THE EFFECT OF NUTRITIONAL STATUS ON EXCLUSIVE BREASTFEEDING KNOWLEDGE AMONG MOTHERS IN ILARO TOWN

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Abstract

Infants are to be exclusively breastfed for the first six months after delivery, followed by introduction of complementary foods and continued breastfeeding for 24 months or more. It is therefore important to elicit the effect of nutritional status on the exclusive breastfeeding knowledge 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 (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 ($p<0.05$) exits 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, Nursing mothers, Nutritional status

Introduction

Breastfeeding is simply the giving of breast milk to infant. Breastfeeding has long been recognised to have effective **anti-immunomodulation** effect on infant beside its nutritional value (Sing, 2007; UNICEF, 2006; Rahil et al, 2006).

World health organisation (WHO) recommends that infants should be exclusively breastfeed for six (6) months and later introduction of complementary feeding for two (2) years (WHO 2010). Breast milk is widely acknowledged as the most complete form of nutrition for infants, with a range of benefits for infants' health, growth, immunity and development. Breast milk is a unique nutritional source that cannot adequately be replaced by any other food, including infant formula. Although pollutants can accumulate in breast milk, it remains superior to infant formula from the perspective of the overall health of both mother and child. (WHO 2003).

Exclusive breastfeeding of infants especially from birth to at least six (6) months is recommended in the primary health care services provided in the health care sector in Nigeria and all over the world. A very important aspect of the primary health sector in Nigeria education of woman and the general public about the importance of exclusive breastfeeding that is, feeding infant with breast milk only till they are at least six (6) months old . This education includes providing information on the components of breast milk and its nutritional benefits to the babies as well as their mothers. In Nigeria, about 97 per cent of children begin exclusive breastfeeding from birth and continue to four (4) months (NDHS, 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). 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. 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, 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).

Several researchers have worked on extent of exclusive breastfeeding practice but no work has explored knowledge of the nursing mothers on exclusive breastfeeding in this area (Ilaro Town). This study is therefore necessary to assess the effect of nutritional status on exclusive breastfeeding knowledge among mothers in Ilaro. It is important to note that this work will showcase the extent of awareness and exclusive breastfeeding knowledge. This work would further contribute to knowledge by providing information on Knowledge about exclusive breastfeeding among mothers in this area which could form an information base during intervention programs either by ministry of health, government or non-governmental organization.

Materials and Method

Study Design

The study was a cross sectional and descriptive in nature as it explores effect of nutritional status on exclusive breastfeeding knowledge among mothers in Ilaro.

Sample size

Determination of Sample Size

In this study, a sum total of two hundred (200) breastfeeding mothers were randomly selected and involved in 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, Ore-Ofe hospital, Queens' hospital and Yewa south primary health care center. Fifty (50) respondents were randomly selected from each hospital.

Sampling Procedure

Multi-stage sampling method was used in selecting nursing mothers who attend post- natal from various hospitals.

Method of Data Collection

A validated structured questionnaire was administered to nursing mothers in Ilaro. It includes;

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). BMI, which corresponds to the respondent's weight divided by the square of the height (kg/m^2) were used to classify underweight (BMI $<18.5kg/m^2$), normal weight, (BMI ≥ 18.5 and $<25.0kg/m^2$), overweight (BMI ≥ 25.0 and $<30.0kg/m^2$) and obesity (BM $\geq 30.0kg/m^2$) as recommended by World Health Organization.

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

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 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 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

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		
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. 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
Level of education		
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
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

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

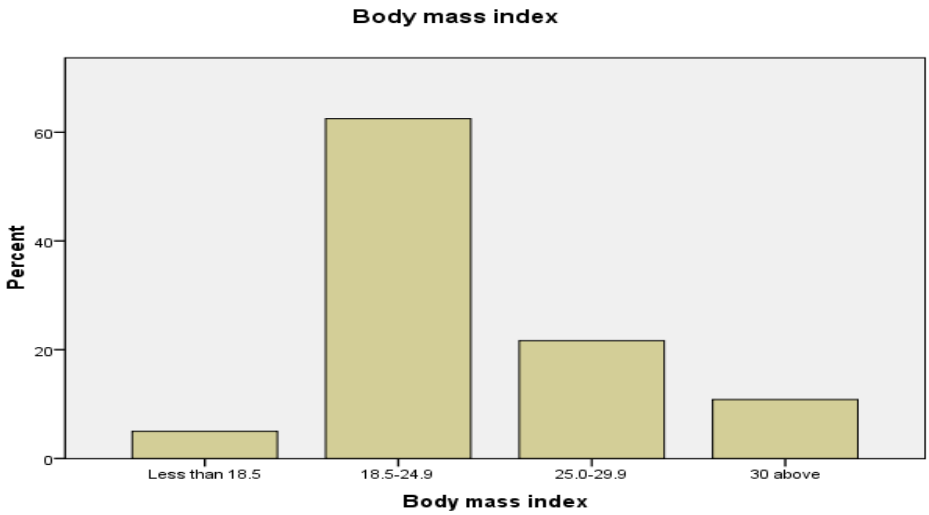

Figure 1: Nutritional status of respondents

Table 4 shows the respondents knowledge about exclusive breastfeeding. A little above half (52.0%) of the respondents did not introduce other kind of food within six months 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.

Variable	Frequency	Percentage
Introduction of other kind food within six months?		
Yes	95.0	47.5
No	104.0	52.0
May be	1.0	0.5
Total	200.0	100.0
Did you exclusively breastfeed your child?		
Yes	191.0	95.0
No	9.0	4.5
Total	200.0	100.0
Exclusive breastfeeding is for six months?		
Agree	122.0	61.0
Strongly agree	66.0	33.0
Disagree	12.0	6.0
Total	200.0	100.0
Does exclusive breastfeeding reduce Diarrhea?		
Agree	116.0	58.0
Strongly agree	76.0	38.0
Disagree	8.0	4.0
Total	200.0	100.0
Does breastfeeding promote mother-child bonding?		
Agree	95.0	47.0
Strongly agree	103.0	51.5
Disagree	2.0	1.0

Variable	Frequency	Percentage
Total	200.0	100.0
Frequent breastfeeding reduce jaundice?		
Agree	137.0	68.0
Strongly agree	52.0	26.0
Disagree	11.0	5.5
Total	200.0	100.0
Breast milk is ideal food for infants?		
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				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 at P≤ 0.05

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

The table 5 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				χ^2	P-value
	Underweight	Normal	Overweight	Obese		
Exclusive breastfeeding is for six months?						
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)		
Any food within first six months?						
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)		
Breastfeeding reduce diarrhea?						
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≤ 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 7: Association between Body Mass Index (BMI) and Knowledge about Exclusive Breastfeeding

Variable	Body Mass Index				χ^2	P-value
	Underweight	Normal	Overweight	Obese		
Exclusive Breastfeeding promote mother-child bonding?						
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)		
Exclusive breastfeeding reduce jaundice?						
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≤ 0.05

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 (1988), 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 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. This category of people consumes more meal while in the market area and they adopt sedentary lifestyle.

Moreover, majority (95.0%) of the nursing mothers exclusively breastfed their children, (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.

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 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.

Recommendation

This study only focuses on knowledge about practice of exclusive breastfeeding among mothers, further study can be carried out on areas not covered in this study which could be coping strategies of breastfeeding mothers. 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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