

Assessment of Socioeconomic Characteristics, Nutritional Status, and Challenges of Breastfeeding Mothers in Ikwerre Local Government Area of Rivers State, Nigeria

Dibia-Emmanuel, Nkasimobu C.

Department of Home Economics, Hospitality and Tourism,
Ignatius Ajuru University of Education, Port Harcourt, Nigeria

Abstract

The study examined the levels of socioeconomic characteristics, nutritional status, and challenges among breastfeeding mothers and their implications for sustainable maternal and child health in Ikwerre Local Government Area, Rivers State. Three specific objectives and three research questions guided the study. The study adopted the descriptive survey research design. The population was 130 nursing mothers and 61 health professionals. The stratified non-proportionate random sampling technique was used to select 97 nursing mothers and 61 health professionals. The instruments used for the data were questionnaires. The direct contact method was used to collect data. Mean and standard deviation were used to answer research questions 2-5. *Epi-info* 2000 was used to determine the anthropometric indices of body mass index (BMI) for the mothers. The findings revealed that majority of the breastfeeding women had averagely low income. The BMI of the mothers showed that 24.7% were underweight ($<18.5\text{kg/m}^2$); 49.5% were normal ($18.5\text{-}24.9\text{kg/m}^2$); 14.4% were overweight ($25.0\text{-}29.9\text{kg/m}^2$); while 11.3% were obese ($\geq 30.0\text{kg/m}^2$). Fruits and vegetables consumption were low; 3.1% skipped breakfast; 19.5% skipped lunch, and 8.2% skipped dinner. Food consumption included 45.4% (beans); 34% (bread); 8.2% (plantain); 68% (rice); and 11.3% (seafood). The nutritional challenges of breastfeeding women include: low knowledge of nutrition (\bar{X} 2.77, 2.71); lack of access to quality information (\bar{X} 2.61, 2.91). The author recommended among others, that families should be encouraged to prioritize the nutrition of breastfeeding women.

Keywords: Breastfeeding Mothers, Nutritional Status, Socioeconomic Characteristics, Sustainable Maternal/Child Health

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*Corresponding author: *Dibia-Emmanuel, Nkasimobu C.*

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INTRODUCTION

One of the main focuses of the Sustainable Development Goals (SDGs) is that countries around the world have accepted sustainable mother and child health. There are 17 Sustainable Development Goals (SDGs) which were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030. Focusing on focusing on sustainable maternal and child health is not just a public health issue; it is a strategic investment that sits at the intersection of health, gender equality, poverty reduction, and economic development. Maternal and child health are prioritized under excellent health and well-being. For many nations, including Nigeria, enhancing the health of expectant mothers, newborns, and kids are top public health priorities. According to Uke et al. (2019), sustainable health for women and their offspring means that their health influences the health of the following generation and can influence future public health issues for families, communities, and the healthcare system. Emphasis has been laid on

promoting breastfeeding mothers' nutrition in order to support and guarantee long-term health for this susceptible group.

One of the best strategies to guarantee a child's health and survival is breastfeeding. The most priceless gift a mother can offer her child is breastfeeding. It might be a gift that saves lives in cases of disease or starvation. It might be the only present available when there is poverty. However, nursing presents moms with a number of difficulties. A breastfeeding mother is defined in this study as a woman who has assumed the task of providing breast milk to her child over an extended period of time. It is crucial to remember that not all moms breastfeed; this can occur for a number of reasons, including health issues, insufficient breast milk production, or even the mother's schedule.

Breastfeeding is one of the best strategies to guarantee a child's excellent health and life since human breast milk ensures the infant's growth, development, and systemic protection (Eglash & Leeper, 2020). Many physicians and obstetricians believe that children should be raised with the knowledge that nursing is the standard (Ejue & Igube, 2017). Additionally, nursing appears to have the qualities of a preventive health intervention for women because the physiological processes involved are a normal component of the female body's maturation. Accordingly, providing moms with sufficient nursing support could guarantee their health and save the lives of numerous children (Esposito, 2017). Nutrition during lactation has not been a priority in breastfeeding promotion efforts before, but in recent times there has been recognition of the need to promote adequate food intake to support milk production and the woman's health (Rohana, 2015). This brings to the fore, the importance of nutrients intake and nutritional status.

According to Shigeko et al. (2017), nutritional status refers to the state of the human body in those areas that are impacted by diet, such as the body's nutrient levels and their capacity to preserve normal metabolic integrity. Adults' weight and height are measured to determine their general nutritional health or adequacy; the result is typically reported as the body mass index, which is the ratio of weight (kg) to height² (m) (Uke et al., 2019). Measurements of muscle diameter and skinfold thickness can also be used to determine body fat. The quantity of nutrients consumed mostly determines one's nutritional state. Nutritional status is a requirement of health of a person convinced by the diet, the levels of nutrients containing in the body and normal metabolic integrity (Nduati et al., 2020). Normal nutritional status is managed by balance food consumption and normal utilization of nutrients.

In order to attain the best possible growth, development, and health, the World Health Organization (WHO, 2022) presently advises that infants be exclusively breastfed for the first six months of their lives. Thereafter, while breastfeeding continues for up to two years of age or more, infants should be given safe, nutritionally appropriate supplemental foods to satisfy their changing nutritional needs. Although, the effects on maternal nutrition throughout the entire period are unclear, evidence from underdeveloped, impoverished nations indicates that lactation can maintain appropriate child growth over the first six months (WHO, 2020).

Nutritionists and other health professionals must take the initiative to put the nutritional status of nursing mothers at the forefront of any conversations about globalization, development, and Africa due to the unsustainable situation in Africa in general, and Rivers State in particular. Nutritionists and other health professionals who are tasked with supporting and caring for populations like nursing mothers and others to improve their nutritional health continue to face difficulties in identifying suitable and efficient strategies to lower the prevalence of maternal malnutrition.

It is critical to ascertain the typical dietary consumption of nursing moms because they experience a number of socioeconomic obstacles that could hinder their access to sufficient nourishment. This is because it is a key factor in determining nutritional health because low levels of breast milk can induce malnutrition in the newborn, while the mother may suffer from malnutrition if her nutrient stores are depleted during breastfeeding. The majority of nutritional status improvement strategies aim to increase dietary consumption.

From the foregoing, objective dietary recommendations may be made to assist moms in continuing to breastfeed while maintaining their health. A person or population cannot be categorized as malnourished based solely on dietary consumption. Nonetheless, it is able to recognize a hazardous state. Health and nutrition specialists must look into and give information on the aspects that may have an impact on breastfeeding moms' dietary consumption and nutrition understanding. This investigation became required in light of this background.

Statement of the Problem

It has been established that maternal malnutrition, which arises from the combined impacts of inadequate nutrition, high workloads, and the energy expenditures of repeated cycles of reproduction – is a significant predictor of both mother and child health. In conversations on maternal and child health, the reality of maternal malnutrition has become a contentious issue. Nonetheless, it is becoming clear that in developing nations and communities, patterns of malnutrition may be conditioned by socioeconomic development and associated with general nutritional deficiency. Many moms practice nursing, and some of them exclusively, in certain areas of Rivers State, such the Ikwerre council area. However, it is frequently noted that a number of these women are less mindful of their food intake because they are either unaware of the significance of a good diet during this time or are dealing with issues related to food insecurity. This has made it necessary to conduct a separate study to look at the nutrients that nursing moms consume. Prior research has concentrated on the nutritional difficulties faced by nursing mothers in Rivers State; however, little or no research has been done on the ways in which socioeconomic factors, nutritional status, and breastfeeding mother difficulties can affect the achievement of long-term health for both the mother and the child. It is based on this premise that this study investigates the levels of socioeconomic characteristics, nutritional status, and challenges among breastfeeding mothers and their implications for sustainable maternal and child health in Ikwerre Local Government Area, Rivers State.

Purpose of the Study

The main purpose of this study was to assess the levels of socioeconomic characteristics, nutritional status, and challenges among breastfeeding mothers and their implications for sustainable maternal and child health in Ikwerre Local Government Area, Rivers State. Specifically, the study sought to examine:

1. the level of socioeconomic characteristics of breastfeeding mothers in Ikwerre LGA, Rivers State;
2. the level of nutritional status of breastfeeding mothers in Ikwerre LGA, Rivers State, and,
3. the level of nutritional challenges of breastfeeding mothers in in Ikwerre LGA, Rivers State.

Research Questions

The study was guided by the following research questions:

1. What is the level of socioeconomic characteristics of breastfeeding mothers in Ikwerre LGA, Rivers State?

2. What is the level of nutritional status of breastfeeding mothers in Ikwerre LGA, Rivers State?
3. What is the level of nutritional challenges of breastfeeding mothers in Ikwerre LGA, Rivers State?

METHODOLOGY

Design of the Study: This study adopted the descriptive survey research design. This design is ideal for this study because it allows for a systematic description of the current situation of breastfeeding mothers in Ikwerre LGA, thereby establishing a crucial baseline of knowledge, highlighting areas of concern, and providing the essential evidence needed to guide future actions, research, and policies aimed at improving maternal and child health in line with the SDGs.

Area of the Study: The study was carried out in Ikwerre Local Government Area of Rivers State, Nigeria. Its headquarters is in the town of Isiokpo. The area is predominantly rural, with little access to nutrition education for families, especially for pregnant women and nursing mothers. However, many women in this area practice exclusive breastfeeding, while some others breastfeed their children up to two years of age, only a few have access to balanced diets. These issues prompted the choice of the study in Ikwerre.

Population for the Study: The population for this study was made up of two categories: 191 breastfeeding mothers and health professionals. The first category was 130 nursing mothers who are on either postpartum immunization programmes for themselves or for the infants at the Primary Health Centre. The second category of the population for this study was all the 61 health and nutrition professionals in the two major health institutions in the area namely; General Hospital Isiokpo and the Primary Health Centre located at Adanta.

Sample and Sampling Technique: The sample for the study was 158 respondents (97 nursing mothers and 61 health professionals in the general hospitals in Isiokpo and Adanta. The stratified non-proportionate random sampling technique was used to select the sample. This method involved dividing the population into strata and then randomly selecting a predetermined number of subjects from each stratum, without ensuring that the sample sizes from each stratum are proportional to their size in the overall population.

Instruments for Data Collection

The instruments used for data collection were in two categories: 1. questionnaires which were developed by the author, and divided into two sets to answer research questions 1 and 3. Structured pretested questionnaire developed by the author and used to obtain information on the nutritional status of the breastfeeding mothers (research question 2). The researcher sent the initial draft of the questionnaires to a panel of three experts – one medical doctor, one nutritionist and one public health professional who assessed the questionnaire for clarity, relevance, and comprehensiveness. Their feedback was used to add, remove, or rephrase questions to ensure the final tool adequately covered all facets of socioeconomic status, nutrition, and breastfeeding challenges. The internal consistency of the questionnaires was determined by pilot-testing the instruments with 10 nursing mothers outside the main study sample and then analyzed using Cronbach's Alpha to calculate a coefficient of 0.86a and 0.88a respectively.

Method of Data Collection: A total of 158 copies of the instruments were distributed to the respondents using the direct contact method, with the help of three research assistants who were sensitized on methods of administration. The questionnaires were used to obtain information in this study. The questionnaire contained sections seeking the following information.

Data on the socioeconomic and demographic characteristics and breastfeeding practices of the subjects were obtained using questionnaires. A 24-hour dietary recall was done for the dietary assessment of the subjects. The weight measurements of the breastfeeding mothers were taken using a portable Salter bathroom weighing scale and the height of the mothers was taken using a stadiometer and length of the infants was measured using the length-board.

Method Data Analysis: Mean and standard deviation were used to answer research questions 1 to 3. The decision rule was based on the cut-off mark of 2.5 mean score. The implication was that any item with mean score lower than 2.5 was disagreed with (D), while items with mean scores of 2.5 and higher were agreed with (A). More so, *Epi-info* 2000 was used to determine the anthropometric indices of body mass index (BMI) for the mothers. Statistical Package for the Social Sciences (*SPSS* version 10) was employed for statistical analyses (proportions, means, standard deviations, correlation co-efficient and test the significance of their differences).

RESULTS

Research question 1: What is the level of socioeconomic characteristics of breastfeeding mothers in Ikwerre LGA, Rivers State?

Table 1: Socioeconomic characteristics of Breastfeeding Mothers

Status	Total Sample		Isiokpo		Adanta			
	n=97	%	n=47	%	n=50	%		
Education	Tertiary	37	38.1	20	42.5	17	34	
	Secondary	50	51.6	25	53.2	25	50	
	Primary	10	10.3	2	4.3	8	16	
	Informal	0	0	0	0	0	0	
Income	<₦5000	25	25.8	12	25.5	13	26	
	₦5000-14,999	60	61.8	25	53.2	35	70	
	≥₦15000	12	42.3	10	21.3	2	4	
Marriage	Monogamy	67	69	40	85.1	27	54	
	Polygamy	20	20.6	7	14.8	13	26	
	Single	10	10.3	0	0	10	20	
Occupation	Trading	51	52.6	21	44.6	30	60	
	Civil service	9	9.3	2	4.3	7	14	
	Artisan	37	38.1	24	51.1	13	26	

Table 1 showed the level of socioeconomic characteristics of the breastfeeding mothers (from Isiokpo and Adanta in Ikwerre local government area of Rivers State. The Table showed that 38.1% of the respondents had tertiary education; 51.6% had secondary education; 10.3% had primary education, while none had informal education. The Table also showed that 25.8% of the respondents' income was <₦5000; 61.8% was ₦5000-14,999; and 12% was ≥₦15000. The respondents who were in polygamy were 20.6%; monogamy was 69%, and single were 10.3%. Also, the Table showed that 52.6% of the respondents were traders; 38.1% were artisans, while 9.3% were engaged in the civil service.

Research question 2: What is the level of nutritional status of breastfeeding mothers in Ikwerre LGA, Rivers State?

The results for research question 2 were presented in Tables 2a, 2b and 2c respectively.

Table 2a: Mean and Standard Deviation on the Characteristics of Breastfeeding Mothers

Status of Breastfeeding Mothers	Total Sample	Isiopko		Adanta		*p value
		n	%	n	%	
Age (yr)	29.15±4.93	29.37±4.48		28.91±5.41		0.440
Weight	63.23±11.60	62.91±10.48		63.58±12.78		0.631
Height (m)	1.62±0.06	1.62±6.14E-02		1.62 ±5.9702		0.614
Body Mass Index (BMI)	24.09±3.94	23.91±3.99		24.18± 4.28		0.587

Table 2a showed the characteristics of breastfeeding mothers in Ikwerre local government area of Rivers State. The Table showed that the mean age was 29 years, mean body weight and height were, 63.23kg and 1.62m respectively. The values for the mean age of the mothers indicate that they were young.

Table 2b: Percentage scores on Body Mass Index of Breastfeeding Mothers

Status	Total (97)		Isiopko (47)		Adanta (50)	
	n	%	n	%	n	%
Underweight (<18.5kg/m ²)	24	24.7	13	27.6	11	22
Normal (18.5-24.9kg/m ²)	48	49.5	22	46.8	26	52
Overweight (25.0-29.9kg/m ²)	14	14.4	4	8.5	10	20
Obese(≥30.0kg/m ²)	11	11.3	8	17	3	6
Total	97	100	47	100	50	100

Table 2b showed the Body Mass Index (BMI) of the breastfeeding mothers from Isiopko and Adanta in Ikwerre local government area of Rivers State. The Table showed that 24.7% of the respondents were underweight (<18.5kg/m²); 49.5% were normal (18.5-24.9kg/m²); 14.4% were overweight (25.0-29.9kg/m²); while 11.3% were obese (≥30.0kg/m²). This showed that less than half of the respondents have normal BMI.

Table 2c: 24 Percentage Scores on Hour Dietary Recall of Breastfeeding Mothers

Food Intake	Total (97)		Isiopko (47)		Adanta (50)	
	n	%	n	%	n	%
Fruits Consumption						
Avocado	12	12.4	9	19.1	3	6
Banana		11	11.3	6	12.7	5
Oranges	37	38.1	20	42.5	17	54
Mango	22	22.6	10	21.3	12	24
Green papaya	2	2.1	0	0	2	4
No fruits	13	13.4	2	4.3	10	20
Vegetables Consumption						
In most meals	56	57.7	26	55.3	30	60
Once in while	41	42.3	21	44.6	20	40
Snacking (yoghurt, milk, boiled eggs)						
Always	1	1	0	0	1	2
Once in a while		43	44.3	11	23.4	32
Not at all	53	54.7	36	76.5	17	34
Skipping of Meals						
Not skipping meals	67	64.9	30	63.8	37	74
Skip breakfast	3	3.1	2	4.3	1	2
Skip lunch	19	19.5	8	17	11	22
Skip dinner	8	8.2	7	14.8	1	2
Types of Foods eaten						
Beans	44	45.4	22	46.8	22	44
Bread	33	34	13	27.6	20	40
Plantain	8	8.2	2	4.3	6	12
Rice	66	68	34	72.3	32	64
Seafoods	11	11.3	4	8.5	7	14

Keys: FTM = First Time Mothers; MTM = Multiple Time Mothers

Table 2c showed the result of a 24 hour dietary recall of breastfeeding mothers in Ikwerre LGA. The Table showed that on fruits consumption, 12.4% of the respondents had avocado; 11.3% had banana; 38.1% had oranges; 22.6% had mango; 2.1% had paw-paw, while 13.4% had fruits in the last 24 hours. On vegetables consumption, 57.7% of the breastfeeding women had vegetables in most of their meals, while 42.3% had vegetables once in a while. The Table also showed that on snacking (yoghurt, milk, boiled eggs), 1% of the breastfeeding women always snack; 44.3% snacked once in a while; 54.7% did not snack at all. Furthermore, the Table showed that 64.9% of the breastfeeding women did not skip meals; 3.1% skipped breakfast; 19.5% skipped lunch, and 8.2% skipped dinner. On the types of foods eaten, the table further showed that 45.4% ate beans; 34% ate bread; 8.2% ate plantain; 68% ate rice; and 11.3% ate some seafoods.

Research question 3: What is the level of nutritional challenges of breastfeeding mothers in Ikwerre LGA, Rivers State?

Table 3: Mean and Standard Deviation on nutritional challenges of breastfeeding mothers in Ikwerre LGA, Rivers State

Nutritional challenges of breastfeeding women are as follows:	n= 97 (BM)		n=61 (HP)				
	\bar{X}	SD	RMK	\bar{X}	SD	RMK	
1. Low knowledge of nutrition	2.77	0.88	A	2.71	0.87	A	
2. Lack of access to quality information		2.61	0.83	A	2.91	0.86	A
3. Lack of financial resources	3.33	0.92	A	3.02	0.90	A	
4. Family burden		3.18	0.91	A	2.99	0.90	A
5. Lack of commitment to healthy diets	2.56	0.81	A	2.67	0.85	A	
6. Lack of appetite		2.42	0.81	D	2.01	0.79	D
7. Food allergies		2.27	0.78	D	2.19	0.77	D
Grand Total	2.73	0.84	A	2.64	0.84	A	

Keys: BM = Breastfeeding Mothers; HP = Health Professionals

Table 3 showed the nutritional challenges of breastfeeding mothers in Ikwerre (LGA), Rivers State. The Table showed that the respondents agreed with items 1-5 because they had mean scores of \bar{X} 2.50 and above which was the cut-off mean mark, while items 6 and 7 were disagreed with because they had mean scores lower than \bar{X} 2.50. The Table further showed that the mean scores ranged between \bar{X} 2.01 in item 6 and \bar{X} 3.33 in item 3. The standard deviation ranged between 0.77 and 0.92.

Discussion

The socio-economic characteristics show that 38.1% of the respondents had tertiary education; 51.6% had secondary education; 10.3% had primary education, while none had informal education. The table also shows that 25.8% of the respondents' income was <N5000; 61.8% was N5000-14,999; and 12% was ≥N15000. The respondents who were in polygamy were 20.6%; monogamy was 69%, and single were 10.3%. Also, the table shows that 52.6% of the respondents were traders; 38.1% were artisans, while 9.3% were engaged in the civil service. These findings are supported by earlier studies. For example, Adams and Hewell (20217) noted that the socioeconomic status of breastfeeding mothers is important in measuring determinants of nutritional status and factors that could undermine access to quality nutrition. Caldwell (2019) also averred that women with low education and minimal incomes are exposed to food insecurity. Diamond (2017) also stated that a woman's marital status could determine the nutritional status. These findings could also be due to the locality, or the hospital-based sampling. Looking at the socio-economic status of the breastfeeding mothers, the prevalent lower socio-economic status among them is consistent with the findings of Gerg (2017), even though there was no significant difference between the socioeconomic statuses of

the two groups. Findings from a similar study reported that mothers who breastfed their children were more educated, just having their first child, with no significance difference in their socioeconomic status and with some indication that they were less likely to belong to the lowest socioeconomic group (Gibson et al., 2018). Nearly all the women in this study were educated, with a similar socioeconomic status and parity.

The findings on the nutritional status of breastfeeding women in Ikwerre LGA, Rivers State showed that the mean age was 29 years, mean body weight and height were, 63.23kg and 1.62m respectively. The values for the mean age of the mothers indicate that they were young. These findings are significant because they provide an understanding of some demographic information on the population under study. An earlier study had noted that will help in structuring an intervention programme based on knowledge of these features (Abe, 2020). The result from the Body Mass Index (BMI) of the breastfeeding mothers (First Time Mothers – MTM and Multiple Time Mothers (MTM) in Ikwerre local government area of Rivers State shows that 24.7% of the respondents were underweight ($<18.5\text{kg/m}^2$); 49.5% were normal ($18.5\text{-}24.9\text{kg/m}^2$); 14.4% were overweight ($25.0\text{-}29.9\text{kg/m}^2$); while 11.3% were obese ($\geq 30.0\text{kg/m}^2$). These findings indicated that most of the breastfeeding mothers had a normal nutritional status as measured by their body mass index. Although their mean BMI tends more on the normal side, this is consistent with earlier findings by Uke et al. (2019). This BMI pattern is similar to that obtained by Caldwell (2019), where about two third (64.6%) of Nigerian women had a BMI within the normal range. Women with a BMI $\geq 30\text{ kg/m}^2$ are less likely to breastfeed than women with a BMI ≤ 30 (Gibson et al., 2018). These findings indicate that few (11.3%) of the breastfeeding women were obese. Although a concern, the number is an indication that there is low tendency to obstruct breastfeeding. Higher than normal maternal prepregnancy BMI has been found to be associated with poorer breastfeeding outcomes, and overweight and obese women are less likely to intend to breastfeed and initiate breastfeeding (Hendel, 2021).

The result of a 24 hour dietary recall of breastfeeding mothers in Ikwerre LGA indicated that on fruits consumption, 12.4% of the respondents had avocado; 11.3% had banana; 38.1% had oranges; 22.6% had mango; 2.1% had paw-paw, while 13.4% had fruits in the last 24 hours. These fruits are common fruits in the area of the study. On vegetables consumption, 57.7% of the breastfeeding women had vegetables in most of their meals, while 42.3% had vegetables once in a while. The findings indicated low consumption of fruits vegetables which could endanger both the nutritional status of mother and child. Low fruit and vegetable consumption can have several implications for breastfeeding mothers.

Fruits and vegetables are rich sources of essential nutrients, including vitamins, minerals, fiber, and antioxidants. If breastfeeding mothers do not consume an adequate amount of these foods, they may experience nutrient deficiencies. This can impact their overall health and well-being, as well as the quality of breast milk produced (Ibe, 2016). Fruits and vegetables also play a vital role in supporting a healthy immune system. They contain immune-boosting nutrients such as vitamin C, vitamin A, and various antioxidants (Kinra et al., 2015). When breastfeeding mothers lack these nutrients, their immune function may be compromised. This could make them more susceptible to illnesses, which could indirectly affect the baby's health as well.

Antioxidants found in fruits and vegetables help protect the body against oxidative stress caused by free radicals (Ibe, 2016). If a breastfeeding mother's diet lacks these protective compounds, it may lead to increased oxidative stress in her body. This can potentially affect the quality of breast milk and may have implications for both the mother and the baby. More so, breast milk is the primary source of nutrition for an infant. The composition of breast milk

can be influenced by the mother's diet. If a breastfeeding mother doesn't consume an adequate amount of fruits and vegetables, her breast milk may be lacking in certain nutrients. This could potentially impact the baby's nutritional intake and overall development.

The findings showed low snacking (yoghurt, milk, boiled eggs) because 1% of the breastfeeding women always snacked; 44.3% snacked once in a while; 54.7% did not snack at all. These could be as a result of the low income status recorded amongst the respondents. However, low snacking, especially if it leads to inadequate calorie and nutrient intake, can have several implications for breastfeeding mothers. This is supported by Kothari and Abderrahim (2020) who noted that poor snacking could result in insufficient energy intake. Breastfeeding requires additional energy, as the body needs to produce milk. If a breastfeeding mother does not snack enough, it can result in an inadequate calorie intake. This may lead to low energy levels, fatigue, and a decreased ability to produce an adequate milk supply.

Breastfeeding mothers often experience increased hunger and cravings due to the energy demands of lactation. Regular snacking can help satisfy hunger and prevent overeating during main meals (Ogude & Ototo, 2019). If a breastfeeding mother avoids snacking, it may lead to intense hunger, excessive food cravings, and potential overeating, which can affect weight management and overall health. Low snacking and inadequate nutrient intake can contribute to fluctuations in blood sugar levels, which may affect mood and energy levels. Balanced snacks, particularly those containing protein and complex carbohydrates, can help stabilize blood sugar levels and promote sustained energy throughout the day (Mosley & Chen, 2018). Neglecting snacking can contribute to mood swings, irritability, and decreased overall well-being.

Furthermore, the findings showed that 64.9% of the breastfeeding women did not skip meals. However, 3.1% skipped breakfast; 19.5% skipped lunch, and 8.2% skipped dinner. Skipping meals means missing out on essential calories needed to support both the mother's energy requirements and milk production. Breastfeeding mothers have increased energy needs, and not consuming enough calories can result in low energy levels, fatigue, and a decreased ability to produce an adequate milk supply. Ibe (2016) and Gerg (2017) are in agreement the findings. They noted that skipping breakfast, lunch, and dinner can have significant implications for breastfeeding mothers, as it can lead to various negative effects on their health and lactation. Calcium and other nutrients are essential for maintaining bone health, both for the mother and the breastfeeding infant. Skipping meals may result in inadequate calcium intake, which can potentially impact the mother's bone density over time (Gerg, 2017). The body requires sufficient energy and nutrients to produce breast milk. If a breastfeeding mother does not consume enough food throughout the day, it may result in a decreased milk supply. Adequate nourishment is crucial for maintaining a healthy milk production (Ibe, 2016).

The study revealed that the nutritional challenges of breastfeeding women in Ikwerre LGA of Rivers State include: low knowledge of nutrition; lack of access to quality information; lack of financial resources; family burden, and lack of commitment to healthy diets. These findings are in agreement with Abe (2020) who noted cultural beliefs, social support, and family influences can impact a breastfeeding woman's nutrition. Cultural dietary practices, traditions, and food preferences may influence the types of foods consumed. Social support, encouragement, and access to nutritious foods can play a significant role in maintaining a healthy diet during breastfeeding.

Economic factors, such as income and financial resources, can significantly impact food access (Agbakwuru et al., 2018). Lower-income households may face challenges in accessing a variety of nutritious foods due to limited financial means. Healthy and fresh foods, such as

fruits, vegetables, and lean proteins, can sometimes be more expensive than processed or unhealthy options, making it difficult for some breastfeeding women to afford a well-rounded diet. Also, the availability and accessibility of food can vary depending on the geographical location. In some areas, there may be limited access to grocery stores or markets that offer a wide range of fresh and healthy foods. This can particularly affect breastfeeding women living in food deserts, which are areas with limited access to affordable and nutritious food options.

CONCLUSION

The study has shown that majority of the respondents have low income, and being in polygamy or single could affect their nutrition lifestyles. The nutritional status of the breastfeeding women in the area indicate that many women are confronted with serious nutritional impediments, hence, requiring adequate attention. The women are also confronted with several nutritional challenges which have grave implications for their health and the development of the infant.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Women should endeavour to consume a well-balanced and varied diet that includes nutrient-dense foods. This can be achieved if their families are encouraged to prioritize the nutrition of breastfeeding women.
2. Healthcare professionals may recommend specific nutritional supplements, such as prenatal vitamins or omega-3 fatty acids, to meet the increased nutrient requirements during lactation.
3. Breastfeeding women should be encouraged to consult with healthcare professionals, such as registered dietitians or lactation consultants, who can provide personalized guidance on nutrition and address any specific concerns or challenges they may face.
4. Continuous monitoring and follow-up regularly to monitor the nutritional status of breastfeeding women and their infants by the health sector will help reduce cases of nutritional emergencies. Hence, the healthcare professionals can conduct follow-up visits to assess dietary intake, address concerns, and provide ongoing support and guidance.
5. Encouraging healthcare providers to enrol for professional development programmes in order to improve their services.

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