Community Health and Finance: Assessing the Nutritional Status of Children and Parents' Financial Status in Ondo State, Nigeria

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ABSTRACT

This study assessed the nutritional status of children in Orita Ojo in Odigbo Local Government Area and established the relationship between nutritional status and socio-economic status. The study used a structured questionnaire distributed to 60 households. The data was analyzed using the Simple Frequency Percentage Tables and Chi-Square. The result of the study indicates that nutritional status of children between ages 0-12 is poor. Also, the current dietary behaviour of the children in Orita Ojo in Odigbo Local Government Area is poor, which can be attributed to the fact that parents are not well knowledgeable dietary. It was also discovered that the level of knowledge on nutrition, foods and their functions by the parents is shallow. Furthermore, the findings shows a positive relationship between the nutritional status and growth of children in Orita Ojo in Odigbo Local Government Area, and there also exist a positive relationship between parent's social-economy status (finance) and children' nutritional status. The study recommends that community health practitioners should on a weekly basis, sensitize the general public on foods, their classes, functions, dietary and nutrition, and that parents should leverage on other sources of income as the study found a positive relationship between parents' social-economy status and children nutritional status. This study supports the Sustainable Development Goals 3, 8 and 15.

Keywords: Community health, children nutrition, finance, SDG 15, SDG 3, socio-economic status

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1 INTRODUCTION

Food is a substance for energy. Providing children to receive a variety of different food each day. They are unlikely to a nutritionally under nourished. The normal child grows genetically predominated rate that can be accelerated by nutrition (Victoria, et al 2002). Growth is one of the criteria used to access to nutritional status of population and individual children. Growth may be influenced by many factors including hereditary, good health or sickness. Nutrition can be measured and interpreted in variety of ways. For most people, good nutrition and the absence of chance illness will result in normal growth development (Gibbon, 2004).

Infant and children do not normally grow in perfectly smooth way but in "brush" where a change in a weight and height occur relatively short time. Children most consume energy generated from the metabolism of facts, carbohydrate and protein provide fuel that support the maintenance bodily functions and carrier. The cost of activities and growth (Gibson 2002). The energy expanded by any child is determined primarily by body size and composition physical activity and the rate of growth. It is important that person concerned with a child's nutrient in-take be heal circumference make it possible to visualize how a child's growth does not appear to be proceeding normally may require conditional methods of assessment such as age and fat food measurement change occur not only in weight and hasn't during growth but also in the components of the tissue. Increase in weight and height and skeletal maturation are accompanied by changed in body composition in lean body mass and hydration (Del Russo, 2001).

Nutrition is important for the development and wellbeing of all living organisms. When Nutrition is controlled, it is called dietary. In children between the ages of 0-12years, nutrition is highly taken into cognizance since the human brain and body functions develop within this age group. Nutritional assessment is the systematic process of collecting and interpreting information in order to make decisions about the nature and cause of nutrition related health issues that affect an individual (British Dietetic Association (BDA), 2012).

Children between 0-12years constitute an important segment of the population and reflect the nutritional status of their families and community as a whole, therefore alarming rate of nutritional disorders in developing serves as a pressing problems since reports have linked poor body growth of the children to dietary disorder. Nutrition is a critical part of health and development. Better nutrition is related to improved infant, child and maternal health, stronger immune systems, safer pregnancy and childbirth, lower risk of non-communicable diseases (such as diabetes and cardiovascular disease), and longevity. Healthy children learn better. People with adequate nutrition are more productive and can create opportunities to gradually break the cycles of poverty and hunger (World Health Organization, 2019).

Malnutrition, in every form, presents significant threats to human health. Today the world faces a double burden of malnutrition that includes both under nutrition and overweight, especially in low- and middle-income countries (World Health Organization, 2019).

This fact file explores the risks posed by all forms of malnutrition (over 149 million children under the age of 5 are stunted as claimed by the World Health Organization in 2020, starting from the earliest stages of development, and the responses that the health system can give directly and through its influence on other sectors, particularly the food system. The nutritional status of a child determines their physical and mental development, thus the need for the monitoring of their nutritional status, particularly in Orita Ojo in Odigbo Local Government. The research objectives are: To investigate the nutritional status of children in Orita Ojo in Odigbo Local Government Area, to access the current dietary behaviour of the children in Orita Ojo in Odigbo Local Government Area, to ascertain the level of knowledge on nutrition, foods and their functions by the parents of the children in Orita Ojo in Odigbo Local Government Area, to examine the relationship between the nutritional status and growth of the children

in Orita Ojo in Odigbo Local Government Area and to examine the effect of parent's social-economy status and the children's nutritional status in Orita Ojo in Odigbo Local Government Area.

The research questions are: what is the nutritional status of the children in Orita Ojo in Odigbo Local Government Area? what is the current dietary behaviour of the children in Orita Ojo in Odigbo Local Government Area? to what extent do the parents of the children in Orita Ojo in Odigbo Local Government Area have knowledge on nutrition, foods and their functions? is there any relationship between nutritional status and growth of children in Orita Ojo in Odigbo Local Government Area? and is there any effect of parent's financial status on children nutritional status in Orita Ojo in Odigbo Local Government Area? For the purpose of this study, the following hypotheses were developed and stated in the Null form (Ho); Hypothesis 1: Is no relationship between the nutritional status and growth of the children in Orita Ojo in Odigbo Local Government Area; Hypothesis 2: There is no effect of parent's financial status on children nutritional status in Orita Ojo in Odigbo Local Government Area.

It is on this note, the study examined the effect of nutritional assessment and parents' financial status on children between 0 – 12 years in Orita Ojo, in Odigbo Local Government Area.

2   LITERATURE REVIEW
2.1   Empirical Review of Literature

Children are assets and the future generation. Therefore, they are expected to grow and develop optimally and become adults who are physically, mentally, socially, and emotionally healthy. Children with various potentials can develop optimally and under these conditions. One indicator of high quality human resources is cognitive intelligence (such as IQ). It is a basic factor and key for an individual to succeed in the future (WHO, 2019). Since the inception of life, nutrition has dictated the growth and survival of the human species. Almost all of the body processes, from meager to vital, have a strong dependence on the diet. The nutritional status serves as an outlook on the past, present, and future of one's health. Various studies have indicated that the most rapid period of intellectual development occurs during the first 4-5 years of life (Padmonodewo, 1993).

The presence of health does not only mean the absence of disease or infirmity, rather, it is a quality of life emphasizing physical, mental and social well-being. In other words, nutrition, both in terms of amount and the kind, serves to act as the cornerstone of optimum health and the cutting edge for disease prevention (UN, 1998). According to Gorelick and Clark in 1985, they studied experimental and control groups of 187 children ages 3–5 years by implementing a program of nutrition education that included training in preparing food, developing cognitive skills, and encouraging creativity. The researchers divided the classes into two experimental and two control groups with 47 (46 in one) children in each group. The expectations of the program were to have children learn to identify foods, classify foods (fruits–vegetables), pair food images, and understand what is to be done before and after eating (showing a picture of soap before eating, showing a picture of a toothbrush afterwards). The study reported that the 3- to 5-year olds were able to easily identify the foods. The children's nutritional knowledge scores increased in the category of identifying foods following the program of education. The researchers concluded that the results were consistent with Piaget's theory. The study suggests the facilitation of the development of concepts of food and nutrition in children and to render the education successful, developmentally appropriate and activity-based teaching should be used.

Good nutrition is indispensable component of healthy life and access to healthy diet and optimum nutrition are important to good health. Better nutrition means stronger immune systems, less illness and better health. Whereas developing countries such as India is experiencing micronutrient malnutrition and under nutrition. The negative externalities of under nutrition are many, especially among the younger age group. Nutritional deprivation and infectious diseases among preschoolers feature prominently among the major public health concerns in developing countries (WHO, 1999).

Poor child health and nutrition impose significant and long-term economic and human development costs, especially on the poorest countries and communities, further entrenching their status. Improving child health and nutrition is not only a moral imperative, but also a rational long-term investment. Under six years old children are most vulnerable section of the society and the present study focuses on these age groups (Kuate- Defo, 2001).

Inadequate and unbalanced nutrition in childhood years hinders children's development leads to disorders such as obesity, cardiovascular disorders, diabetes, hypertension, and cancer. According to a report by the Turkey Demographic and Health Survey, 26% of children worldwide under 5 years of age are underweight, 11% are wasted, and 30% are stunted and 10% of children under the age of 5 are short for their age (TDHS, 2008).

There are three reasons why children's diets may be inadequate and unbalanced. These can be cited as:
   i.   the low level of education of mothers,
   ii.   the low socioeconomic status of the family, and thirdly,
   iii. the insufficient knowledge of the family about their children's nutritional needs (Salehi, et al. 2004).

Consequently, children may be insufficiently nourished in terms of energy, protein, calcium, zinc, iron, and vitamins. All of these factors hinder children's growth and development. Many countries have adopted national nutrition (Wang et al., 2000).

Studies of instances where nutrition education has been given to children along with their mothers indicate that the level of nutritional knowledge increased in these cases in both mothers and children. In addition, children preferred healthier foods; according to a study conducted by Powers, Struempler, Guarino, & Parmer, 2005, the children's anthropometric measurements were within the recommended limits for their ages they made use of Piaget's theory and created a school program of nutrition education. The study was of quasi-experimental design and encompassed the implementation of class activities. Interviews were held with the teachers and amounts of leftovers were noted. At the end of the program, it was found that the students in the study group exhibited increased knowledge.
2.2Cozby (2007) defined concept in terms of techniques and operations a research uses to manipulate or measure his study contents. He also argues that conceptual definition allows and guides the researcher to expatiate in solid terms on the abstract concepts in view. The importance of a conceptual framework is to direct, guide and informs the users of a study as regards the main view and variable employed in other to avoid concept misconception.

Based on the explanation above, the main concepts in this study include: Nutritional Assessment, Nutritional Status, Nutrient, Growth, Socio-economy Status and Calories and Dietary.

2.1.1   Nutritional Assessment: Nutritional assessment is the systematic process of collecting and interpreting information in order to make decisions about the nature and cause of nutrition related health issues that affect an individual (BDA, 2012).

2.1.2   Nutritional Status: Nutritional status is the physiological state of an individual, which results from the relationship between nutrient intake and requirements and from the body's ability to digest, absorb and use these nutrients (FAO, 2007).

2.1.3   Nutrients: These are compounds in foods essential to life and health, providing us with energy, the building blocks for repair and growth and substances necessary to regulate chemical processes (health.gov.ng, 2020).

2.1.4 Growth: According to the Merriam-Webster dictionary, growth is a stage or condition in increasing, developing, or maturing.

2.1.5 Socio-economy Status: Socioeconomic status is the social standing or class of an individual or group. It is often measured as a combination of education, income and occupation (APA, 2020).

2.1.6 Calories: A calorie is a measurement, just like a teaspoon or an inch. Calories are the amount of energy released when the body breaks down (digests and absorbs) food. The more calories a food has, the more energy it can provide to the body. When you eat more calories than you need, the body stores the extra calories as body fat. Even a fat-free food can have a lot of calories. Excess calories in any form can be stored as body fat (Cleveland Clinic, 2019).

2.1.7 Dietary: a regulated or restricted diet (Oxford Dictionary).

The following diagram is a conceptual framework for nutrition adopted from UNICEF. It reflects relationships among factors and their influences on children's nutritional status. Although political, socioeconomic, environmental, and cultural factors (at the national and community levels) and poverty (at the household level) affect the nutritional status of women and children. The highlighted areas of the framework depict selected factors.

2.2 Theoretical Review

A basic theory have been used to support the effect of nutrition assessment on children between the ages of 0 – 12years. This nutritional theory form the framework for this research study to substantiate nutrition assessment and children's growth. This theory is the Piaget's cognitive development theory.

2.2.1 Piaget's Cognitive Development Theory: This theory has been selected as a theoretical framework for the nutrition education guidance of preschool children. This theory provides a philosophical explanation of using knowledge, development and cognitive processes. The theory proposes that there should be a bridge between cognition, learning and behavior. Piaget's theory allows us to understand children's cognitive development and how and when they learn things. The preschool and school periods are important stages where children start to learn concepts and learn about their environment. Especially considering that preschool children do not have sufficient cognitive development, education offered at this age should be appropriate for their cognitive development. In fact, education not suitable for a given stage may have a negative impact on children.

Piaget's theory offers ways to teach effectively and guides us in designing education programs. Children and their families need information about nutrition and other topics. Using the stages involved in the theory -schema, adaptation and equilibration - helps us make associations between the selected topics. It also helps planning education which encourages children to be active and creative and self-learning. When nurses prepare education programs which encourage thinking and learning, they should be aware of the cognitive developmental stages of the children. For example, a nurse who knows that simple, concrete and correct expressions should be used when talking to children under seven years old can communicate more easily and effectively. Therefore, the results of this review will provide guidance for Nurses dietitians and other professionals who plan nutrition education for preschool children. It is recommended that nurses carry out studies that determine behavior changes regarding nutrition and other areas by using Piaget's Cognitive Development Theory.

2.3 Nutritional Assessment Methods

Nutritional assessment can be done using the following methods: Anthropometry, Biochemical/biophysical methods, Clinical methods, Dietary methods.

i.   Anthropometry: Anthropometric measurements include height, weight, skin-fold thickness, and circumference etc., could detect the change of body composition to assess the nutritional status in specific population groups, including newborn, children under age of five and adults. The advantage of using anthropometric measurements is that routine anthropometric measurements can suggest patterns of growth and development of an individual (Park, 2004).

ii.   Biochemical/biophysical methods: These investigations are extremely helpful in detecting early changes in body metabolism and nutrition before the appearance of overt clinical signs. In addition, the results obtained are precise, accurate and reproducible. The limitations are that these investigations are time-consuming and expensive, which cannot be used on a large scale (Wrieden, et al, 2014).

iii.   Ecological Factors: Occurrence of malnutrition is usually the final results due to the interaction of different ecological factors such as socio-economic factors, quality, accessibility, availability of health care services, and diseases. It is extremely important to make an "ecological diagnosis" to identify, which factors will affect the nutrition status of the community. However, it is often difficult to quantify the influence of ecological factors, which precipitates unfavorable nutritional outcomes (Bernstein, 2012).

iv.   Vital statistics: Vital statistics is obtained from the community, health care professionals, and surveillance network etc. All the data collected from different countries will present an overall picture of the nutritional status for that population of interest to help the government-making policy decisions. For example, analysis of morbidity and mortality data can be used in estimating the prevalence of the disease in the community and identifying the high-risk groups. However, in contrast to the mortality data which do not provide a satisfactory picture of the nutritional status of the population, morbidity data has higher public health importance and can help policy makers in giving priority to a particular area. The program managers could use vital statistic to evaluate the strategies periodically, then revise their program, accordingly (Shrivastava, 2013).

v.   Clinical methods: It is an essential feature of all nutritional surveys as the primary goal is to assess the health status of individuals or groups within a population in accordance with the type of food consumed. The presence of two or more clinical signs of a specific nutritional deficiency increases the diagnostic significance. It can be applied to a large group of the population. However, its limitation is that it cannot quantify the exact level of nutrient deficiency because most of these clinical signs for nutrient deficiency are nonspecific and require biochemical analysis to identify the nutritional status (Malara, et al, 2014).

vi.   Dietary methods: Dietary survey is a scientific assessment of eating pattern that could detect nutrient deficiency. There are many methods to do dietary surveys. The food balance sheet could aid the program managers to decide the dietary needs of a region or a state or a country - it is obtained by subtracting the amount of food provided for a specified group of population on a specific date and the amount remaining after a previously set time limit, to finally establish the consumption/requirement of food commodities for the earmarked population in that specified arbitrary period. The inventory method is based on a similar rationale as food balanced sheet except the study population is usually a group of a homogenous population, that is, hostel. The weighed food records method is employed at household level to estimate the food requirement - by weighing either raw food or cooked food for 7-10 days for a particular family in a specified period. The 24 h recall method is employed at household level to assess the type of food and the quantities consumed in the last 24 h (Baum, 2000).

The food frequency questionnaire method helps in assessing meal patterns and dietary habits of people by identifying number of times a specific food item is consumed in a defined time-span. However, most of these methods are tedious, difficult to execute, and have a poor acceptance rate by members of the community. To summarize, food balance sheet method and inventory method are similar, and the

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only difference is the settings (food balance sheet - state/national level or inventory - institutional level) in which they are generally considered applicable. However, the other three methods are used at household level to assess the amount of food consumed/dietary patterns of members of a family in a specified period (Baum, 2000).

vii. **Functional indicators**: These indicators for nutritional status are emerging as an important category of diagnostic tools and supporting the biochemical investigations. Some of the commonly used functional indices are for hemostasis and nerve conduction. Although these indicators are been used in different physiological components, they are time-consuming and expensive (Herder & Demmig-Adams, 2004).

2.4   Factors Affecting Nutritional Status

There are many factors affecting nutritional status, few are explained below to capture the objectives of this study.

i. **Socio-economic factor:** The financial and social class a parent stands determines their children's nutrition status. A parent whose social standing is extremely low, will also have an adverse effect on the nutritional status of their wards due to economic instability (unemployment, lack of permanent jobs, low monthly income, etc) (Hardy, 2002).

ii. **Political Factor:** Local and international polities can affect nutritional status of children and the community in general. Most developing countries contract foreign exchange technological advancement which resulted in industrial, availability of white collar jobs and rural-urban migration carving a setback in food production (Moestue, et al, 2007).

iii. **Family Size:** A large family size puts a lot of economic and social burden on the head of the family i.e. the father, since his resources are often more limited than the numbers of people that he has and often, the result is that the children are often left for their mother. Also illiteracy and misplacement of priority can made a family to be have a poor budget for food or plan their menu rightly (Hardy, 2002).

iv. **Education Problem:** Ignorance or lack of knowledge of the parent about the nutritional requirement of their children and prevention of malnutrition on the physical and mental growth and development of the children may lead to poor nutritional status in children (Dietz, 2004).

v. **Occurrences of Natural Disasters:** Recurrent of persistent – natural disaster such as drought, flood, earth awakes in a country can drastically reduce the farming potential therefore resulting in less availability of food items (Crain, 2005).

vi. **Cultural belief on food:** The cultural belief of people can affect their perception about food, what should be eaten or forbidden, and how food is prepared. All these affect the health status of the people in that community. In some community, their culture forbid them eating some certain meat such as Snakes, Snails, Pigs, Cat, etc. and these are major available source of animal protein. The result is that people suffer in the midst of plenty (Moestue, et al, 2007).

vii. **Seasonal Variation:** Climate factors is a major determinant of nutritional status of a community. In Africa, food production occurs mainly in the raining season and during this period, food is always in abundance and cheap but as soon as the dry season approaches and harvesting is compiled, food crops become scarce and expensive in tropical and developing countries (Dietz, 2004).

3   METHODOLOGY

Two forms of research design were employed for this study which are: The Simple Questionnaire Survey and the Correlational Research Design. The Simple Questionnaire Survey allows the study to make decisions using the descriptive statistics in answering the research questions 1, 2 and 3, while the Correlational Research design allows us to explore the relationship between the adopted variables as stated in the research questions 4 and 5 of this study using statistical analysis. The study was conducted in the urban area of Orita Ojo in Odigbo Local Government Area in Ondo State. Orita Ojo is a major

community in Odigbo Local Government Area. It is partly surrounded with river and land. There are some communities like Ore town, Agbabu, Lafe, and Modebiayo around the community. There are social amenities like Basic Health Centre (BHC), Schools (both primary and secondary), Market, Electricity, Good Housing, Pipe-Borne Water, etc. Out of all the households having children ranging from the age of 0 – 12years of age in Orita Ojo in Odigbo Local Government Area, 60 households will be selected (i.e. 20 from 0-4years, 20 from 5-8years and 20 from 9-12years).

The Convenience Sampling Method was adopted to enable the population have an equal representation. This method has the advantage of not being biased. The instrument used for the data collection was a structural questionnaire which was drawn by the researcher. The questionnaire research instrument can be grouped as a primary source of data. The questionnaire were personally administered to the sixty (60) respondents by hand and also, personal interviews were conducted in Orita Ojo in Odigbo Local Government Area by the researcher. The questionnaire were collected by hand immediately after responses have been provided. The collected data was analyzed using the Simple Frequency Percentage Tables in order to identify each response, understanding predicting the behaviour reaction and desire of the study population which enabled the researcher to proffer answers the research questions 1, 2 and 3. Also, for research questions 4 and 5 which can be seen in the hypotheses, the 5 point Likert Scale of Strongly Agree (SA), Agree (AG), Neutral (N), Disagree (DA) and Strongly Disagree (SD) was used and Chi-Square Analysis was adopted since it enables a study to examine the relationship between two variables (Nutritional Assessment, Growth and Social-economic Status). The Chi-Square is denoted by the Greek alphabet **"X²"**,

Chi-Square formulae: $X^2 = \Sigma \dfrac{(Oi - Ei)^2}{Ei}$

Where X^2 = Chi-Square calculated figure, Σ = Summation, Oi = Observed Frequency and Ei = Expected Frequency) at 1% level of significance with 0.05 degree of freedom will be used to test the stated hypotheses and tabulated benchmark for Chi-Square (Chi-Square Distribution Table – Probability Level – Alpha) will be used for decision rule. **Decision Rule of Chi-Square:** If the computed value is greater than (>) the tabulated value (alpha), we reject the null hypothesis and when the computed value is less than (<) the tabulated value (alpha), we accept the hypothesis. To measure the height of the children, a stadiometer was used. A stadiometer is a piece of medical equipment used for measuring human height. It is usually constructed out of a ruler and a sliding horizontal headpiece which is adjusted to rest on the top of the head. Stadiometers are used in routine medical examinations and also clinical tests, nutritional assessment -and experiments. For the weight measurement, the Measuring Scale will be used through the deflection of a spring mechanism and a beam balance. Body Mass Index (BMI) Formulae: Weight (kg)/Height (m²) where kg is a person's weight in kilograms and m² is their height in meters squared. According to the National Institutes of Health (NIH), a BMI of less than 18.5 means that a person is underweight, a BMI of between 18.5 and 24.9 is ideal, and a BMI of between 25 and 29.9 is overweight.

4   DATA ANALYSIS AND DISCUSSION OF FINDINGS

Table 4.1. Simple Frequency Percentage Table of Nutritional Assessment
Nutritional Status of the Children

RESEARCH QUESTIONS	FREQUENCY		PERCENTAGE (%)	
	YES	NO	YES	NO
Does the height of the child, corresponds to the age?	48	12	80	20
Is the Weight of the child in line with the age bracket?	33	27	55	45
Does the Body Mass Index (BMI) of the child corresponds to the age?	37	23	61.7	38.3

Source: Researcher's Questionnaire, 2020

In Table 4.1 above, the percentage of children's height that corresponds to their age is 80% while the remaining 20% does not corresponds to their age; 55% of the children's weight under study corresponds to their age while the remaining 45% of the children's weight does not correspond. Lastly 67% of the children's Body Mass Index (BMI) is in line with their age while the remaining 38.3 of the% children's BMI does not corresponds to their age.

This shows that to all the questions asked regarding Nutritional Status of the children, "YES" has the highest frequency, which means that the nutritional status of the children in Orita Ojo in Odigbo Local Government Area of Ondo State is **FAIR.**

Table 4. 2. Simple Frequency Percentage Table on Dietary Behaviour of the Children
Dietary Behavior of the Children

RESEARCH QUESTIONS	FREQUENCY		PERCENTAGE (%)	
	YES	NO	YES	NO
Have you heard of the word Calories in food?	16	44	26.7	73.3
Do you have a roster that takes into consideration on the family intake of the various classes of food and nutrients?	9	51	15	85
If yes to question 1 above, do your family eat the needed calories per day?	6	54	10	90

Source: Researcher's Questionnaire, 2020

In Table 4.2 above, 26.7% respondents understands the word "Calories" in food while the remaining 73.3% respondents claimed to have heard of the word "calories"; for the second question, 15% of the respondents claimed that they have a roster that take into consideration, the family intake of the various classes of food and nutrients, and for the last question, 10% out of the total respondents believe that their children eat the needed calories per day while the 90% disagree.

This shows that to all the questions asked regarding dietary behaviour of the children, "NO" has the highest frequency, which means that the dietary behaviour of the children in Orita Ojo in Odigbo Local Government Area of Ondo State is **POOR**.

Table 4.3. Simple Frequency Percentage Table on Knowledge of Nutrition, Foods and their functions

RESEARCH QUESTIONS	FREQUENCY		PERCENTAGE (%)	
	YES	NO	YES	NO
Is protein a class of nutrient?	48	12	80	20
Do you know that Carbohydrate is one of the classes of nutrition?	53	7	88.3	11.7
Will you agree that Fat and Oil a nutritional element?	52	8	86.7	13.3
Is Mineral a class of nutrient needed in the body?	31	29	51.7	48.3
Do you know that Vitamins is a class of nutrient?	41	19	68.3	31.7
Is Water an example of an essential nutrients?	56	4	93.3	6.7
Is Meat one of the classes of proteineous food?	25	35	41.7	58.3
Are you aware that Rice is a carbohydrate food?	33	27	55	45
Are beans, mushroom and fruits rich in Minerals?	18	42	30	70
Do you agree that fried foods are rich in fat and oil?	30	30	50	50
Is fish and Banana rich in Vitamins?	28	32	46.7	53.3
Do you know if Cucumber and Oranges are rich in water?	37	23	61.7	38.3
Does food rich in protein provides blood in the body?	14	46	23.3	76.7
Is it the function of Fats and Oil to prevent dehydration?	11	49	18.3	81.7
Does foods rich in vitamins helps to boost the immune system?	18	42	30	70
Is Mineral important in the formation of the blood cells?	9	51	15	85
Does water helps in the removal of waste through urine and sweat?	53	7	88.3	11.7
Can Carbohydrate helps in the formation of energy?	42	18	70	30

Source: Researcher's Questionnaire, 2020

In Table 4.3, 80% respondents out of the total respondents asserted that protein a class of nutrient while 20% claimed that protein is not a class of nutrient; 88.3% respondents claimed that Carbohydrate is one of the classes of nutrition while 11.7% respondents believe it is not; 87.7% respondents claimed that Fat and Oil a nutritional element while 13.3% claimed it is not; 51.7% respondents agreed that Mineral is a class of nutrient needed in the body while 48.3% respondents said it is not needed; 68.3% respondents that Vitamins is a class of nutrient while 31.7% did not agree; 93.3% respondents believe

that Water an example of an essential nutrients while 6.7% respondents did not agree; 41.7% respondents agree that Meat is one of the classes of proteineous food while 58.3% disagreed.

55% are you aware that Rice is a carbohydrate food while 45% did not agree; 30% respondents believe that beans, mushroom and fruits are rich in Minerals while 70% did not believe; 50% respondents agreed that fried foods are rich in fat and oil while the other 50% respondents disagreed; 46.7% respondents claimed that fish and Banana are rich in Vitamins while 53.3% respondents did not; 3761.7% of the total respondents agree that Cucumber and Oranges are rich in water while the remaining 38.3% disagreed that Cucumber and Oranges are rich in water; 23.3% respondents asserted that food rich in protein provides blood in the body while 76.7% respondents disagreed; 18.3% respondents claimed that it is the function of Fats and Oil to prevent dehydration while 81.7% respondents disagreed; 30% respondents believe that foods rich in vitamins helps to boost the immune system while 70% out of the total respondents did not believe;

15% respondents claimed that Mineral is important in the formation of the blood cells while 85% did not believe, 88.3% respondents asserted that water helps in the removal of waste through urine and sweat but 11.7% disagreed and 70% respondents claimed that Carbohydrate helps in the formation of energy but 30% disagreed.

This shows that regarding the knowledge of nutrition from the parents, **"YES"** has the highest frequency which means the parents have the knowledge of Nutrition but the knowledge is not complete because the difference between the **"YES"** and **"NO"** frequency is not high. However. regarding the knowledge of foods and their functions, **"NO"** has the highest frequency, which means that parents Knowledge of foods and their functions in Orita Ojo in Odigbo Local Government Area of Ondo State is **POOR**.

4.1   Test of Hypotheses
Table 4.4. Hypothesis 1 Frequency and Percentage

	RESPONDENT									
RESEARCH QUESTIONS	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	F	%	F	%	F	%	F	%	F	%
Have you experienced any growth in your child for the past 4years?	10	16.6	46	76.7	3	5	1	1.7	0	0
Has the growth in your child been stable for the past 4years?	5	8.3	43	71.7	5	8.3	7	11.7	0	0

Source: Researcher's Questionnaire, 2020

Table 4.4 shows the frequency and percentage distribution on Nutritional Status and Growth of Children. 16.6% respondents strongly agreed that they have experienced growth in their child for the past 4years; 76.7% respondents agreed, 5% respondents were neutral because they were not really sure, 0% respondent disagree while no respondents disagreed. This shows that majority of the parents agreed that they have experienced growth in their child for the past 4years?

To know if the growth in their children have been stable for the past 4years, 8.3% respondents strongly agreed, 71.7% respondents disagreed, 8.3% were neutral, 11.7% disagreed while 0% of the respondents strongly agreed.

Table 4.5. Test of Hypothesis 1 - Relationship between Nutritional Status and Child's Growth

Category	Observed (Oi)	Expected (Ei)	Oi – Ei	$(Oi – Ei)^2$	$\frac{(Oi – Ei)^2}{Ei}$
SA	10	12	-2	4	0.3333
A	46	12	34	1156	96.33
N	3	12	-9	81	6.75
D	1	12	-11	121	10.08
SD	0	12	-12	144	12
Σ	60	60	0	1506	125.493

Source: Researcher's design, computation and analysis, 2020
Note: Level of significance: 1%, Degree of Freedom: 0.05

Chi-square formulae: $X^2 = \Sigma \frac{(Oi – Ei)^2}{Ei}$

Table 4.5 test the relationship between Nutritional Status and Child's Growth. The computed value is 125.493 while the tabulated value (alpha) is 9.488 which means that the computed value is greater than the tabulated value (alpha).

Decision Rule: If the computed value is greater than (>) the tabulated value (alpha), we reject the null hypothesis and when the computed value is less than (<) the tabulated value (alpha), we accept the hypothesis. Therefore, hypothesis 1 (null) will be rejected because the computed value is greater than the tabulated value (alpha); the alternate hypothesis will be accepted which means that there is a relationship between nutritional status and growth of children in Orita Ojo in Odigbo Local Government Area.

Table 4.6. Hypothesis 2 Frequency and Percentage

					RESPONDENT					
RESEARCH QUESTIONS	**Strongly Agree**		**Agree**		**Neutral**		**Disagree**		**Strongly Disagree**	
	F	%	F	%	F	%	F	%	F	%
Does your income monthly fails within the range of ₦50,000 – ₦100,000	8	13.3	22	36.7	1	1.7	29	48.3	0	0
Do you successfully feed your family within a month with your salary?	11	18.3	17	28.3	7	11.7	25	41.7	0	0

Source: Researcher's Questionnaire, 2020

Table 4.6 shows the responses on Nutritional Status and Social-economy of Parents. 13.3% respondents strongly agreed that their monthly income falls within the range of ₦50,000 – ₦100,000; 36.7% respondents agreed, 1.7% respondents was neutral because he has other businesses that bring in money weekly, 48.3 respondents disagreed while 0% respondents strongly disagreed.

To know if the parents successfully feed their family within a month with their income, 18.3% respondents strongly agreed, 28.3% respondents disagreed, 11.7% respondents were neutral, 41.7% disagreed while 0% of the respondents strongly disagreed.

Table 4.7. Test of Hypothesis 2 - Relationship between Nutritional Status and Social-economy Status of Parents

Category	Observed (Oi)	Expected (Ei)	Oi – Ei	$(Oi - Ei)^2$	$\dfrac{(Oi - Ei)^2}{Ei}$
SA	11	12	-1	1	0.0833
A	17	12	5	25	2.0833
N	7	12	-5	25	2.0833
D	25	12	13	156	13
SD	0	12	-12	144	12
Σ	60	60	0	351	29.2499

Source: Researcher's design, computation and analysis, 2020
Note: Level of significance: 1%, Degree of Freedom: 0.05

Chi-square formulae: $X^2 = \dfrac{\Sigma(Oi - Ei)^2}{Ei}$

Table 4.7 test the relationship between Nutritional Status and Social-economy Status of Parents. The computed value is 29.2499 while the tabulated value is 18.48 which means that the computed value is greater than the tabulated value (alpha).

Decision Rule: If the computed value is greater than (>) the tabulated value (alpha), we reject the hypothesis and when the computed value is less than (<) the tabulated value (alpha), we accept the hypothesis. Therefore, hypothesis 2 (null) will be rejected because the computed value is greater than the tabulated value; the alternate hypothesis will be accepted which means that there is a relationship between the children's nutritional status and the social-economy status of the parents in Orita Ojo in Odigbo Local Government Area.

4.2 DISCUSSION OF FINDINGS

After the questionnaire were duly validated and distributed, the responses of the respondents were retrieved. No questionnaire was found invalid. We then analysed the responses on the questionnaire in order to answer the research questions. The frequency and percentage table were used to analyse the research questions 1, 2 and 3 while Chi-Square was adopted to answer the questions 4 and 5 which are the hypotheses of this study.

The result for the first research question indicate that the nutritional status of the children in Orita Ojo in Odigbo Local Government Area of Ondo State is fair; for the second research question, the result indicate that dietary behaviour of the children in Orita Ojo in Odigbo Local Government Area of Ondo State is poor; for the third research question, the result indicate that the parents have the knowledge of Nutrition but the knowledge is not complete because the frequencies difference is not high, however, regarding the knowledge of foods and their functions, parents knowledge of foods and their functions in Orita Ojo in Odigbo Local Government Area of Ondo State is poor.

For the fourth research question which represents the first hypothesis, there exist a relationship between nutritional status and growth of children in Orita Ojo in Odigbo Local Government Area which denote that an increase in the nutritional status of the children will have a positive impact on their growth while a decrease in the nutritional status will negatively impact the children's growth. Lastly, the result of the fifth research questions which represents the second hypothesis show there exist a relationship between the children nutritional status and the social-economy status of the parents in Orita Ojo in Odigbo Local Government Area which denote that an increase in the social-economy status of the

parents will have a positive impact on the children's nutritional status while a decrease in the social-economy status will negatively impact the children's nutritional status.

5.   CONCLUSION AND RECOMMENDATIONS

This research has so far been able to assess financial effect on nutritional assessment on children between 0-12 years in Orita Ojo, in Odigbo Local Government Area. With this study, it is now known that on the average and generally, nutritional assessment in Orita Ojo in Odigbo Local Government Area is poor.

The study further concludes that the components of nutrition considered in this research are important in determining children's growth and one of the social-economy variables (Salary/Income) is seen to be able in determining the nutritional status of the children in Orita Ojo in Odigbo Local Government Area.

5.1.   RECOMMENDATIONS

Based on the findings, the following recommendations were presented:

i.   The study recommends that the community health practitioners/workers should on a weekly basis sensitize the general public on food, its classes and functions, dietary, nutrition and the effect of a child not taking the needed nutrients in the body system.

ii.   Parents should leverage on other source of income and not just one stream because the study found a positive relationship between the parent's social-economy status and the children's nutritional status.

iii.   The health workers should be empowered to provide effective feeding counseling services to parents within the Clinics and Hospital's settings.

iv.   Further resources should be carried out in a large scale to include more age range in order to give a broader view of the nutritional status on children, teenagers and adult.

v.   Nutritional rehabilitation clinic should be available for under nourished children with competent health professional to teach parents on the important of good nutrition and of locally available food products in the right proportion and combination.

vi.   There should be collaborations between the Dieticians and the Community Health Workers on nutritional matters.

vii.   Parents should be encouraged to have a little garden with essential fruits and vegetables around their compound.

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