PERCEPTION OF MOTHERS OF PRIMARY SCHOOL CHILDREN ON MALNUTRITION IN YABA LOCAL GOVERNMENT AREA OF LAGOS STATE

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ABSTRACT

This study examined the perception of mothers of primary school children on malnutrition in Yaba Local Government Area of Lagos State. A community based descriptive cross-sectional study was employed through quantitative techniques. The study investigated the causes and implications of malnutrition, as well as the consequences of specific micronutrients on the health status of primary school children. A proportionate sampling technique was used to select 100 mothers of primary school children (6-12yrs). Data collected using a validated structured questionnaire, were described using mean and standard deviation while the hypotheses were analyzed using ANOVA and Chi-square. Results revealed that poor maternal/nutritional knowledge, poverty, food insecurity and poor living condition among others were the causes of malnutrition among primary school children. The implications of malnutrition among primary school children include poor social skills, delayed physical growth and poor motor development, low intelligent quotient and poor immune system. The study also showed that the consequences of specific micronutrient deficiencies such as retinol, cyanocobalamin and ascorbic acid can cause detrimental effects on the nutritional and health status of primary school children and consequently, impact economic productivity. The ANOVA test showed a statistically significant difference in the means of mothers' demographic characteristics on their perception of malnutrition among children (P< 0.05). Also, the Chi-square test showed a statistically significant association between mothers' demographic characteristics and their perception of malnutrition among young children (P< 0.05). The study recommends that primary school children should be assisted to making healthy food choices both in school and at home.

Keywords: Perception, mothers, primary school children, malnutrition

INTRODUCTION

Adequate nutrition is essential for the day-to-day activities of individuals including young children. Nutrition is the intake of food, considered in relation to the body's dietary needs (WHO, 2012). Malnutrition is the lack of sufficient quantity or quality of nutrient to maintain the body system at some definable level of functioning (WHO, 2012). Good nutrition and well-balanced diet combined with regular physical activity is a cornerstone for good health. Children are more prone to suffer from nutritional deficiencies and problems. Poor nutrition can lead to reduced immunity, increased susceptibility to disease, impaired physical and mental development, and reduced productivity (WHO, 2012). Malnutrition results from a poor diet or a lack of food, and occurs when the intake of energy is too low, too high or poorly balanced (UNFAO, 2012). Malnutrition increases an individual's susceptibility to disease(s) by attacking the immune system, which increases vulnerability to infectious diseases such as Tuberculosis, HIV, and hepatitis C. (Semba, Cegielski &McMurray, 2014). According to WHO, malnutrition is the gravest single threat to global public health. Globally, it has contributed to 45% of deaths of young children (WHO, 2013).

Mothers have been shown to be the most predominant care-givers of children. Their social, economic, and psychological characteristics influence the quality of care they are able to provide, and the number of initiatives they apply to problem solving. A mother is the principal provider of the primary care that her child needs during the first six years of its life. They are also likely to be more assertive and play a greater part in intra-family decision making in favor of their children's needs. Mothers who have good knowledge of nutrition are likely to provide their children with adequate nutrition. Malnourished children experience developmental delay, weight loss and illness as a result of inadequate intake of protein, calories and other nutrients (Ananya, 2015). School aged children may experience one or several of macronutrient or micronutrient deficiencies which puts them at risk of varieties of implications which may be short term or long term. Other symptoms of malnutrition include breathing difficulties, higher risk of hypothermia, weight loss and higher susceptibility to diseases. The risk factors for malnutrition include larger family size, maternal literacy, low monthly income among more.

Many people particularly children associate food with pleasure, often forgetting daily nutritive requirements. Fast foods, sugar sodas, and foods rich in fat and carbohydrates become the preferred foods of primary school children. Over consumption of energy dense foods can lead to obesity in children and adults, which will in turn lead to high risks of developing certain illnesses such as high cholesterol level, growth problems due to excess weight, and other forms of malnutrition. The Institute for Dietetics, Nigeria (2018) asserted that the record of acute malnutrition is still high in some of the local government areas in Lagos state. Lagos State has recorded an alarming figure for childhood death resulting from malnutrition. This is of public health concern. Hence, the need to examine the knowledge of mothers on malnutrition becomes crucial since nutrition is one of the major factors that determine health and mothers are the principal determinants of the children's nutrition.

Research Questions

The following research questions were formulated to guide the study:

1. What is the knowledge of mothers on causes of malnutrition among primary school children?
2. What is the mothers' perception on implications of malnutrition among primary school children?
3. What are the consequences of specific micronutrient deficiencies among primary school children?

Hypotheses

H_{O1}: There is no significant difference in the responses of mothers' perception of malnutrition based on their demographic characteristics.

H_{o2}: There is no significant association between mothers' demographic characteristics and their perception of malnutrition among young children.

METHODOLOGY

This study adopted the descriptive survey research design**.** The study was carried out in two primary schools in Yaba local government area of Lagos State, Nigeria. The schools were purposefully selected for the study because they have a high population of mothers bringing their children to school. The estimated population for this study comprised 500 parents (mothers) of pupils in Yabatech primary school (Government owned school) and Mbari-Mbayo primary school (Private school). The population distributions are 200 mothers in Yabatech primary school and 300 mothers in Mbari-Mbayo primary school (The summary of population and sample for the study is shown in Table I). Proportionate sampling was used to determine the sample size for the study. The sample size for the study comprised one hundred (100) mothers who have children between the ages of 6-12 in the two selected schools in Yaba local government area of Lagos state.

Information on demographic and nutrition related practices of school-aged children were obtained from mothers using a structured questionnaire. The questionnaire contained two sections. Section A elicited information on the socio demographic characteristics of mothers such as; age of mothers, marital status, educational qualification, employment status, income and number of children. Section B elicited information on mothers' perception of the causes and implications of malnutrition on young children as well as the consequences of specific micro-nutrient deficiencies among school-aged children. The questionnaire was administered to the participants in each of the schools. The exercise lasted for two weeks. Explanations were made to the participants where necessary for clarifications on instrument.

The research questions were answered using mean and standard deviation while the hypotheses were analyzed using ANOVA and Chi-square. The decision rule for mean is 2.50. Items with mean values of 2.50 and above were regarded as accepted while items that scored below 2.50 were regarded as not accepted.

Table I: Population and Sample Distribution for the Study

S/N	School	Population	Sample (20%)
1	Mbari-Mbayo Private School, Jibowu, Yaba	300	60
2	Yabatech Secondary School	200	40
	Total	500	100

Source: School Records Unit, 2019

Table I showed the population and sample distribution of the study. Sixty percent (60%) of the sample was drawn from Mbari-Mbayo private school while the remaining 40% was drawn from Yabatech secondary school.

RESULTS

Table II: Demographic Characteristics of the Participants (N=100)

Characteristics	%
Age (yrs.)	
20-30	49
31 – 40	38
41 – 50	13
51 and above	-
Marital Status	
Married	85
Divorced	6
Widowed	9
Educational Level	
Primary	2
Secondary	26
Tertiary	72
Employment Status	
Working	76
Full Housewife	24
Monthly Income (₦)	
Less than 50,000	17
50,000 – 100,000	48
Above 100,000	35

Data in Table II showed that majority (49%) of the mothers were between ages 20-30 years. Eighty-five (85%) of the mothers are married; 72% had tertiary education; 76% are working; 35% of the mothers earn above N100, 000 while 48% of the mothers earn between N50,000 to N100,000 as monthly income.

Research Question 1: What are the causes of malnutrition among primary school children?

Table III: Causes of Malnutrition among Primary School Children

S/N	Causes of malnutrition among primary school children	M	SD	Decision
1	Poor maternal education/nutrition knowledge	3.14	0.65	Agreed
2	Poverty	3.25	1.00	Agreed
3	Diseases and illness	2.92	1.05	Agreed
4	Poor hygiene and sanitation	1.88	1.94	Disagreed
5	Unsafe water	3.20	1.00	Agreed
6	Poor living condition	2.92	1.05	Agreed
7	Inadequate breast feeding	3.12	0.84	Agreed
8	Food insecurity in the family	2.93	1.05	Agreed
9	Consumption of inadequate diet	3.29	1.00	Agreed

Table III showed the causes of malnutrition among primary school children. All the items were accepted as causes of malnutrition among primary school children with a mean range of 2.92 to 3.14 except item 4 (poor hygiene and sanitation) which had a mean rating of 1.88. This indicated that majority of the mothers know the causes of malnutrition among primary school children.

Research Question 2: What are the implications of malnutrition among primary school children?

Table IV: Implications of Malnutrition among Primary School Children

S/N	Implications of malnutrition among primary school children	M	SD	Decision
1	Delay in physical growth and motor development	3.26	1.00	Agreed
2	Low intelligent quotient	2.96	1.12	Agreed
3	Behavioral problem	2.05	1.97	Disagreed
4	Poor social skills	2.92	1.05	Agreed
5	Susceptibility to infectious diseases	3.12	1.73	Agreed
6	Reduced ability to fight infections	3.21	0.91	Agreed
7	Impaired temperature regulation which can lead to	2.50	1.06	Agreed

	hypothermic			
8	Rickets	2.05	1.97	Disagreed
9	Reduced muscle mass and strength	3.43	0.60	Agreed
10	Delayed sexual development	3.17	1.09	Agreed
11	Growth failure and stunting	2.94	0.55	Agreed
12	Increased lifetime risk of osteoporosis	2.50	1.06	Agreed

The data presented in Table IV showed the implications of malnutrition among primary school children. Given the mid-point of 2.50, the respondents agreed with most of the items with the exception of items 3 and 8 with mean values below 2.50. This indicated that majority of the mothers know the implications of malnutrition among young children.

Table V: Consequences of Specific Micronutrient Deficiencies among Primary School Children

S/N	Consequences of specific micronutrient deficiencies among primary school children	M	SD	Decision
1	Iron deficiency causes anemia	3.30	1.04	Agreed
2	Deficiency of vitamin A (Retinol) could lead to night blindness	2.24	1.81	Disagreed
3	Deficiency of vitamin C (Ascorbic acid) leads to scurvy	3.20	1.04	Agreed
4	Zinc deficiency causes skin rashes and decreased ability to fight infections	1.88	1.94	Disagreed
5	Deficiency of vitamin D causes rickets in children	3.14	0.65	Agreed
6	Deficiency of vitamin B12 causes anemia and nerves problem	2.94	1.35	Agreed
7	Deficiency of iodine can cause mental impairment	3.21	0.91	Agreed

The data presented in Table V revealed the consequences of specific micronutrient deficiencies among primary school children. Given the point of 2.50, the respondents agreed with most of the items with the exception of items 2 and 4 with mean values below 2.50. This indicated that majority of the mothers are aware of the consequences of specific micronutrient deficiencies among primary school children.

Hypotheses

H_{O1}: There is no significant difference in the responses of mothers' perception of malnutrition based on their demographic characteristics.

Table VI: ANOVA Analysis Showing Difference in the Means of Mothers' Demographic Characteristics on their Perception of Malnutrition among Children

Mothers' demographic data	Source	MS (DF)	F	P-value	Remark
Mothers' Age	Between Groups Within Groups	35.419 (2) .178(97)	198.831	<.001	Sig.
Mothers' marital status	Between Groups Within Groups	18.720 (2) .522(97)	35.831	<.001	Sig.
Mothers' educational level	Between Groups Within Groups	21.706 (2) .461(97)	47.096	<.001	Sig.
Mothers' monthly income	Between Groups Within Groups	36.303 (2) .160(97)	227.025	<.001	Sig.

Table VI revealed that there is a significant difference in the means of mothers' demographic characteristics on their perception of malnutrition among children since their respective p-values is less than 0.05.

H_{o2}: There is no significant association between mothers' demographic characteristics and their perception of malnutrition among young children.

Table VII: Association between Mothers' Demographics Characteristics and their Perception of Malnutrition among Children

	Response	Perception		Total	X^2 (R)	DF	Remark
		Good	Poor				
Mothers' Age	20-30 31-40 41-50	49 26 0	0 12 13	49 26 13	52.111(0 .688)	2	<0.001
Mothers' marital status	Married Divorced	75 0	10 6	85 6	47.205 (.725)	2	<0.001

	Widowed	0 9	9			
Mothers' educational level	Primary Secondary Tertiary	2 0 26 0 47 25	2 26 72	11.880 (0.359)	2	<0.001
Mothers' employment status	Work Full housewife	75 1 0 24	76 24	93.789 (0.973)	1	<0.001
Mothers' monthly income	< 50,000 50,000-100,000 > 100,000	17 0 48 0 10 25	17 48 35	45.507 (0.709)	 2	<0.001

Table VII showed that there is a significant association (P< 0.005) between mothers' demographic characteristics and their perception of malnutrition among young children.

DISCUSSION OF FINDINGS

This study examined the perception of mothers of primary school children on malnutrition. Findings from the study showed that poor maternal/ nutritional knowledge, poverty, food insecurity, poor living condition, unsafe water, diseases among more were identified as causes of malnutrition among primary school children. These implied that a number of factors could result to malnutrition. This is in agreement with the findings of Bhargava, Aggarwal, Kandpal & Semwal (2015) that several factors could cause malnutrition and these include food intake, infections, psychosocial deprivation, and insanitary environment as well as lack of good personal hygiene, social inequality and some genetic contributions. The findings from this study also corroborates the submissions of Mkhize and Sibanda (2020) that malnutrition among school children is caused by household food insecurity, low household income, illiterate caregivers, unemployment, inadequate dietary intake, low birth weight, consumption of monotonous diets, poor caregiver nutritional knowledge, poor access to water and sanitation, poor weaning practices, age of the caregiver and demographic characteristics of the child. In the same vein, Seshadri and Ramakrishna (2018) asserted that malnutrition among school children is caused by the socio-economic status of their parents/guardian which further influenced their social development.

Findings from the study showed that the implications of malnutrition among primary school children include poor social skills, delayed physical growth and poor motor development, low intelligent quotient, poor immune system and many more. School-age is a period of physical growth as well as mental development of the child. Serious and long-term consequences of malnutrition have been observed to impede motor, sensory, cognitive, social and emotional

development. As the malnourished child grow, he is less likely to perform well in school and more likely to become malnourished adults and are at greater risk of developing diseases and die early (Amoghan & Narayana, 2021). School-aged children spend more time away from their parents, thus, influence from friends and media further affect the formation and stabilization of their dietary practices. There is growing evidence suggesting that young children from developing countries are increasingly making unhealthy food choices especially due to lack of knowledge and wrong perception towards healthy foods which has led to the increasing rate of under nourished or over nourished children (Mirmira & Azadbakh, 2017). This could be attributed to the fact that the concept of 'food' has changed from a means of nourishment to a marker of lifestyle and a source of pleasure as portrayed by media. A large proportion of televised food advertisements are of highly processed foods/convenient foods with, high caloric content, large amounts of fat and sugar, and with little or no micronutrient content. School aged children have to be empowered to make the right food choices at the right time.

Findings from the study showed that the consequences of specific micronutrient deficiencies such as retinol, iodine, ascorbic acid, zinc and cyanocobalamine (Vitamin B12) can cause detrimental effects on the nutritional status of primary school children. Deficiency of Vitamin A reduces immunity and increases the incidence and gravity of infectious diseases resulting in increased school absenteeism. Child malnutrition may have adverse effect on economic productivity. Haddad and Bouis (2019) affirmed that the mental impairment caused by iodine deficiency is permanent and directly linked to loss of productivity. Iodine is critical for cerebral growth and development because it is required for the production of the thyroid hormones triodothyronin (T3) and thyroxine (T4). Long term and severe iodine deficiency causes cretinism and goiter. However, even at less severe stage, iodine deficiency can be responsible for lower cognitive performance, deaf mutism, or birth defects (Wardlaw & Smith, 2017). They further stressed that the loss from stunting is 1.38% reduced productivity for every 1% decrease in height while 1% reduced productivity is estimated for every source of iron status. Erickson (2016) asserted that, children need five food components to maintain cognitive capabilities. This component includes; protein, carbohydrates, vitamins, vegetables and, fats. Proper nutrition is critical to maximizing brain function and enhancing learning in school aged children; helping children develop healthful habits from a young age will aid them in reaching optimal potential (UNICEF, 2017).

The ANOVA test showed a significant difference ($p< 0.005$) in the means of mothers' demographic characteristics on their perception of malnutrition among young children. This implied that a mother's demographic characteristics such age, educational level, monthly income among more can influence her perception of malnutrition among young children. This corroborates Wordu (2014) who reported in his study that knowledge, attitude and practice of mothers on child nutrition were found to be influenced by socio-demographic factors such as level of educational attainment, family income, employment status, age and marital status.

The Chi-square test showed a statistically significant association ($p< 0.005$) between mothers' demographic characteristics and their perception of malnutrition among young children. This indicated that mother's age, monthly income and educational level could influence their perception of malnutrition. This relates the findings of Anas and Mujahid (2020) who reported a significant association between mothers' demographics (such as age, educational level, monthly income) and malnutrition.

CONCLUSION

The study concluded that the causes of malnutrition among young children are well known to the mothers. These include food insecurity, poor hygiene and sanitation, poverty, poor maternal nutritional knowledge, diseases and illness. Malnutrition results into behavioural problems, low intelligent quotient, susceptibility to diseases, poor social skills among primary school children. Deficiency of micronutrients could lead to reduced immunity, mental impairment and increases the incidence and gravity of infectious diseases resulting in increased school absenteeism. There was a significant difference in the means of mothers' demographic characteristics on their perception of malnutrition among children ($P< 0.05$).A statistically significant association ($P< 0.005$) existed between mothers' demographic characteristics and their perception of malnutrition among young children.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are proffered:

1. Children should be encouraged to make healthy food choices both in school and at home.
2. There is need for parents and schools to intensify frequent hand-washing practices among children
3. Parents should try as much as possible to prevent their children from deficiencies of micronutrients since they can cause permanent detrimental effects on the children.

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