

## Mothers' Socio-economic Background and Feeding Practices of Secondary Schools Students in Edo Central, Nigeria

Kate I. Odaman<sup>1</sup> and Odion M. Odaman<sup>2</sup>

<sup>1</sup>*State Universal Basic Education Board, Benin City, Edo State, Nigeria*  
*E-mail: dr\_odaman@yahoo.com; odion.odaman@uniben.edu*

<sup>2</sup>*Department of Sociology and Anthropology, Faculty of Social Sciences, University of Benin,  
Benin City, Nigeria*  
*E-mail: dr\_odaman@yahoo.com; odion.odaman@uniben.edu*

**KEYWORDS** Feeding Practices. Food Types. Nutrition Education. Balanced Diet

**ABSTRACT** This article is on the effects of mothers' socio-economic background on the feeding practices of the secondary school students in Edo Central Zone, Edo State, Nigeria. The independent variables were mothers' socio-economic status. Food practices were the independent variables and these comprised intake of meat/ other sources of proteins, fruits/vegetables, milk products, grain products, roots/tubers and fat-sweets and non-alcoholic. The proportionate sampling technique was adopted in selecting the nine secondary schools while a total of five hundred and eighty-nine (589) adolescent secondary school students were randomly selected for the study. Findings showed that majority of the secondary school students was at the risk of poor nutritional habit because the majority of the students did not take the adequate/balanced diet; that appropriate feeding practice for the secondary school students was more popular with older mothers than their younger counterparts; that the food types were associated with the religious denominations and education of mothers; and that mothers' income status had positive influence on the feeding practices of the children. Consequently, it was recommended, among others that parents, guardians, school authorities, the lay public and the secondary school students should be given sound nutrition education to prevent food prejudices that forbid eating what is available.

### INTRODUCTION

It has been suggested by Johannsen et al. (2006) that parents play a pivotal role in the development of their children's food preferences and energy intake. It has also been suggested by Carty (1995) and Shepherd and Dennison (1996) that adequate disposable income, sufficient agricultural production, sanitary foods, surroundings, a healthy life style and reasonable knowledge of nutrition are certain factors associated with good feeding practice. Yet, healthy adolescents have very big appetite. According to Shepherd and Dennison (1996), the challenges adolescents face in an attempt to satisfy their appetites include taste and quality, cost and health, nutrition knowledge of parents and peers.

Adequate feeding practices for adolescents in secondary schools must be supported by care, time, attention and skills of the parents, family and society. As noted by Dapi et al. (2005), eating behaviors that are learned early in life are maintained even in adulthood. Dapi et al. (2005) has also said that nutritional inadequacies influence not only adolescent's health but also the risk for major chronic diseases in adulthood. This is in addition to the poor growth of chil-

dren that have been associated with impaired mental development as well as poor scholastic or intellectual performance

Understanding the feeding practices of adolescents is a major step towards providing a guide or reference point in the implementation of the midday meal at school for the students. Consequently, the State Ministry of Basic Education, the National Primary Education Commission, the State Universal Basic Education Board (SUBEB), Local Government Education Authorities and Non-Governmental Organizations (NGOs) would find the result of this study useful. These bodies would have the basis for arguing the need for the implementation of providing midday meals in secondary schools in Edo State. Specifically, it would ensure that the Federal and State governments, as stakeholders of Education in Nigeria, pay their counterpart funding for the purpose of implementing the midday meal in schools. This would ensure that the midday meal becomes a reality. Accordingly, this article is separated into a number of sections. Section 1, starts with the introduction and includes the theoretical framework. Section 2 discusses methodology. Section 3, presents results and brings the discussion to a close with concluding remarks.

### **Objectives of the Study**

The objective of the study was to providing some basic information we needed on mothers' socio-economic background and feeding practices of adolescents in some secondary schools in Edo Central, Edo State, Nigeria. That is an exploration of the relationship or influence that background characteristics have on the feeding practices of the secondary school students. These included the extent to which mothers' age, religion/culture, education and income status have affected adolescents in the Secondary Schools intake of meat/other sources of protein, fruits/vegetables, grain products, milk products, roots and tubers, fats sweets no-alcoholic.

### **Theoretical Framework**

The theories adopted, in this article, were Demographism, Maslow's Hierarchy of Needs (1943), the Malthusian Theory (1798) and Psychoanalytic theory, otherwise, called the developmental approach. According to Ryder (1969), the sociological theory perspective that applies population or individual characteristics to the explanation of social reality is known as demographism. In this article on the secondary school students, mothers' age, religion, educational qualifications and income were applied to the understanding of the adolescents' feeding practices. This is typical of the subjective approach in analyzing social reality in the behavioral sciences. The subjective approach relates to man as the active participant in his environment. Coser and Rosenbenberg (1976) explained further that one must be able to understand the meaning that the actor attaches to his actions to fully understand his/her behavior. Adams and Sydie (2002) had also indicated that Max Weber, Talcott Parsons and George Herbert Mead were agreed on this social action and interaction approach.

Regarding Maslow (1943), the five specific needs in life that people seek to satisfy were identified in his Hierarchy of Needs Theory. These included physiological needs (comprising air, food, drink, shelter, warmth, sex and sleep), safety needs (protection, security, order, law, limits and stability), social needs (family, affection and relationships), self-esteem needs (achievement, status, responsibility and reputation) and self-actualization needs (personal growth and

self - fulfillment). Maslow's hierarchy of needs theory is important in the explanation of feeding practices of the secondary school students because food takes the center stage in the physiological requirement. The main principle in the hierarchy of needs theory is that it is when the first stage of needs (physiological requirement) is satisfied, that one aspires to get to the next hierarchy of needs. When people take good food they remain healthy, look good, knowledgeable and are able to achieve. The adolescents require good food to be healthy and secure from the elements or the weather.

With respect to the Malthusian Theory (1798), the relationship between population growth and means of subsistence was explained. According to Malthus (1798), population grows geometrically as against the increase in food that is arithmetical and when population is higher than the available food there would be hunger, diseases, vice and misery. Like the Maslow's hierarchy of needs theory, the Malthusian theory implies that food was necessary for human existence. In relation to feeding practices, and specifically for the secondary school students, nutritional inadequacies would influence not only their health but also the risk for major chronic diseases in adulthood. The psychoanalytic theory is on personality throughout the life span. Its underlying assumptions are that, at any point in time, personality is a result of its past history and that the acquisition of the past continues to play active role in the contemporary personality configuration. In other words, the eating behaviors of the secondary school students, and influenced by mothers' characteristics, that are maintained in adulthood.

### ***Mothers, the Secondary School Students and Feeding Practices***

The Secondary School Students (referred to as children in this article) are mainly adolescents and need to be assisted because adolescence is a comparatively new life stage as childhood. The adolescent is a person who is no longer a child and, at the same time, cannot be considered as an adult (Boyd et al. 2000). According to UNICEF (2012), adolescents are among the most vulnerable members of any community and would disproportionately suffer the negative effects of poverty and inequality. Yet the secondary school students are expected to achieve academically.

Feeding practices refer to the frequency of taking meals per day. The frequencies range from one to three meals per day. The appropriate method refers to that of a balanced diet. A balanced diet is one that comprises the six essential nutrients in adequate amount as required by the body (Onyebueke and Souzey 2003; Ukpore 2006). The nutrients are essential because they contain the various nourishing elements that are meant to preserve and promote good health (Anyakoha and Eluwa 1999). The six nutrients include protein, carbohydrates, fats and oil, minerals, vitamins and water.

The secondary school students have various influences/challenges in terms of feeding practices. These challenges are appetite, peer influence, home influence or earlier learnt eating habits (Onyebueke and Souzey 2003). Appetite is psychological and satisfying it, may deprive the body of the benefit of a well-balanced diet. For instance, the secondary school students prefer sweet foods, irrespective of their nutritional content (Ukpore 1988) the same way some people like fast and convenient food, in order to have more time for other activities (Leavenworth et al. (1988). As indicated by Ndungi (1988), for a normal feeding practice, adolescents should take meat/other sources of protein, at least, four to five servings, per week; fruits/vegetables, four or more servings daily; and grain products, four or more servings daily.

Parents play a powerful role in their children's eating behavior, development of preferences, and as models of eating behavior (Savage et al. 2007). Mothers' education, training and sound knowledge are important in feeding practices. Women, particularly, mothers generally involve in manual works including sowing, harvesting, husking and winnowing of the crops (Ahmed 1995). The conservation of fruits and vegetables, preparing the fields and watching over them are all tasks that women engage in. Apart from fetching water and fuel wood, the women tend livestock, rear children; and prepare food, stitch embroidery and other housework. These have a lot of consequences on the upbringing of children.

The women prefer energy/starchy foods that are relatively cheap and available in the environment to bodybuilding and protective foods. It is the eating of these starchy foods that are taught to the students, right from their infancy by parents. This often influences their feeding

practices. Education is associated with feeding habit because it affects the ability to embrace new foods and eating habits. This includes the methods of food preparation with special consideration given to conserving the food nutrients.

There are observations that the type and amount of food people eat are largely determined by economic factors especially the price of food as it relates to income (Akinrinade in Ukpore 2006; Bender and Smith 1997). As the living standard continues to rise, most people are observed to have changed from carbohydrates (rice and corn) to eating more of the protein food such as dairy products and meat (Pointing 1991). Abimbola (2006) confirmed that the feeding habit of the people was greatly influenced by income after examining the dietary nature of low-income earners in Epe Local Government Area of Lagos State.

Kajang et al. (2005) examined the factors militating against the health of students in Garram District Kanke Local Government Area of Plateau State and found that poverty, ignorance, malnutrition, childhood disease and traditional beliefs were the factors militating against the health of students. In other words, the students who grow up under such conditions of living had traces of life style influencing their patterns of feedings.

A child is taught to eat foods which the mothers like and which the mother had been taught to eat by her mother (Onyebueke and Souzey 2003). Women participate in commercial work force in much greater number in the developing countries (Ahmed 1995). The women thus, handle the majority of the domestic duties including childcare and food and their adolescent students cannot be separated when it comes to the issues of feeding practices because the mothers are the primary care givers and the child's first teacher.

Finally, there is the connection between culture/religion and feeding practice because some religions demand particular food customs (Onyebueke and Souzey 2002) and in Nigeria, the people are deeply religious (Ajayi 1983). In Obiakor (2006) opinion, such food customs could lead to some nutritional problems at adulthood; and food taboos have contributed too many nutritional problems that exist, worldwide. In her view, some of the traditional taboos can only be reversed through appropriate nutrition edu-

cation approaches. On parents' age and feeding practices, Kazetushi et al. (1996) observed among Japanese female high school students that older age would not inhibit eating practices. But in their Ilesha Osun State, Nigeria study, Ogunba and Adeyefa (2002) found that mothers' age was a significant factor in the choice of complimentary food for children. Therefore, how does the socio-economic background of the students contribute to what the secondary students eat and, at least, 7+ times, per week?

### METHOD OF STUDY

This article has its genesis on "Mothers' Socio-economic Background and Feeding Practices of Secondary Schools Students in Edo State, Nigeria" – a study by the lead author. Consequently, a total of five hundred and eighty-nine (589) public senior secondary school students constituted the sample size of this study. This was done by first collating all the public senior secondary schools in each of the local government area that make up the senatorial district. Proportionate sampling technique was employed to ensure that there was no bias in the selection of the research subjects from each of the local government area. Thereafter, simple random sampling was employed to determine those to get the questionnaire each from the various schools that were chosen (Table 1), showing the population size of the Local Government Areas in Edo Central and the estimated sample size of the respondents).

The research instrument comprised the questionnaire. Each questionnaire was made up of three sections A, B and C. Section A comprised 7 items on personal information about the respondents. Section B contained 6 items on the socio-economic profile of the respondents' mothers. Section C contained 17 items on the fre-

quency of food consumption (that is, the number of times particular foods are eaten in a week).

The researcher personally visited the nine (9) selected public senior secondary schools in Edo Central Zone/Senatorial District to administer the questionnaires. Depending on the number of students in that school, the ballot papers were prepared and marked yes for the required number of respondents per school. The students that picked "yes" were given a questionnaire each, while those who pick "no" were not given questionnaires. In this way, the respondents emerged in each of the schools. Sufficient time was allotted to enable them understand the contents and fill in the appropriate answers before the completed questionnaires were retrieved from them.

The Local Government Areas in Edo Central that represented Edo State, Nigeria in this study and their population sizes, according to the 2006 Population Census, were Esan Central (105,242), Esan North East (121,989), Esan South East (166,309), Esan West (127,718) and Igueben (70,276). The respective Local Governments Headquarters are Irrua, Uromi, Ubiaja, Ekpoma and Igueben.

Edo Central comprised more males (178,053) than females (172,445). It is the traditional abode of the Esan speaking people and received migrants from the entire State, the country and beyond. The high influx of youths has been on the account of the presence of Ambrose Alli University in Ekpoma, the Irrua Specialists Teaching Hospital, Bendel Feeds and Flour Mills, Ewu as well as the occupational activities at the headquarters. Apart from accommodating the local government secretariats, the High Court of Justice and General Post Offices, the towns have banking institutions, ministries, health, educational and Agricultural institutions and related Industrial establishments. Residents find employment in these organizations.

**Table 1: Population size of LGAs and the estimated sample size of respondents**

S. No.	Local Government Area	Population size of LGA	Population size of senior secondary school students		Respondents		Total
			Male	Female	Male	Female	
1.	Edo Central	105,242	559	1031	30	50	80
2.	Esan North East	121,989	777	854	40	40	82
3.	Esan South East	166,309	1285	2626	68	127	195
4.	Esan West	127,718	1216	1334	63	65	128
5.	Igueben	70,276	1132	938	59	45	104
	Total	591,539	4969	6783	262	327	589

Source: Field Survey, March to April, 2009



## RESULTS AND DISCUSSION

### Socio-Economic Characteristics of the Respondents

The secondary school students' age, sex, religion and schooling status were examined in the study. As presented, the bulk of the adolescents (67.9%) in the secondary schools were ages 15-19 years. This was followed by their counterparts' ages 10-14 years (23.4%) and 20-24 years (8.7%). On sex, data (Table 2) revealed that the females (55.5%) were in excess of the males (44.5%) among the respondents and this has suggested that the girl-child education was receiving a boost in this area. In terms of religious belief, 89% were Christians, 9.3% were Moslems while (1.7%) revealed that they were practicing African Traditional Religion (Table 2). Regarding educational qualification, the present class of respondents was categorized into SSS1, SSS2, and SSS3. 42.1%, 39.9% and 27.0% of the students were in SSS2, SSS3, and SSS1, respectively.

**Table 2: Socio-economic characteristics of the respondents**

Characteristics	Respondents	
	(N)	(%)
<i>(a) Age</i>		
10-14 years	138	23.4
15-19 years	400	67.9
20-24 years	51	8.7
<i>(b) Sex</i>		
Male	262	44.5
Female	327	55.5
<i>(c) Religion</i>		
Christianity	524	89.0
Islam	55	9.3
African traditional religion	10	1.7
<i>(d) Schooling Status</i>		
SSS1	159	27.0
SSS2	248	42.1
SSS3	182	30.9

Source: Field Survey, March to April, 2009

### Mothers' Socio-economic Characteristics and the Students' Intake of the Food Types

Mothers' age, religion, education and income were examined because these characteristics are very important in the care, time, attention and skills that parents require to provide adequate feeding practices for children. The food types were meat/other sources of proteins, fruits/veg-

etables, milk products, grain products, roots/tubers and fat-sweets and non-alcoholic because they contain the various nourishing elements that are meant to preserve and promote good health. The numbers that were consuming the food types, 1-3 times, 4-6 times and 7+ times, per week were sought with a view to appreciating mothers' provision of adequate feeding practices for children. Consequently, it was confirmed, that precisely 21.9%, 31.8% and 41.6% of the secondary school students had not had meat/other sources of proteins, fruits/vegetables, grain products respectively, 7+ times a week, as at the time of enquiry.

As for milk products, roots/tubers and fat-sweets and non-alcoholic, 51.8%, 53.0% and 56.0% of the secondary school students respectively had not had the food types, 7+ times a week. Such proportions were significant for a normal feeding practice, according to Ndungi (1988), adolescents should take meat/other sources of protein, at least, four to five servings, per week; fruits/vegetables, four or more servings daily; and grain products, four or more servings daily. For instance, as observed by Dapi et al. (2005), the accompany consequences of nutritional inadequacies are poor growth of children, impaired mental development and poor scholastic or intellectual performance. Therefore, majority of the secondary school students was at the risk of poor nutritional habit. This was because the majority of the students did not take the adequate/balanced diet. This could partly be explained by the fact that majority of mothers may not have had adequate knowledge of nutrition.

*Mothers' age* and the intake of the food types, 7+ times a week was examined first. Mothers' age is a significant factor in the choice of complimentary food for children. As in Table 3, mothers' age was categorized into: Young (less than 41 years), Middle age (41-50 years) and Elderly (51+ years). Data revealed that the children born to elderly mothers (82.8%) followed by those to middle age mothers (79.4%) and young mothers (75.5%) indicated they were provided with meat/ other sources of protein. The children of the elderly mothers (59.6%), young mothers (68.3%) and middle age mothers (72.3%) responded that they were served with fruits/vegetables. The children born to 60.3%, 58.6% and 57.0% of the middle age mothers,

**Table 3: Mothers' age and the students' in-take of the food types per week**

Food types	Mothers' age			Total	
	Young	Middle Age	Elderly	N	%
<i>Meat/ Protein Source</i>					
1-3 times	6.4	2.4	7.1	30	5.1
4-6 times	18.1	18.2	10.1	99	16.8
7+ times	75.5	79.4	82.8	460	78.1
Total N	281	209	99	589	
%	47.7	35.5	(16.8)	(100)	
<i>Fruit/Vegetables</i>					
1-3 times	9.3	4.4	9.1	44	7.5
4-6 times	68.3	23.4	31.3	143	24.3
7+ times	22.4	72.3	59.6	402	68.2
Total N	281	209	99	589	
%	47.7	35.5	16.8	(100)	
<i>Grain Products</i>					
1-3 times	12.1	10.5	10.1	66	11.2
4-6 times	30.9	29.2	31.3	179	30.4
7+ times	57.0	60.3	58.6	344	58.4
Total N	281	209	99	589	
%	47.7	35.5	16.8	100	
<i>Milk Products</i>					
1-3 times	19.2	19.1	18.2	112	19.0
4-6 times	33.8	36.4	22.2	193	32.8
7+ times	47.0	44.5	59.6	284	48.2
Total N	281	209	99	589	
%	47.7	35.5	16.8	(100)	
<i>Roots and Tubers</i>					
1-3 times	16.0	16.3	10.1	89	15.1
4-6 times	39.5	37.3	34.3	223	37.9
7+ times	44.5	46.4	55.6	277	47.0
Total N	281	209	99	589	
%	47.7	35.5	16.8	(100)	
<i>Fat-sweets and Non-alcoholic</i>					
1-3 times	31.3	27.8	30.4	176	29.9
4-6 times	34.2	36.8	40.4	213	36.1
7+ times	34.5	35.4	29.3	200	34.0
Total N	281	209	99	589	
%	47.7	35.5	16.8	100	

Source: Field Survey, March-April, 2009

elderly mothers and young mothers respectively indicated that they received servings of grain products.

With respect to the consumption of milk products, elderly mothers (59.6%), young mothers (47.0%) and middle age mothers (44.5%) were reported by their children to have provided them with the food type. Children of the elderly mothers (56.6%) followed by those of middle age mothers (46.4%) and young mothers (44.5%) showed that they received servings of roots and tubers, according to their responses. As for fat-sweet and non-alcoholic, lesser number of the elderly mothers (29.3%) than middle age mothers (35.4%) and young mothers (34.5%) provided the children with the food type

for, that is, according to the responses of the children).

A closer look at the data (Table 3) revealed that the secondary school students' intake of meat/protein sources and roots/tubers had a steady decline with *mothers' age*. The secondary students' intake of fruits/vegetables, grain products, roots/tubers and fat-sweets and non-alcoholic (except milk products) increased with mothers' age up to Middle age. That with mothers' age (specifically, ages < 41 and 41-50 years), the number of students provided with appropriate feeding practice (except for milk products) was on the decline is most worrisome. The reason is that, these are years/ages of mothers known for childbearing, rearing and care). These

**Table 4: Mothers' religion and the students' in-take of the food types per week**

Food types	Mothers' religion				Total	
	Catholic	Protestant	Moslem	ATR	N	%
<i>Meat/ Protein Source</i>						
1-3 times	3.3	9.0	12.0	10.0	42	7.1
4-6 times	17.4	15.3	10.0	20.0	92	15.6
7+ times	79.3	75.7	78.0	70.0	455	77.3
Total N	238	286	55	10	589	
%	(40.4)	(48.6)	(9.3)	(1.7)	(100)	
<i>Fruit/Vegetables</i>						
1-3 times	7.7	7.9	4.0	10.0	44	7.5
4-6 times	24.0	23.1	30.0	30.0	143	24.3
7+ times	68.3	69.0	66.0	60.0	402	68.2
Total N	238	286	55	10	589	
%	(40.4)	(48.6)	(9.3)	(1.7)	(100)	
<i>Grain Products</i>						
1-3 times	11.6	9.0	16.0	10.0	66	11.2
4-6 times	29.6	35.0	20.0	20.0	179	30.4
7+ times	58.8	56.0	64.0	70.0	344	58.4
Total N	238	286	55	10	589	
%	(40.4)	(48.6)	(9.3)	(1.7)	(100)	
<i>Milk Products</i>						
1-3 times	16.8	23.4	7.3	30.0	114	19.4
4-6 times	34.0	32.5	45.4	30.0	202	34.3
7+ times	49.2	44.1	47.3	40.0	273	46.3
Total N	238	286	55	10	589	
%	(40.4)	(48.6)	(9.3)	(1.7)	(100)	
<i>Roots and Tubers</i>						
1-3 times	14.3	18.2	18.2	10.0	97	16.5
4-6 times	34.9	42.7	61.8	10.0	240	40.7
7+ times	50.8	39.1	20.0	80.0	252	42.8
Total N	238	286	55	10	589	
%	(40.4)	(48.6)	(9.3)	(1.7)	(100)	
<i>Fat-sweets and Non-alcoholic</i>						
1-3 times	27.3	30.8	30.9	50.0	175	29.7
4-6 times	39.5	33.2	36.4	30.0	212	36.0
7+ times	33.2	36.0	32.7	20.0	202	34.3
Total N	238	286	55	10	589	
%	(40.4)	(48.6)	(9.3)	(1.7)	(100)	

Source: Field Survey, March-April, 2009

findings were significant because they buttressed Kazetushi et al. (1996) observation, among Japanese female high school students, that older age would not inhibit eating practices. The findings were also significant because they support Ogunba and Adeyefa (2002) observation that mothers' age was a significant factor in their choice of complimentary foods for children (except for fat-sweets and non-alcoholic foods). Therefore, nutrition education should be more emphatically embraced by the young mothers.

What was examined next was *mothers' religion* in relation to the secondary school students' feeding practices, that is, intake of the food types, 7+ times a week. Data, revealed that the children born to Catholic mothers (79.3%) followed

by those to Moslem mothers (77.0%) and Protestant mothers (75.5%) indicated that they were provided with meat/ other sources of protein (Table 4). The children of the Protestant mothers (69.0%), Catholic mothers (68.3%) and Moslem mothers (64.6%) responded that they were served with fruits/vegetables. The children from the Moslem mothers (64.6%) followed by those of the Catholic mothers (58.8%) and Protestant mothers (56.0%) indicated they were provided with grain products.

As for consumption of milk products, the children born to Catholic mothers (49.2%), Moslem mothers (46.3%) and Protestant mothers (44.1%) indicated being provided with the food product. Children of Catholic mothers

(50.8%) followed by those of Protestant mothers (46.4%) and young mothers (44.5%) received servings of roots and tubers, according to their responses. As for fat-sweet and non-alcoholic, 27.7% of Moslem mothers and slightly more Protestant mothers (36.0%) than Catholic mothers (33.2%) provided the children with the food type.

A closer look at the data revealed that more Catholic mothers than their counterparts in other religious denominations provided the children with meat/other sources of proteins, milk products and roots/tubers. More Protestant mothers, than their counterparts in other religious denominations provided their children with fruits/vegetables and fat-sweets and non-alcoholic. The Moslem mothers were in excess of their counterparts in other religious denominations in providing the children (secondary school students) with grain products. These findings on mothers' religion, food types and the feeding practices of the secondary school students are supportive of Ajayi (1983) observation that certain foods in Nigeria (just like holidays) were associated with religion. The findings are also supportive of Leavenworth et al. (1988) observation in the USA that in turkey, chocolates and barbecued meats were associated with thanksgiving, Valentine's Day and fourth-of-July picnics respectively.

With respect to *mothers' education* in relation to the secondary school students' feeding practices, that is, intake of the food types, 7+ times a week, mothers' educational background was categorized into Low (First School Leaving Certificate, FSLC), Medium (West African School Certificate, WASC) and High (NCE, ND, HND and University degrees). The findings, in Table 5, revealed that the children born to 80.0%, 77.7% and 76.2% of mothers with low, high and medium education, respectively indicated that they were provided with meat/ other sources of protein. Mothers with high, medium and low education comprising 71.5%, 70.7% and 63.2% respectively, provided their children with fruits/vegetables. Mothers (61.9%) with medium education and mothers (59.6%) with high education as well as their counterparts (70.7%) with low education provided their children with grain products. The children born to mothers (49.8%) with low education, mothers (49.2%) with high education and mothers (45.3%) with medium education provided their children with milk products.

The children born to 49.8%, 49.7% and 41.5% of mothers with low, medium and high education, respectively indicated that they were provided with roots and tubers. Finally, mothers (35.3%) with medium education and mothers (36.3%) with high education as well as their counterparts (30.7%) with low education provided their children (secondary school students) with fat-sweets and non-alcoholic.

A closer look at the data revealed that the secondary school students' intake of meat/other sources of proteins, fruits/vegetables and milk products increased slightly with mothers' education only as from the medium level. The consumption of roots and tubers by the secondary school students was inversely proportional to mothers' education. The secondary school students' intake of fats-sweets and non-alcoholic was directly proportional to mothers' education. This was in line with Seaman et al. (1997) observation, in spite of nutrition knowledge, students had preferred and consumed foods high in fat, sugar, salt, carbonated drinks, confectionery, chocolate and low fibre foods to fruits and vegetables. Thus, irrespective of mothers' educational qualifications, the mothers' nutritional knowledge should be improved.

*Mothers' income* was categorized into Low (SGL 1-6, that is, ≤N20,000.00), Medium (SGL 7-10, that is, N20000.00 –N49999.00) and High (SGL12+, that is, N50,000.00+). The findings, revealed that the children born to 77.1%, 75.5% and 83.7% of mothers on low, high and medium income, respectively indicated that they were provided with meat/ other sources of protein, 7+ times a week (Table 6). Mothers on high, medium and low income comprising 80.4%, 63.8% and 63.6% respectively provided their children (secondary school students) with fruits/vegetables, seven plus times per week.

Mothers (57.2%) on low income and mothers (57.6%) on medium income as well as their counterparts (62.6%) on high income provided their children (secondary school students) with grain products, seven plus times per week. The children born to mothers (45.9%) on low income, mothers (48.9%) on medium income and mothers (53.6%) on high income responded that they consumed of milk products, 7+ times a week. The children born to 45.4%, 46.8% and 46.4% of mothers on low, medium and high income, respectively indicated that they were



**Table 5: Mothers' education and the students in-take of the food types per week**

Food types	Mothers' educational qualification				Total	
	Low	Medium	High	N	%	
<i>Meat/ Protein Source</i>						
1-3 times	6.0	3.9	5.2	30	5.1	
4-6 times	14.0	19.9	17.1	99	16.8	
7+ times	80.0	76.2	77.7	460	78.1	
Total N	215	181	193	589		
%	(36.5)	(30.7)	(32.8)	(100)		
<i>Fruit/Vegetables</i>						
1-3 times	7.0	8.8	6.7	44	7.5	
4-6 times	29.8	20.5	21.8	143	24.3	
7+ times	63.2	70.7	71.5	402	68.2	
Total N	215	181	193	589		
%	(36.5)	(30.7)	(32.8)	(100)		
<i>Grain Products</i>						
1-3 times	13.0	9.4	10.9	66	11.2	
4-6 times	32.6	28.7	29.5	179	30.4	
7+ times	54.4	61.9	59.6	344	58.4	
Total N	215	181	193	589		
%	(36.5)	(30.7)	(32.8)	100		
<i>Milk Products</i>						
1-3 times	22.8	16.0	17.6	112	19.0	
4-6 times	27.4	38.7	33.2	193	32.8	
7+ times	49.8	45.3	49.2	284	48.2	
Total N	215	181	193	589		
%	(36.5)	(30.7)	(32.8)	(100)		
<i>Roots and Tubers</i>						
1-3 times	13.5	11.6	20.2	89	51.1	
4-6 times	36.7	38.7	38.3	223	37.9	
7+ times	49.8	49.7	41.5	277	47.0	
Total N	215	181	193	589		
%	(36.5)	(30.7)	(32.8)	(100)		
<i>Fat-sweets and Non-alcoholic</i>						
1-3 times	39.3	31.0	22.8	176	29.9	
4-6 times	34.0	33.7	40.9	213	36.1	
7+ times	30.7	35.3	36.3	200	34.0	
Total N	215	181	193	589		
%	(36.5)	(30.7)	(32.8)	100		

Source: Field Survey, March-April, 2009

provided with roots and tubers, 7+ times a week. Finally, mothers (31.2%) on low income and mothers (36.7%) on medium income as well as their counterparts (38.3%) on high income provided their children (secondary school students) with fat-sweets and non-alcoholic, seven plus times per week.

A closer look at the data (Table 6), tended to reveal that the proportion of secondary school students that indicated their mothers provided them with fruits/vegetables, grain products, milk products and fats-sweets and non-alcoholic, 7+ times a week, was directly proportional to mothers' income. There was a marked increase in the proportion of secondary school students that indicated the mothers provided them with meat/

other sources of proteins with mothers' income, that is, from the medium level. Conversely, there was a slight reduction in the number of secondary school students that indicated the mothers provided them with roots/tubers with mothers' income as from the medium level. Bender and Smith (1997), that with rise in income, people tended to demand large quantities of food and more varieties in their diets.

## CONCLUSION

This study has attempted to examine mothers' socioeconomic background and the feeding practice of the secondary school students in Edo Central Nigeria. It was observed that with moth-

**Table 6: Mothers' income and the students' in-take of the food types per week**

<i>Food types</i>	<i>Mothers' income</i>			<i>Total</i>	
	<i>Low</i>	<i>Medium</i>	<i>High</i>	<i>N</i>	<i>%</i>
<i>Meat/ Protein Source</i>					
1-3 times	5.8	2.9	5.7	30	5.1
4-6 times	17.1	21.6	10.6	99	16.8
7+ times	77.1	75.5	83.7	460	78.1
Total N	327	139	123	589	
%	(55.5)	(23.6)	(20.9)	(100)	
<i>Fruit/Vegetables</i>					
1-3 times	9.5	6.5	3.3	44	7.5
4-6 times	26.9	25.2	16.3	143	24.3
7+ times	63.6	68.3	80.4	402	68.2
Total N	327	139	123	589	
%	(55.5)	(23.6)	(20.9)	(100)	
<i>Grain Products</i>					
1-3 times	11.3	13.7	8.1	66	11.2
4-6 times	31.5	28.7	29.3	179	30.4
7+ times	57.2	57.6	62.6	344	58.4
Total N	327	139	123	589	
%	(55.5)	(23.6)	(20.9)	100	
<i>Milk Products</i>					
1-3 times	21.7	14.4	17.1	112	19.0
4-6 times	32.4	36.7	29.3	193	32.8
7+ times	45.9	48.9	53.6	284	48.2
Total N	327	139	123	589	
%	(55.5)	(23.6)	(20.9)	(100)	
<i>Roots and Tubers</i>					
1-3 times	15.0	12.9	17.9	89	15.0
4-6 times	37.6	40.3	35.8	223	37.9
7+ times	45.4	46.8	46.4	277	47.1
Total N	327	139	123	589	
%	(55.5)	(23.6)	(20.9)	(100)	
<i>Fat-sweets and Non-alcoholic</i>					
1-3 times	33.6	28.0	21.9	176	11.2
4-6 times	35.2	35.3	39.8	213	30.4
7+ times	31.2	36.7	38.3	344	58.4
Total N	327	139	123	589	
%	(55.5)	(23.6)	(20.9)	100	

Source: Field Survey, March-April, 2009

ers' age, the number of secondary students provided with appropriate feeding practice (except for milk products) was on the decline. In other words, appropriate feeding practice for the secondary school students was more popular with older mothers than their younger counterparts. This is problematic because the majority of the secondary school students would be at the risk of poor nutritional habit for the upcoming years. The trend is most worrisome because the ages of the mothers involved are the years known for childbearing, rearing and care).

With respect to religion, it is tempting to conclude that certain food types were associated with the denominations. For instance, the proportion of mothers in the different denomina-

tions varied with the food types they provided their children. This finding can be explained by the observation that some religions demand particular food customs and such could lead to some nutritional problem at adulthood.

As it relates to education, it was found that more mothers with low education than their counterparts in other levels of education tended to provide their children with meat/other sources of proteins, milk products and roots/tubers. More mothers with medium education than their counterparts in other levels of education tended to provide their children with grain products. More mothers with high education than their counterparts in other levels of education tended to provide their children with fruits/vegetables and

fats-sweets and non-alcoholic. Thus, we could conclude that, irrespective of mothers' educational qualifications, nutritional knowledge should be improved upon through nutritional education. This is also supported an earlier observation that people could suffer from malnutrition in the midst of plenty if they have no knowledge (education) of the right quality and combination of foods to be served.

### RECOMMENDATIONS

Religious leaders and organizations as well as notable community leaders, opinion leaders, traditional rulers, politicians and policy makers should be encouraged to play active roles in adequate feeding practice of children to avoid jeopardizing their future. On the strength of the observation (data in Table 6), that mothers' income status had direct influence on the feeding practices of the secondary school students, the incidents of hyperinflation such as that brought about by the structural adjustment program (SAP) must be avoided. This is because the family menu of most Nigerians would take a plunge with economic depression. The home grown school feeding (mid-day meal) should, therefore, be strengthened by governments, school authorities and the parents teachers associations. Finally, parents (particularly, young mothers), guardians, school authorities, the lay public and the secondary school students should be given sound nutrition education to prevent food prejudices that forbid eating what is available. All these would improve the status of a population towards the attainment of the much needed sustainable development.

### REFERENCES

- Abimbola E 2006. The dietary nature of low income earners, in Epe Local Government Area of Lagos State. *Nigerian journal of Home-Economics*, 1(1): 15.
- Adams BN, Sydie RA 2002. *Classical Sociological Theory*. London: Pine Forge Press, Sage Publications.
- Ahmed T 1995. The lesser half. In: PW Carty, E Lee (Eds.): *In the Shadow of the First World: The Environment as Seen From Developing Nations*. USA: Chicago Press, pp. 187-189.
- Ajayi A 1993. Nigeria. *The World Book Encyclopedia*. 4<sup>th</sup> Edition. New York: Harper Collins.
- Anyakoha EU, Eluwa MA 1999. *Home Management for Schools and Colleges*. Onitsha: Africana -FEP Publishers.
- Bender W, Smith M 1997. Population, food and nutrition. *Population Bulletin*, 51(4): 2 – 43.
- Boyd A, Haub C, Cornelius D 2000. *The World's Youth 2000*. Paris: Population Reference Bureau, UNESCO.
- Carty PW, Lee E 1995. *In the Shadow of the First World: The Environment as Seen From Developing Nations*. USA: Chicago Press.
- Coser PS, Rosenberg I 1976. *Sociological Theory*. New York: Macmillan.
- Dapi LN Nouedoui C, Janlert U, Haglin I 2005. Adolescents' food habits and nutritional status in urban and rural areas in Cameroon, Africa. *Scandinavian Journal of Nutrition*, 49(4): 151
- Kajang YG, Padung LL, Jatau AA, Datol IC 2005. Factors militating against the health of students in Garran District, Kanke Local Government Area of Plateau State. *Journal of Home-Economics Research*, 6(2): 148 – 152.
- Kazetoshi N, Yoshihiko H, Atsushi W, Kyoichi H, Shinichi N et al. 1996. Eating Problems of Female Japanese High School Students: A Prevalence Study. From <kazun@med.niigata-v.ac.jp> (Retrieved on 13 July, 2012).
- Leavenworth C, Hendrick G, Gay K, Harriman CC, Kreinin, M 1988. *Enjoying Good Nutrition. Family Living*. New Jersey: Prentice Hall, pp. 315 – 318.
- Malthus RT 1798. From <http://www.thefreedictionary.com/Malthusian+theory.> (Retrieved on 13 July, 2012).
- Maslow AH 1943. A theory of human motivation. *Psychological Review*, 50: 370-390.
- Ndungi HK 1988. *Basic Nutrients: Food and Nutrition for Schools and Colleges*. Nairobi: Evans Publishers.
- Obiakor P 2006. *Introduction to Home Economics*. Owerri: City Prints.
- Odaman K I 2012. *Mothers' Socio-economic Background and Feeding Practices of Secondary School Students in Edo State, Nigeria*. MEd Home Economics Dissertation, Unpublished. Department of Vocational Education, Faculty of Education, Delta State University, Abraka, Nigeria.
- Ogunba O, Adeyefa L 2002. Factors influencing mothers' choice of complementary foods in Ilesha Area of Osun State. *Early Child Development and Care*, 172(4): 385 –390.
- Onyebueke D, Souzey JA 2003. *Nutrition for the Tropics: Introduction to Food and Nutrition*. Delta State: Soliq Limited.
- Pointing C 1991. *A Green History of the World*. New York: Penguin Books.
- Ryder N B 1969. "Notes on the Concept of a Population" *Sociological Theory*. USA: Prentice-Hall, Inc.
- Savage JS, Fisher JO, Birch LL 2007. Parental Influence on Eating Behavior: Conception to Adolescence. From <http://www.ncbi.nlm.nih.gov/pubmed/17341215> (Retrieved on 13 July, 2012).
- Sherpherd R, Dennison CM 1999. Influences on Adolescent Food Choice. *Proceedings of the Nutrition Society*. Institute of Food Research. Earley Gate, Whiteknights Road Reading, pp. 345–357.
- Ukpore BA 2006. *Fundamentals of Consumer Education*. 3<sup>rd</sup> Edition. Ibadan: Spectrum Books Ltd.
- UNICEF 2012. The State of the World's Children. From <http://www.unicef.org/SOWC2012/2012/pdfs/SOWC%2...> (Retrieved on 11 March, 2013).