



# **Nutritional Status and Exclusive Breastfeeding Knowledge among Working (Breastfeeding) Mothers in Ilaro Town**

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## **ABSTRACT**

The WHO and UNICEF have recommended exclusive breastfeeding for the first six months after delivery, followed by introduction of complementary foods and continued breastfeeding for 24 months or more. This study aims to elicit the effect of exclusive breastfeeding on the nutritional status of nursing mothers in Ilaro. Data were collected using random sampling techniques and a well-structured questionnaire. A total of 200 respondents gave data on exclusive breastfeeding practices. Descriptive (mean, standard deviation, frequency and percentage) and inferential (chi-square was used to determine associations) statistics were used to summarize data. Data were analyzed using Statistical Package for Social Sciences (SPSS) VERSION 20.0. Socio-demographic characteristics results showed that, majority (49.0%) of the respondents were between the ages of 21-30 years. Also, (87.0%) were married while few (2.5%) were divorced. Almost half of the respondents (40.5%) were business women. The income of the respondents showed that (32.0%) earned between ₦11,000- ₦ 20,000 while (5.0%) earned above ₦ 41,000. Majority (62.0%) of the respondents had a normal nutritional status while (11.0%) were obese. Above average (79.0%) practiced exclusive breastfeeding. Also (58.0%) of the respondents agreed that exclusive breastfeeding reduce diarrhea. Significant association ( $p < 0.05$ ) exists between BMI and age, marital status exclusive breastfeeding practice and diarrhea reduction. It could be concluded that the respondents have normal nutritional status and also there was a good knowledge of exclusive breastfeeding among nursing mothers. Enlightenment about exclusive breastfeeding among nursing mothers should be emphasized.

**KEYWORDS:** Complimentary food, Exclusive breastfeeding knowledge, Nutritional status, Nursing mothers.

## **1. INTRODUCTION**

Exclusive breastfeeding is giving baby breast milk only and nothing else, not even sips of water except for medicines 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 as well (Stuart-Macadam and Dettwyler, 1995). Mother's milk has antibodies which are not present in infant formula. These antibodies protect the body and the boost the immune system of infant to enable them fight disease. The human milk in the right proportion also helps in the development of infant (Jones, 1993; Tiwari, Zahariya and 2008).

Breast milk easily absorbed and has a low solute load, and an increased availability of minerals, vitamins, and proteins. It has been estimated that exclusive breastfeeding (EBF) reduces infant mortality rates by up to 13% in low-income countries (Jones *et al.*, 2003). United Nations International Children's Fund (UNICEF) and World Health Organization began an international campaign called Baby Friendly Hospital Initiative (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 all child deaths (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 to receive exclusive breastfeeding. Many attempts and hard work to promote exclusive breastfeeding have achieved less than desired outcomes and in order 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 focused on factors and barriers to exclusive breastfeeding (Aidam *et al.*, 2005; Otoo *et al.*, 2009; Senarath *et al.*, 2010). Several studies have looked at the health outcomes of exclusive and non-exclusive breastfeeding



(Duncan *et al.*, 1993; Coutsoudis *et al.*, 1999; Kramer, 2003); whereas others have also considered the prospective position of husbands in breastfeeding decisions (Arora *et al.*, 2000; Susin, *et al.*, 2008).

Also, a lot of work has been done by several researchers on extent of exclusive breastfeeding practice but no work has explored knowledge of the nursing mothers on exclusive breastfeeding in this area. This study is therefore necessary to assess the nutritional status and exclusive breastfeeding knowledge among working (breastfeeding) mothers in Ilaro. It is important to note that this work will validate the extent of awareness and exclusive breastfeeding knowledge. This work would further contribute to knowledge by providing information about exclusive breastfeeding practice among working 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.

## **2. MATERIALS AND METHOD**

### **2.1 Study Design**

The study was a cross sectional and descriptive in nature that involved working (breastfeeding) mothers in Ilaro.

### **2.2 Sample Size**

#### **2.2.1 Determination of Sample Size**

In this study, a sum total of two hundred (200) working breastfeeding mothers were randomly selected and contacted for this work. Two (2) private and two (2) government 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.

### **2.3 Sampling Procedure**

Multi-stage sampling method was used in selecting nursing mothers from various hospitals.

### **2.4 Method of Data Collection**

A validated structured questionnaire was administered to nursing mothers 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, body mass index (BMI) ( $\text{kg}/\text{m}^2$ ). 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 ( $\text{kg}/\text{m}^2$ ) 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 ( $\text{BMI} \geq 30.0 \text{kg}/\text{m}^2$ ) as recommended by World Health Organization.

Section C: Exclusive breastfeeding practice and knowledge of respondents was also gotten.

### **2.5 Data Analysis**

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  $p < 0.05$ .



### 3. 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 the 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. 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 traders.

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

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Age</b>		
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
<b>Gender</b>		
Male	0.0	0.0
Female	200.0	100.0
Total	200.0	100.0
<b>Religion</b>		
Christian	108.00	54.0
Islam	92.0	46.0
Total	200.0	100.0
<b>Marital status</b>		
Single	21.0	10.5
Married	174.0	87.0
Divorced	5.0	2.5
Total	200.0	100.0
<b>Ethnicity</b>		
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
<b>Occupation</b>		
Trader	53.0	26.5
Civil servant	55.0	27.5
Business woman	81.0	40.5
Others	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 the respondents (43.5%) had SSCE, 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 ₦ 41,000- ₦ 50,000. Above half of the respondents (55.5%) had 2-3 children, few (21.5%) had 1 child while (3.0%) had less than five (5) children.



TABLE 2: Socio-demographic and Socio-economic Characteristics of Respondents

Variables	Frequency	Percentage
<b>Level of education</b>		
SSCE	87.0	43.5
ND/HND	77.0	38.5
B Sc.	30.0	15.0
Masters	4.0	2.0
Ph.D	2.0	
Total	200.0	100.0
<b>Income</b>		
< ₦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
<b>No of children</b>		
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

### NUTRITIONAL STATUS OF THE RESPONDENTS

Table 3 shows the nutritional status of the respondents. 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.

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

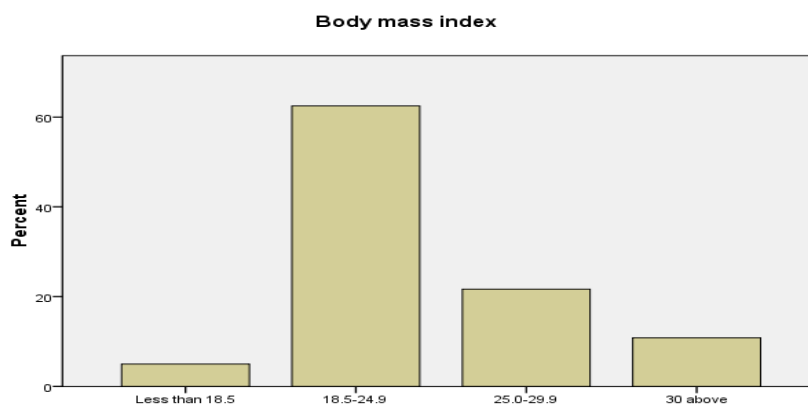


Fig. 1: Body Mass Index



Table 4 Show the respondents knowledge about exclusive breastfeeding. A little above half (52.0%) of the respondents did not introduce other kind of food within six month while (47.5%) introduced other kind of food within six months. Almost all (95.5%) exclusively breastfed while (4.5%) did not. Also (58.0%) of the respondents agreed that exclusive breastfeeding reduce diarrhea while (4.0%) disagree. Also, (51.5%) of the respondents strongly agreed that breastfeeding promote mother-child bonding while (1.0%) disagreed. More than half (61.0%) of the respondents agreed that exclusive breastfeeding is for six months, (33.0%) strongly agreed while (6.0%) disagreed. More than half (68.0%) of the respondents agreed that breastfeeding reduce jaundice while (5.5%) disagreed. While (51.0%) agreed that breast milk is ideal food for infants, (48.0%) strongly agreed.

Table 4: Knowledge about Exclusive Breastfeeding of Respondents.

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Introduction of other kind food within six months?</b>		
Yes	95.0	47.5
No	104.0	52.0
May be	1.0	0.5
Total	200.0	100.0
<b>Did you exclusively breastfeed your child?</b>		
Yes	191.0	95.0
No	9.0	4.5
Total	200.0	100.0
<b>Exclusive breastfeeding is for six months?</b>		
Agree	122.0	61.0
Strongly agree	66.0	33.0
Disagree	12.0	6.0
Total	200.0	100.0
<b>Does exclusive breastfeeding reduce Diarrhea?</b>		
Agree	116.0	58.0
Strongly agree	76.0	38.0
Disagree	8.0	4.0
Total	200.0	100.0
<b>Does breastfeeding promote mother-child bonding?</b>		
Agree	95.0	47.0
Strongly agree	103.0	51.5
Disagree	2.0	1.0
Total	200.0	100.0
<b>Frequent breastfeeding reduce jaundice?</b>		
Agree	137.0	68.0
Strongly agree	52.0	26.0
Disagree	11.0	5.5
Total	200.0	100.0
<b>Breast milk is ideal food for infants?</b>		
Agree	102.0	51.0
Strongly agree	96.0	48.0
Disagree	2.0	1.0
Total	200.0	100.0

**Association between Socio-Demographic Characteristics and Nutritional Status of the Respondents**



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

Table 5: Association between BMI and Socio-economic Characteristics

Variable	Body Mass Index				$\chi^2$	p-value
	Underweight	Normal	Overweight	Obese		
<b>Age</b>					33.53	0.000*
15-20 years	1(0.5)	15(7.5)	6(3.0)	1(0.5)		
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)		
<b>Religion</b>					2.23	0.526
Christian	7(3.5)	66(33.0)	24(12.0)	11(5.5)		
Islam	2(1.0)	58(29.0)	21(10.5)	22(5.5)		
<b>Marital status</b>					14.16	0.030*
Single	0(0.0)	19(9.5)	2(1.0)	0(0.0)		
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)		
<b>Ethnicity</b>					8.23	0.510
Yoruba	9(4.5)	97(48.5)	36(18.0)	15(7.5)		
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 at  $P \leq 0.05$ \*

#### Association between Nutritional Status and Knowledge about Exclusive Breastfeeding of the Respondents

The Table 6 below shows the association between nutritional status and knowledge about exclusive breastfeeding of the respondents. It reveals that there is a significant association at ( $p < 0.05$ ) between nutritional status and knowledge about exclusive breastfeeding (Exclusive breastfeeding is for six months and Exclusive breastfeeding reduce diarrhea) while there is no significant association with other variables.

Table 6: Association between Body Mass Index (BMI) and Knowledge about Exclusive Breastfeeding.

Variable	Body Mass Index				$\chi^2$	P-value
	Underweight	Normal	Overweight	Obese		
<b>Exclusive breastfeeding is for six months?</b>						
Agree	8(4.0)	81(40.5)	22(11.0)	11(5.5)	13.73	0.033*
Strongly agree	1(0.5)	37(18.5)	21(10.0)	7(3.5)		
Disagree	0(0.0)	6(3.0)	1(0.5)	4(2.0)		
<b>Any food within first six months?</b>						
Yes	5(2.5)	57(23.5)	23(11.5)	10(5.0)	1.186	0.978
No	4(2.0)	66(33.0)	22(11.0)	12(6.0)		
May be	0(0.0)	1(0.5)	0(0.0)	0(0.0)		
<b>Breastfeeding reduce diarrhea?</b>						
Agree	8(4.0)	74(37.0)	28(14.0)	6(3.0)	12.99	0.043*



Strongly agree	1(0.5)	45(22.5)	15(7.5)	15(7.5)
Disagree	0(0.0)	5(2.5)	2(1.0)	1(0.5)

\*Statistically significant at  $P \leq 0.05$ \*

#### **Association between Nutritional Status and Knowledge about Exclusive Breastfeeding of the Respondents.**

The Table 5 below shows the association nutritional status and knowledge about exclusive breastfeeding of the respondents. It reveals that there is a significant association at ( $p < 0.05$ ) between nutritional status and knowledge about exclusive breastfeeding variables on the table.

Table 6: Association between Body Mass Index (BMI) and Knowledge about Exclusive Breastfeeding.

Variable	Body Mass Index				$\chi^2$	P-value
	Underweight	Normal	Overweight	Obese		
<b>Exclusive Breastfeeding promote mother-child bonding?</b>						
Agree	9(4.5)	61(30.5)	19(9.5)	6(3.0)	20.95	0.002*
Strongly agree	0(0.0)	63(31.5)	24(12.0)	16(8.0)		
Disagree	0(0.0)	0(0.0)	2(1.0)	0(0.0)		
<b>Exclusive breastfeeding reduce jaundice?</b>						
Agree	9(4.5)	84(42.0)	34(17.0)	10(5.0)	20.66	0.002*
Strongly agree	0(0.0)	36(18.0)	9(4.5)	7(3.5)		
Disagree	0(0.0)	4(2.0)	2(1.0)	5(2.5)		

\*Statistically significant at  $P \leq 0.05$ \*

#### **4. DISCUSSION OF RESULTS**

According to the data presented in this work, it can be stated that nutritional status has an influence on exclusive breastfeeding knowledge among working nursing mothers in Ilaro town. As indicated, 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 reflected 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.

Also, nutritional status of respondents showed 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. The extent of exclusive breastfeeding of is dependent on the knowledge acquired about it over time.





The nutritional status of these mothers was gotten from the measurement of weight and height of breastfeeding mothers. The result indicated 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. Market women most likely to consume more meal while in the market environment.

Moreover, majority (95.0%) of the nursing mothers exclusively breastfed their child, (61.0%) agreed that exclusive breastfeeding is for six months, majority (58.0%) consented that exclusive breastfeeding reduce diarrhea while (51.5%) strongly agreed that breastfeeding promotes mother-child bonding. All the above data is a clear indication that these set of nursing mothers have good knowledge about 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 (51.0%) consented that breast milk is an ideal food for infants. This goes in line with the recommendation of World Health Organization that every new born be breastfed very quickly after birth (WHO, 2001).

More than half of the breastfeeding mothers (51.5%) strongly agreed that exclusive breastfeeding promote mother-child spacing thereby showing a strong association at  $p < 0.002$  with body mass index (BMI). This result is different from the work of (Ogunba & Agwo, 2014) which showed that (87.5%) disagreed that breastfeeding promote parent-child intimacy.

## **5. 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. Knowledge of nursing mothers about exclusive breastfeeding goes a long way to determine how secure and healthy a child will be during breastfeeding. This is because a low knowledge will not yield an unhealthy child development. 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.

## **6. RECOMMENDATION**

This study only focus on knowledge about 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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