	Normal	Overweight	Obese		
Age						
15-20 years	1(0.5)	15(7.5)	6(3.0)	1(0.5)	33.53	0.000*
21-30 years	6(3.0)	73(36.5)	16(8.0)	3(1.5)		
31-40 years	2(1.0)	29(14.5)	19(9.5)	11(5.5)		
>40 years	0(0.0)	7(3.5)	4(2.0)	7(3.5)		
Religion						
Christian	7(3.5)	66(33.0)	24(12.0)	11(5.5)	2.23	0.526
Islam	2(1.0)	58(29.0)	21(10.5)	22(5.5)		
Marital status						
Single	0(0.0)	19(9.5)	2(1.0)	0(0.0)	14.16	0.030*
Married	9(4.5)	104(52.0)	41(20.5)	20(10.0)		
Divorced	0(0.0)	1(0.5)	2(1.0)	2(1.0)		
Ethnicity						
Yoruba	9(4.5)	97(48.5)	36(18.0)	15(7.5)	8.23	0.510
Igbo	0(0.0)	14(7.0)	5(2.5)	5(5.5)		
Hausa	0(0.0)	8(4.0)	4(2.0)	2(1.0)		
Others	0(0.0)	5(2.5)	0(0.0)	0(0.0)		

*Statistically significant ($p < 0.05$)

Table 6 shows the association between exclusive breastfeeding status and exclusive breastfeeding practice (Breast milk secretion practice and the nutritional status of the respondents. It reveals that while there is no significant association with other variables, there is a significant association at (p<0.05) between nutritional

Table 6: Association between BMI and Exclusive Breastfeeding Practice

Variable	Body Mass Index				χ^2	p-value
	Underweight	Normal	Overweight	Obese		
First food given after delivery?						
Pap	0(0.0)	0(0.0)	1(0.5)	0(0.0)	4.34	0.631
Water	2(1.0)	23(11.5)	10(5.0)	3(1.5)		
Breastmilk	7(3.5)	101(50.5)	34(17.0)	19(9.5)		
Breast milk secretion after birth?						
< 1 hour	5(2.5)	70(35.0)	27(13.5)	18(9.0)	23.63	0.005*
1-12 hours	2(1.0)	43(21.5)	14(7.0)	0(0.0)		
12-24 hours	0(0.0)	6(3.0)	2(1.0)	4(2.0)		
2-3 days	2(1.00)	5(2.5)	2(1.0)	0(0.0)		
Breastfeeding position?						
Sideways	9(4.5)	111(55.5)	39(19.5)	20(10.0)	8.048	0.235
Other methods	0(0.0)	13(6.5)	4(2.0)	2(1.0)		

“Statistically significant (p<0.05)”

Table 7 shows the association between exclusive breastfeeding status and exclusive breastfeeding practice (exclusive breastfeeding practice and the nutritional status of the respondents. It reveals that while there is no significant association with other variables, there is a significant association at (p<0.05) between nutritional

Table 7: Association between BMI and Exclusive Breastfeeding Practice of Respondents

Variable	Body Mass Index				χ^2	p-value
	Underweight	Normal	Overweight	Obese		
Child's feeding pattern?						
On demand	6(3.0)	72(36.0)	20(10.0)	12(6.0)	6.03	0.737
On schedule	2(1.0)	26(13.0)	10(5.0)	5(2.5)		
Anytime	1(0.5)	24(12.0)	15(12.5)	5(2.5)		
Once a day	0(0.0)	2(1.00)	0(0.0)	0(0.0)		
Breastfeeding duration?						
1-10 minutes	5(2.5)	34(17.0)	14(7.0)	9(4.5)	11.59	0.231
11-20 minutes	2(1.0)	66(33.0)	26(13.0)	13(6.5)		
21-30 minutes	2(1.0)	18(9.0)	3(1.5)	0(0.0)		
31-40 minutes	0(0.0)	6(3.0)	2(1.0)	0(0.0)		
Exclusive breastfeeding practice?						
Yes	6(3.0)	103(51.5)	31(15.5)	18(9.0)	14.21	0.027*
No	3(1.5)	19(9.5)	14(7.0)	2(1.0)		

“Statistically significant (p<0.05)”

Discussion of results

Based on all the data presented in this paper, it can be emphatically stated that nutritional status has a favorable influence on exclusive breastfeeding practices among working (breastfeeding) mothers in Ilaro town. As expected, majority of the respondents were between ages 21-30 years while others were 31-40 years this confirms the early state of marriage and reproductive age of Nigerian woman which is between 15 – 49 years age, showed significantly ($p < 0.05$) better nutritional status more than other variables.

This work further showed that (87.0%) of the mothers were married while (10.5%) were single parent. Also, more than half (78.5%) of the respondents were Yoruba, this could be attributed to the fact that this study was conducted in western Nigeria (Ogun state).

The level of education of these women showed that majority (43.5%) had SSCE while few (15.0%), (2.0%) had B Sc. and Masters respectively. It has been reflected in other studies that low educational background limits women to employment in the informal sector rather than a formal sector, therefore exposing them to stress (Berio, 1984; Koblinsky., 1993). This also limits them to earning very low income as reflected in this study (32.0%) of these women earning a monthly income ₦11,000- ₦20,000 after putting in more hours into work. According to Leslie J, who stated that women worked as much as 8-10 hours per day and get under paid.

The nutritional status of respondents indicated that majority (62.0%) of the respondents had a normal weight, (22.5%) of the respondents were overweight, few (4.5%) were underweight while (11.0%) were obese. According to Kurz et al., the heavy nutritional demands of pregnancy, childbirth, and lactation when a girl is still growing, could harm her growth and development which can have effects on her health and nutritional status well into adulthood.

Over the years breastfeeding practice is very common among Nigerian mothers as they ensure their child is adequately breastfed immediately after birth. But the extent of practice of exclusive breastfeeding among breastfeeding mothers is not on the rise.

The nutritional status of these mothers was gotten from the measurement of weight and height of breastfeeding mothers. The result showed that

majority (62.0%) of the respondents had normal nutritional status. This could be attributed to the occupation of respondents, as majority (40.5%) of the respondents were business women. They tend to purchase and consume more food in the market environment with less physical activity.

Furthermore, majority (79.0%) of the mothers agreed to practice exclusive breastfeeding. This high figure could be as a result of education of mothers as almost half (38.5%) of them possess ND/HND certificate.

Also, majority (80.5%) fed their babies with breastmilk immediately after birth. This goes in line with the recommendation of World Health Organization that every new born be breastfed very quickly after birth or within one hour after birth (WHO, 2001).

More than half of the breastfeeding mothers (60.0%) will initiate breast milk within one hour after birth, (4.5%) will initiate breastfeeding the second or third day. This result is different from the work of (Ogunba & Agwo, 2014) which showed that (21.5%) of intending mothers will initiate breastfeeding the second day after birth.

CONCLUSION

While concluding this work, it is very important to note that the nutritional status of these breastfeeding mothers is adequate and normal. This is consequent on the BMI result which accounted for 62.0% normal nutritional status. Infant breast milk consumption and nutrient intake is dependent on the nutrient store of mother. Colostrum present in human milk is very important in assisting infants to fight against infection and make them very healthy. Exclusive breastfeeding practice among mothers is very high in the area of study.

Recommendation

This study only focus on practice of exclusive breastfeeding among mothers, further study can be carried out on areas not covered in this study. More studies and enlightenment about exclusive breastfeeding practice among nursing mothers should be emphasized as this would improve the wellbeing of infants.

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