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PARENTAL SOCIO-ECONOMIC STATUS AS A CORRELATE OF PUPILS' NUTRITION IN PUBLIC AND PRIVATE PRIMARY SCHOOLS IN OGBOMOSO, OYO STATE

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ABSTRACT

Nigeria, like other developing countries is undergoing demographic, epidemiological and nutritional transitions due to globalization and economic growth thus making urbanization and increasing income to have impact on health and well-being. Malnourished children are common in poor communities. The objectives of this study was to evaluate the socioeconomic status of parents of pupils in public and private primary schools and to examine the relative contribution of parents' socioeconomic status to the type of pupils' nutrition in public & private primary school in Ogbomoso North Local government area of Oyo State.

A nutritional survey was carried out using a self-developed structured questionnaire design in line with the variables to be measured. Closed ended questions were asked and the anthropometric measurements were taken. Two private and two public primary schools were selected in Ogbomoso North Local Government Area. All data were entered into the PASW 18. Frequency, Percentages, Pearson product moment correlation analysis and Independent Test were used to analyze all the data.

Socio-economic status of parents significantly influenced the health of their wards in public and private primary schools because the private primary schools have a mean score (M 4.54) which is significantly higher than the score of pupils from public schools (M 2.87). The study revealed that under nutrition is more with pupils from public schools.

The mean value indicate that the pupils from nuclear family take better nutrition because their mean score (M 4.72) is significantly higher than the score of pupils from polygamous family (M 3.37). Therefore socio–economic status of parents affects the nutritional status and health of the children. In conclusion, this study shows that malnutrition constituted major health problems among school children in Ogbomoso North Local Government Area, Nigeria. Continuing research is recommended to identify risk groups and monitor healthy growth and development of children of all socioeconomic classes.

Introduction

Proper nutrition is fundamental to the physical growth and mental development of a child, but in the developing countries, malnutrition is one of the major health problems among children in primary schools. Malnutrition is still highly prevalent in developing countries and school children may be at high nutritional risk[1]. Despite the economic growth observed in developing countries, malnutrition and particularly under nutrition is still highly prevalent which contributes directly or indirectly to more

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than 60% of 10 million child deaths each year in the developing world, 43% of the children are stunted and 9% are wasted[1,2]. Iquo Ukoh, a Nestle Director, during a presentation of Healthy Kids, said that a recent research by her company showed that only 40% of Nigerian children have normal nutritional status while 23% have good knowledge about nutrition despite nutrition teaching in schools. She further stated that 44% of children in Nigeria have mild/moderate obesity while 16% are malnourished[8].

The nutritionists in the Nigerian Academy of Science said in the Guardian newspaper of 16th February, 2012 that nutrition can play a role to check security situation. They further stated that malnutrition plays a role in more than half of all children's death in Nigeria, may lead to low IQ and later antisocial behavior in developing countries. Undernutrition is highly prevalent and is the most important cause of growth retardation in children. This may be primarily due to inadequate food intake or secondary to infection, injury, or disease[10].

The nutritional status of a child depends largely on the quantity and quality of food available in the family, purchasing power of the household which would determine the accessibility to food, and the distribution of food within the household. The socioeconomic status of parents can affect the nutritional intake of school pupils, because children from low socio-economic status are likely to have shortfall in food intake and poor feeding services which in turn may lead to micronutrient deficiencies causing serious morbidity. Urbanization and increasing income have a great impact on health and well-being[3]. Malnourished children are common in poor communities and this is often caused by family size, occupation of parents and educational status of parents, resulting in depleted nutrients such as fall in animal protein, riboflavin and other nutrients intake indicating that some children were consuming exceptionally lesser than the calculated recommended daily intake (RDI). Nutrition stunting can also be caused by other factors such as environmental factors and medical conditions, like severe asthma, heart disease, renal and gastrointestinal disease and growth hormone deficiency, or may be genetically determined[3]. Inadequate nutrition can lead to poor growth which is a commonly used criterion of nutritional status in children[4]. Bradley and Corwyn[5] stated that socio economic status has effect on the wellbeing of Children and poverty forces emphasis on the cheapest staple foods which may lead to monotonous diet, that can result in a restriction of food intake, leading to energy deficiency[4]

Knowledge, level of education and cultural values of parents with regards to nutrition may contribute to the type of diet given to their wards. This implies an increase in carbohydrates and low protein, mineral and vitamin intake. This further necessitate the study of parental socioeconomic status as a correlate of pupils' nutrition in public and private primary schools.

Objectives

The objectives of this study are:

1. To evaluate the socioeconomic status of parents of pupils in public and private primary school.
2. To examine the relative contribution of parents' socioeconomic status to the type of pupils' nutrition in public & private primary school.

Hypotheses

1. Socio-economic status of parents does not significantly influence the health of their wards in public & private primary schools

2. Socio- economic status of parents does not significantly influence the nutrition of their wards in public & private primary schools

3. There is no significant relationship between family size and nutrition of pupils in public & private primary school

Methodology

Study population

A survey in which nutritional status of children with ages between six and twelve years was explored. This took place between April and May 2011. Two public primary schools (Answ Sarudeen School (ADS) 168 pupils and Masifa 114 pupils) and two private primary schools (Aduke Goodness and Mercy 168 pupils, Ladoke Akintola University of Technology (LAUTECH), 202 pupils) were selected in Ogbomoso North Local Government Area. All boys and girls in the first, third and sixth years classes participated in the study except in LAUTECH nursery primary school where the highest class was primary 5. The sample size for this study was five hundred and eighty–two pupils, three hundred from private schools (51.4%) while two hundred and eighty-two were from public primary schools (48.5%). The sample selection was purposive. The selected schools were visited and permission was sought from the headmaster and headmistress. All the boys and girls in primary 1, 3 and 6 were invited in each of the schools and the objectives and methods of the study were explained in the manner the pupils will understand.

Instrument

The research instrument for this study was self-developed structured questionnaire design in line with the variables to be measured. The questionnaire had two parts. Part 1 contain the questions and Part 11 is the anthropometric measures, Part 1 has two sections, section A was the demographic information of the respondents and section B sought information about the variables selected for study. Closed ended questions were asked and the responses were categorized into four parts. Experts were given the questionnaire for face validation while the reliability was determined through A test-re–test method and the result yielded an $r = 0.95$.

Data collection

20 research assistants were trained to take all anthropometric measures. The training was concluded with practice on pupils not participating in the research to allow for accuracy and expertise. The authors ensured consistency and accuracy of instruments.

In each group, three trained researchers took the measurements, and another recorded the results. Afterwards, the data were checked for inconsistencies, if found, the child was measured a second time. Children were weighed on a bathroom scale with their school uniform on, without shoes and sweater, and after removal of heavy objects from their pockets. Weight was recorded to the nearest 0.45 kg. The scale was calibrated each morning before starting the measurements. Standing height was obtained by measuring the child without shoes, using a centimetre tape vertically affixed to the wall. Subjects stood on a flat surface, with their heels, buttocks, scapulae, and head against the wall and their arms hanging freely. Their head was

positioned in the Frankfort horizontal plane. A wooden headpiece was lowered until it touched the head of the child. Height was recorded to the nearest 0.5 cm.

Data Analysis

All data were entered into the PASW 18. Frequencies, Percentages, Pearson Product Moment Correlation Analysis and independent t test were used to analyze all the data.

Ethical Consideration

Permission was sought from the headmaster/headmistress of each school that participated in the study and this was granted. Dates were then given when the pupils can be available in each of the schools. The objectives and methods of the study was explained to the pupils that participated in the study.

Results

The subjects for this study are 582. 282 respondents were from public primary schools (143 males, 139 females) while 300 were from private primary schools (143 males, 147 females). The average age recorded in this study was 6 to 12 years.

The respondents in private schools came from the following families nuclear (251) polygamous (31), extended (5) while the respondents in public school, nuclear

TABLE 1 LEVEL OF EDUCATION OF PARENTS

level of Education	Private Primary School		Public Primary School	
	Father	Mother	Father	Mother
Masters and PhD	80 [27%]	34 [11%]	-	-
BSc	113 [38%]	66 [22%]	3[1%]	-
HNDs	66 [22%]	50 [17%]	10 [4%]	3 [1%]
NCE/NDs	21 [6%]	100 [33%]	29 [10%]	19 [7%]
Secondary Schools	20[7%]	40 [13%]	50 [18%]	80 [28%]
Primary School	-	12 [4%]	100 [35%]	90 [32%]
No certificate	-	2 [0%]	90 [32%]	90 [32%]

Table 1 shows the respondents fathers from private schools that had PhD and Master certificate are 27%(80), BSc 38% (113), HNDs 22% (66), NCEs/NDs 6% (21),Secondary school certificate 7% (20) and in the public schools, nobody had PhD and Master certificate, BSc certificates 1% (3) HNDs 4% (10) NCE/NDs 10% (29), Secondary school certificate 18%(50), Primary school certificate 35% (100), no certificate 32% (90). The mothers of respondents in private schools who had PhD and Master certificate are 11%(34), BSc 22% (66), HNDs 17%(50), NCE/NDs 33%(100), Secondary school certificate 13%(40) Primary school certificate 4%(12) no certificate 0%(2) and in public schools mothers' level of education recorded include HNDs 1% (3) NCE/NDs 7% (19) . Secondary school certificate 28% (80), Primary school certificate 32% (90) and no

THE SOCIO - ECONOMIC STATUS OF PARENTS IN PUBLIC & PRIVATE PRIMARY SCHOOL PUPILS,

TABLE 2: OCCUPATION OF PARENTS.

Type of Job	Private Primary School		Public Primary School	
	Father	Mother	Father	Mother
Civil servants	112 [37%]	94 [33%]	65[23%]	15 [5%]
Public servants	48 [16%]	40 [14%]	1 [0%]	2 [1%]
Business/traders	73 [24%]	116 [41%]	73[24%]	220[78%]
Pastors/Imams	2 [1%]	2 [1%]	13 [4%]	-
Artisans	54 [18%]	22 [8%]	83 [29%]	30 [11%]
Drivers	5 [2%]	-	50 [18%]	-
Jobless	5 [2%]	8 [3%]	10 [4%]	15 [5%]

Table 2 shows the fathers of respondents from private schools were 37% (112) civil servants, 16%(48)Public servants, 24% (73)business/traders, Pastors/Imams1%(2), artisans 18% (54) drivers 2%(5) and jobless2%(5). In public schools, the respondents' had fathers who were civil servants 23% (65) ,Public servants 0% (1) Pastors/Imams 4% (13),artisans 29%(83), business/traders 24% (73), drivers 18% (50) and jobless 4%(10). The mothers occupation of respondents in private schools were civil servants 33% (94), business/traders 41% (116), Public servants 14% (40), Pastors/Imams 1% (2) artisans 8% (22) Jobless 3% (8) and in public schools mothers' occupation recorded include civil servants 5% (15), Public servants 1% (2)business /traders 78% (220) artisans 11% (30) Jobless 5% (15).

TABLE 3: WHAT ARE THE TYPES OF FOOD YOU TAKE?

	ENERGY GIVING FOOD	BODY BUILDING FOODS	PROTECTIVE FOODS	TOTAL
Public school	96.6	1.7	1.7	100%
Private school	83.5	9.3	7.2	100%

Table 3 revealed that the predominant components of pupils' diet for breakfast, lunch and supper are foods rich in carbohydrates which is prevalent in both public and private schools. However, the pupils from private primary schools took more of body building and protective foods than pupils from public primary schools. The type of nutrition eaten were compared and the result showed that pupils in the public schools, took 96.6% of energy giving foods, 1.7% of body building foods and 1.7% of protective foods whereas pupils in private schools, took 83.5% of energy-giving foods, 9.3% of body building foods and 7.2% of protective foods. Therefore the diet composite of pupils in private schools are better than that of pupils in public schools. This may be as a result of the socioeconomic status of the parents. Findings revealed the prevalence of malnutrition with 87.9% of pupils in public primary schools and 77.7% in private primary schools. Survey showed that the nutrient intake of pupils in both public and private primary schools are lower than the recommended daily intake.(RDI) The prevalence in the intake of carbohydrates may be due to low socio economic status of the parent, or inadequate knowledge of the parents on the causes of malnutrition and food

Descriptives

TABLE 4 Height

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
ADS	168	124.35	15.422	1.190	122.00	126.70	97	160
ADUKE	98	127.06	11.662	1.178	124.72	129.40	100	156
LAUTECH	202	123.15	10.125	.712	121.75	124.56	103	151
MASIFA	114	125.00	11.580	1.085	122.85	127.15	106	162
Total	582	124.52	12.426	.515	123.51	125.53	97	162

Table 4 explained that the mean height of pupils in private primary schools (ADUKE& LAUTECH) were 127.06cm and 123.15cm respectively while those in public primary schools (ADS, MASIFA) were 124.35cm and 125cm The average height for all the respondents was 124.52cm and the WHO standard height for boys and girls with mean age of 9years old is 129.5cm.

TABLE 5: WEIGHT

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
ADS	168	25.47	7.140	.551	24.38	26.55	15	50
ADUKE	98	26.35	7.074	.715	24.93	27.77	17	45
LAUTECH	202	25.95	5.613	.395	25.17	26.73	16	48
MASIFA	114	25.13	7.075	.663	23.82	26.44	16	54
Total	582	25.72	6.619	.274	25.18	26.26	15	54

In table 5,the mean weight of pupils in private primary schools (ADUKE &LAUTECH) were 25.95kg and 26.35kg respectively while those in public primary schools (ADS, MASIFA) were 25.47kg and 25.13kg. The average weight for all the respondents was 25.72kg and the WHO standard weight for boys and girls with the mean age of 9years old is 27.6kg.
This shows prevalence of stunting of all the children.

Test For Hypothesis 1

TABLE 6 Result of independent t-test of parental socioeconomic status and the health of their wards in private and public schools

Variable	N	M	Sd	t-value	Sig.
Private schools	280	4.54	2.82	5.84	.000
Public schools	300	2.87	3.99		

Significant at 0.05 level, df = 579, critical t-value = 1.96s

The result presented in table 1 shows a mean value of 4.54 for pupils from private school and mean of 2.87 for pupils from public schools. The two groups yielded a t-value of 5.84 which is higher than the critical t-value of 1.96 at 0.05 level of significance with 579 degree of freedom.

With this result, the null hypothesis is rejected. Socio-economic status of parents significantly influence the health of their wards in public and private primary schools. The mean value indicate that the health of pupils from private school when scored have a mean (M 4.54) which is significantly higher than the score of pupils from public schools (M 2.87).

Hypothesis 2

TABLE 7: Result of Pearson product moment correlation of the relationship of Socioeconomic status of parents and the nutrition of their wards primary schools.

Variables	N	M	SD	Df	r-value
Socioeconomic status	579	3.68	1.34	579	0.68
Pupils nutrition	579	12.42	6.36		

**Significant at 0.05 level, df 579, critical r .195

The result in table 2 reveals that the calculated r- value of 0.68 is higher than the critical r- value of 195 at .05 level of significant with 579 degree of freedom, with this result, the null hypothesis, Socio-economic status of parents does not significantly influence the nutrition of their wards in public and private primary schools is rejected. This implies that Socio-economic status of parents significantly influence the nutrition of their wards in primary schools.

Hypothesis 3

TABLE 8: Result of independent t-test of influence of family size and nutrition of pupils in primary schools

Variable	N	M	Sd	t-value	Sig.
Nuclear family	134	4.72	3.31	3.89	.000
Polygamous family	444	3.37	4.08		

Significant at 0.05 level, df = 579, critical t-value = 1.96

The result presented in table 8 shows a mean value of 4.72 for pupils from nuclear family and a mean of 3.37 for pupils from polygamous family. The two groups yielded a t-value of 3.89 which is higher than the critical t-value of 1.96 at 0.05 level of significance with 579 degree of freedom. With this result, the null hypothesis is rejected. This means that there is significant relationship between family size and nutrition of pupils in primary schools. The mean value indicate that the pupils from nuclear family take better nutrition and their mean score (M 4.72) is significantly higher than the score of pupils from polygamous family (M 3.37).

Discussion

The aim of this study is to assess parental socioeconomic status as a correlates of pupils' nutrition in public and private primary schools in Ogbomoso North Local Government Area of Oyo State. The present study showed that the socio -economic status of parents in both public and private primary schools has great influence on the health of their wards and that of private schools is even higher. This may be due to the fact that many of the parents who had children in private schools had BSc and higher certificates and are either civil or public servants while majority of parents of pupils from public schools had secondary school certificates or below and are either

business men, drivers or artisans. The mean value indicate that the health of pupils from private school when scored have a mean (M 4.54) which is significantly higher than the score of pupils from public schools (M 2.87) This indicate that pupils in private primary schools have better health status than their counterparts in public primary schools. Our study corroborate with that of Daboné et al[1] which shows that pupils attending public schools were significantly more affected by micronutrient malnutrition than those of private schools and stunting was more frequent in public schools.

Secondly, this study revealed that socio-economic status of parents significantly influences the nutrition of their wards in primary schools. This is in contrast to the study of Benderd[4] which explained that the relationship between socio-economic class and nutritional status is not nearly as marked. Groeneveld et al[3] in agreement with this study, observed in their study that undernutrition is still in developing countries especially among people with low socioeconomic status and the levels of child stunting (low height for-age) were still relatively high (56%). Stunting they said may be a consequence of malnutrition. Addo[9] posited that the high prevalence of stunting in Nigerian children is an indication of long standing dietary deficiency.

Lastly, the findings of this study indicate that pupils from nuclear family had better nutrition at their mean score (M 4.54) which is significantly higher than the score of pupils from polygamous family which is in line with Benderd[4], who believed that food intake will depend on the number of siblings, family size and educational status of parents. This study is similar to the report of Mukherjee et al[2] who analyzing the prevalence of stunting, wasting and underweight as markers of undernutrition among children in Army school in Prune, India, found them to be present in 13.81%, 6.71% and 9.87% of children respectively. The studies of Groeneveld et. al[3] also supported this present study because family size showed statistically significant association with the three nutritional indices of stunting, wasting and underweight and further stated that neglect in the health and nutrition of pupils in primary schools will lead to poorly educated and unhealthy people which will have a devastating effect on the nation's economy, growth and development on the long run.

Ogbomoso is a university town, most of the indigenes engage in low income occupations therefore the socio economic status of most parents is low thus affecting the nutritional status of pupils both in public and private schools.

Conclusion

This study shows that socio–economic status of parents affects the nutritional status and health of the children. Malnutrition (underweight stunting) constituted major health problems among school children in Ogbomoso North Local Government Area. Nigeria. It is therefore pertinent that prevention of malnutrition should be given a high priority through school health programme.

Recommendation

Continuing research is recommended to identify risk groups and monitor growth and development of children of all socioeconomic classes. School based nutrition and health intervention programme will be helpful. Education of parents on healthy nutrition of their wards will help to prevent malnutrition.

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