JHER Vol. 20, September 2014, pp. 199-207

Factors Influencing Food Consumption Patterns of the University of Ibadan Undergraduate Students, Ibadan, Oyo State, Nigeria

Oyewole, M. F.
Department of Agricultural Extension and Rural Development
University of Ibadan, Nigeria.

Abstract

The study investigated factors influencing food consumption pattern of the University of Ibadan undergraduate students, Ibadan, Oyo State, Nigeria. Stratified sampling technique was used to select two male and two female halls of residence based on sex. One hundred and twenty one students (121) were interviewed through the use of questionnaire. Descriptive and inferential statistics were used to analyze the data. Majorities (50.4%) of the respondents were females and (60.3%) fell between the age ranges of 21- 25 years. Majority (93.4%) had their parent as their sources of allowance and 55.3% received allowance ranging from N5, 000 – N9, 999. Thirty seven percent(75%) of respondents consumed proteinous food. Only 1.7% consumed vegetables and fruits seven or more times. Ninety percent (90%) of them got nutrition information from their parents. Major constraints to adequate food consumption pattern of respondent were income (50%) and family size (48%). There was significant relationship between respondents' sex (x^2 =90.537, p= 0.000), religion (x^2=32.802, p= 0.000), family size (x^2= 112.923, p= 0.000), tribe (x^2 =201.709, p=0.000) and food consumption pattern.

Keywords: Factors, Food, Consumption, Pattern, Undergraduates.

Introduction

The consumption of specific food items and their combination in dishes and meals terns of give rise food consumption patterns of individuals. The pattern show large temporal and spatial differences, mainly caused by availability of food commodities, cultural aspects and economic factors (FAO, 2010). Diets evolve over time, and is influenced by many factors such as income, prices, individual preferences and beliefs, cultural traditions. Other factors are geographical location, environmental, social and economic factors. These interact in a complex manner to shape dietary consumption patterns. Research shows that there are has been major shifts in food consumption patterns throughout the world, even in the consumption of staple foods, towards more diversified diets (Popkin 2006). Accompanying the changes in food consumption patterns are considerable health related problems arising from failure to consume adequate diet required to meet the nutritional needs.

Some of the health related problems associated with inadequate consumption of adequate diet include diabetes, hypertension, heart diseases, kwashiorkor and stunted growth in children and adolescents. Story (2005) noted that nutrient needs are higher during adolescence than any other time in the lifecycle. Nutrition and physical growth are integrally related. Optimal nutrition is

a requisite for achieving full growth potential. Failure to consume an adequate diet at this time can result in delayed sexual maturation and can arrest or slow linear growth. Research indicates that improving the awareness of nutritious meal choices and establishing long- term habits of healthy eating have a positive effect on cognitive memory capacity, increasing a student potential to process and retain academic information Neha and Devanshi 2012) . The level of nutrient requirement has been determined by the World Health Organization (WHO) and Food and Agricultural Organization (FAO 2002) . The basic minimum requirement figure has been found to be 65 grammes of protein and 250kcal of energy per capital intake of which is consumed otherwise, leads to a state of malnutrition which are associated with inadequate diet especially in adolescents. (WHO, 2003).

Most adolescent and young people have improper eating habits and tend to consume junk foods and ready-to-eat foods (Ibrahim, 2008). Over the years, students' consumption patterns have been found to be influenced by various factors such as religion, sex, tribe, income, and environment (Omonona and Agoi, 2007). The environment of an individual has made an impact on their consumption pattern. The common foods available in one environment may be scarce in another's. Most individuals buy their food from whatever is readily distributed in the nearest or within their environment. This situation causes variation in consumption patterns of individual.

According to Popkin (2006), there are differences in personal taste which might be due to custom, religion and beliefs. For example, some religions do not allow members to eat pork while some do not eat livestock such as snail because of their beliefs, even though the foods could be of benefit to individuals in one way or the other. Yu (2005) reported that the consumption pattern of the students depends on the university student's income. A personal consumption pattern is usually determined by the level income. Because the students have not yet established their careers, their income is very difficult to estimate, and in this circumstance, most university students' income is mainly from their parents, and this invariably determine their consumption pattern. Economic development is normally accompanied by improvements in a country's food supply and the gradual elimination of dietary deficiencies thus improving the overall nutritional status of the households and the entire country's population. (Jagoda, 2009).

The size of the household and its consumption cannot be overlooked in consumption pattern of students.(Delisle, 2009) It is possible that the more the number of persons in the family, the less adequate and balanced the food an individual student can afford and vice versa due to the allowance an individual student gets from home and this factor can affect on the individual food needs. However, there is dearth information on the factors influencing consumption patterns among undergraduate students of the University of Ibadan. It is against this background that this study was carried out.

Purpose of the study

The general purpose of this study was to investigate the food consumption patterns of University of Ibadan undergraduate

students. Specifically the study determined:

(1) the frequency of food consumed in the study area
(2) reasons why students do not consume some foods available in their environment.
(3) Identify the sources of the respondents' up keep allowance.
(4) Determine the constraints militating against students accessibility to quality food on campus.

Research Question

The study answered the following research questions

(1) What is the frequency of food consumed in the study area?
(2) What are the reasons for not consuming some foods available in their environment?
(3) What the sources of the respondents' are up keep allowance?
(4) What are the constraints militating against accessibility to quality food on the campus?

Hypotheses

Two null hypotheses were formulated for the study, namely:

(1) There is no significant relationship between the personal characteristics of the respondents and their food consumption pattern.
(2) There is no significant relationship between constraints faced by the respondents and their food consumption pattern.

Methodology

Design of study: The study adopted a survey research design. It sought information from undergraduate students of the University of Ibadan who reside in the hostels.

***Area of study*:** The study was conducted in the University of Ibadan, lbadan . University of Ibadan is located at Ibadan, the capital of Oyo state in the south-western part of Nigeria. It is the first citadel of higher education established in Nigeria in 1948 as College of the University. The University of Ibadan has two female undergraduate halls (Queen Elizabeth and Queen Idia halls) and six male undergraduate halls (Tedder, Kuti, Mellanby, Sultan Bello, Independence, Nnamdi Azikwe halls).

***Population for the study*:** The target populations were all undergraduate students of the University of Ibadan who reside in the two female and six male halls of the University.

***Sample for the study*:** Stratified sampling technique was used to stratify the halls into male and female halls. . There were 610 and 600 registered students in the selected female and male halls respectively. Two male halls were randomly selected from the six male halls available, they include Nnamdi Azikwe and Kuti halls while the two female halls available were selected namely Queens Elizabeth and Idia halls. The total number of students residing in Queen Elizabeth hall were 300, Queen Idia hall were 310 while 250 and 350 students resides in Nnamdi Azikwe and Kuti hall respectively. Ten percentage (10%) of the total number of one thousand two hundred and ten registered respondents from each halls of residence were randomly selected which gives the sum of one hundred and twenty one (121) respondents which was used as sample size for this study.

Table 1: The Numbers of Respondents Selected

Hall of residence	Population of Students in each hall of residence	10% of selected respondents
Queens	300	30
Idia	310	31
Namdi Azikwe	250	25
Kuti	350	35
Total	**1210**	**121**

***Instrument for data collection*:** The structured questionnaire which was developed based on the literature and research objectives was used to collect data for the study. The instrument was divided into two sections (A and B). Section A elicited information on the personal data, while section B answered questions 1, 2, 3, and 4 which were developed to correspond to the specific objectives.

The instrument was face-validated by two experts in Home economics unit of the Department of Agricultural Extension and Rural Development, University of Ibadan. The reliability of the instrument was tested using the split half method. The reliability coefficient of the instrument was 0.80

Data Collection and Analysis Technique
One hundred and twenty one copies of questionnaire were administered by hand to the students. Some were collected on the spot while others were collected on a later date. Data collected were analyzed using descriptive statistics which include frequencies, percentages and mean to describe the data collected. Chi-square was used to test the hypotheses.

Findings of the study

Personal characteristics of the respondents
Majority of the respondents (60.3%) fall between the ranges of 21-25 years, 20.7% falls between 15-20 years, 17.4% falls between 26-30 years and those with lowest range (1.7%) fall between 31-35 years. This implies that most of the respondents are still in their active age and they require adequate nutrients to be able to carry out their metabolic activities. On the basis of family size, 62.0% of the respondents had a family size above 5 people while only 38% had a family size of 1-5. This implies that member of the households members will tend to compete for limited resources within their reach which will also affect their food consumption pattern.

Table 1: Distribution of Respondents on the Frequency of Different Foods

Food Items	Frequency of Consumption per week Not at all		1-2 times		3-4 times		5-6 times		7 or more times	
	F	%	F	%	F	%	F	%	F	%
Egg	11	9.1	45	37.2	38	31.4	23	19.0	4	3.3
Fish	20	16.5	26	21.5	30	24.8	26	21.5	19	15.7
Milk	16	13.2	35	28.9	28	23.1	18	14.9	24	19.8
Beans	23	19.0	44	36.4	22	18.2	15	12.4	17	14.0
Rice	11	9.1	14	11.6	23	19.0	28	23.1	45	37.2
Yam	35	28.9	54	44.6	18	14.9	7	5.8	7	5.8
Maize	34	28.0	57	47.1	17	14.0	9	7.4	4	3.3

Oil palm	21	17.4	27	22.3	31	25.6	16	13.2	26	21.5
Groundnut oil	13	10.7	27	22.3	34	28.1	18	14.9	29	24.0
Ugu	39	32.2	48	39.7	19	15.7	6	5.0	9	7.4
Cochorous	68	56.2	35	28.9	11	9.1	5	4.1	2	1.7
Bitter leaf	58	48.0	46	38.0	11	9.1	4	3.3	2	1.7
Orange	35	28.9	47	38.8	25	20.7	10	8.3	4	3.3
Pineapple	51	42.1	43	35.5	16	13.2	7	5.8	4	3.3
Pawpaw	58	47.9	38	31.4	16	13.2	7	5.8	2	1.7

Table 1 shows that most undergraduate students in the study area consume more of milk when compare to other protein sources. This could be as result of accessibility and availability of artificial milk. In addition, it was also revealed that a larger proportion (87.1%) of the respondents consume rice more than twice a week when compared to other carbohydrate source This shows that rice is becoming a staple food. Furthermore, most (75.1%) of the respondents consume groundnut oil more than twice a week to meet their fat and oil requirement. Since they consume rice, there is the need for groundnut oil in making stew the study also shows that most (67.8%) of the respondents consume ugu more than twice a week when compared to other vegetables. Also, 32.3% of the respondents consume orange more than twice a week to meet their vitamins requirement. However this low compared to daily vitamin requirement. In summary, the distribution showed that undergraduate students in the study area consume more of carbohydrate while a very few consume fruits.

Table 2: Distribution of respondents on reasons for not consuming some food items

	Reasons for not Consuming Food items									
Food Items	**Health Reasons**		**Not affordable**		**Not available**		**Culture**		**No response**	
	F	%	F	%	F	%	F	%	F	%
Egg	7	5.8	5	4.1	1	0.8	4	3.3	104	86.0
Fish	3	2.5	2	1.7	2	1.7	2	1.7	112	92.6
Milk	3	2.5	7	5.8	1	0.8	1	0.8	109	90.1
Beans	4	3.3	3	2.7	2	1.7	1	0.8	111	91.7
Rice	1	0.8	2	1.7	2-	1.7-	1	0.8	115	95.0
Yam	1	0.8	0	0.0	16	13.2	2	1.7	102	84.2
Maize	2	1.7	3	2.5	7	5.8	2	1.7	107	88.4
Oil palm	4	3.3	2	1.7	3	2.5	2	1.7	110	91.0
Groundnut oil	2	1.7	2	1.7	2	1.7	2	1.7	113	93.3
Ugu	2	1.7	5	4.1	13	10.7	1	0.8	100	82.6
Cochorous	2	1.7	3	2.5	29	24.0	2	1.7	85	70.2
Bitter leaf	2	1.7	8	5.0	22	18.2	1	0.8	88	72.7
Orange	1	0.8	4	3.3	14	11.6	2	1.7	100	82.6
Pineapple	2	1.7	4	3.3	17	14.0	2	1.7	96	79.3
Pawpaw	2	1.7	5	4.1	20	16.5	1	0.8	93	76.9

Table 2 shows that 24% of the respondents do not consume cochorous (ewedu) because it is not readily available, 5.8% of the respondents do not consume egg and beans for health reasons, 16.5 % do not consume pawpaw because it is not readily available.

Table 3: Distribution of respondents by sources of up keep allowance

Source of up keep allowance	Frequency	Percentage
Parents	113	93.4
Friends	1	0.8
Guardians	1	0.8
Business	2	1.7
Scholarship	4	3.3
Total	121	100

Table 3 shows the distribution of the respondents up keep allowance. Majority (93.4%) of the respondents got their up keep allowance from their parents while 0.8% got theirs from friends and guardians.

Table 4: Distribution on Constraints to Food Consumption Pattern

Constraints to food consumption pattern	Major Constraints		Minor Constraints		Not a Constraint	
	F	%	F	%	F	%
Finance	52	43.0	45	37.2	24	19.9
Family/ Background	51	42.1	50	41.3	20	16.5
Environment	51	42.1	35	28.9	35	28.9
Taste	49	40.5	41	33.9	31	25.6
Health	34	28.1	23	19.0	64	52.9
Nonchalant attitude	28	23.1	40	33.1	53	43.8
Age	15	12.4	13	10.7	93	76.8
Availability of food	10	8.3	19	15.7	92	76.1
Time available for cooking	14	11.7	73	60.8	65	54.1

Table 3 reveals that finance (43.0%), family background (42.1%), environment (42.1%) and taste (40.5%) were the major constraints faced by undergraduate students in the study area, preventing achieving adequate food consumption. on the other hand, time available for cooking (60.8%) and nonchalant attitude (33.1%) were minor constraints faced by the respondents. Interestingly students have time to prepare their foods.

Table 4: Chi- Square Analysis Showing the Relationship between Personal Characteristics of Respondents and Factors affecting Food Consumption Pattern

Variable	χ^2	df	p	Decision
Sex	90.537	3	0.000*	S
Age	0.008	1	0.928	NS
Religion	32.802	1	0.000*	S

Family size	112.923	8	0.000*	S
Ethnicity	201.709	3	0.000*	S

NS= Not Significant S= Significant *= Significant at 0.05 level

The result of the Chi-square analysis in table 4 shows that there is a significant relationship between sex, (χ^2 = 90.537, p= 0.000), religion (χ^2 =32.802, p= 0.000) family size (χ^2 = 112.923, p= 0.000), position in the family (χ^2 = 66.21, p= 0.000) ethnicity (χ^2 = 201.709, p= 0.000) are factors influencing food consumption pattern. This implies that sex, religion, family size, position in the family and ethnicity influences food consumption pattern. However, there was no significant relationship between respondents' age (χ^2 = 0.008, p= 0.928) and their food consumption pattern. This means that age of the respondents do not influence their food consumption pattern.

Table 5: Chi-Square Analysis showing the Relationship between the Constraints faced Respondents and Factors affecting their Food Consumption Pattern

Variable	χ^2	df	P	Decision
Finance	12.42	2	0.002*	S
Family background	15.39	2	0.000*	S
Environment	95.10	2	0.000*	S
Taste	7.20	2	0.027*	S
Health	22.33	2	0.000*	S
Nonchalant attitude	4.55	2	0.103	NS
Availability of food	4.23	2	0.121	NS
Time available for cooking	42.63	2	0.000*	S

NS= Not Significant S= Significant *= Significant at 0.05 level

Table 5 shows that there is significant relationship between finance (χ^2 = 12.42, p= 0.002), family background (χ^2 = 15.39, p= 0.000), environment (χ^2 = 95.10, p= 0.000) taste (χ^2 = 7.20, p= 0.000), health (χ^2 = 22.33 p= 0.000), time available for cooking (χ^2 = 42.63, p =0.000) and factors affecting food consumption pattern among undergraduate students. This implies that financial status, family background, environment, taste and time available for cooking have influence in food consumption pattern. However there is no significant relationship between nonchalant attitude of the respondents (χ^2 = 4.55, p= 0.103) availability of food (χ^2 = 42.63, p= 0.000) and factors affecting food consumption pattern

Discussion of Results

The findings of the study indicates that majority of the students were females, which implies that sex is one of the factors that influenced consumption pattern of the students. This agrees with the findings of Omonona and Agoi (2007), that the student's consumption pattern is influenced by their sex. Also most of the students are still in their active age, so they require adequate nutrients to be able to carry put their metabolic activities and increasing a student potential to process and retain academic information. (Story, 2005). . On the basis of family size, the respondents had a family size above 5 people. This implies that member of the households members will tend to compete for limited resources within their reach

which will also affect their food consumption pattern. . This is in line with the study of Delisle, (2009) that the size of the household and its consumption cannot be overlooked in consumption pattern of students.

Table 1 shows that carbohydrates is the most frequently consumed foods by the students in the study area while only few consumed fruits and vegetables. This corroborated by Norman, (2014) that carbohydrates are an energy sources for the brain. However, most students consume sugar excessive sugar, causing increase in sugar level in the blood streams and also according to Mintah et al. (2012), who reported that there is inadequate fruit consumption among University of Ghana. Table 2 shows that the respondents do not consume cochorous (ewedu) because of it is not readily available, some do not consume egg and beans for health reasons, while do not consume pawpaw because it is not readily available, It can therefore be deduced from the findings that the major reasons why some food items were not consumed is as a result of health factors, availability and cost, This corroborates the findings of Hart (2005) that food consumption pattern can be influenced by some factors such as availability, health factors, and cost. It was also revealed that finance, environment and taste were the major constraint faced by the respondents in the study area.

The Chi square results also showed significant relationship between each of sex, family size, and position in the family, ethnicity and food consumption pattern. This is supported by Omonona and Agoi (2007) findings that over the years, students' consumption pattern has been determined to be influenced by various factors such as religion, sex, tribe, income, and environment. The study also showed financial status, family background, taste, and environment influenced the students' consumption pattern.

Conclusion

Based on the findings of this study, it has been shown that, the rate at which students consume some food items for good health is low. This is due to some factors influencing the food consumption pattern. These factors include; allowance, family size, religion, environment, taste, availability of foods while the age of the respondents do not influence the students consumption pattern. The main source of the students' up keep allowance is from their parents and the major constraint militating against accessibility to quality food on campus is finance. There is need for adequate up keep allowance in favour of the students' well- being, as this will improve their healthy eating habits which have a positive effect on their cognitive memory capacity. It will also increase student's potential to process and retain academic information.

Recommendation

The following recommendations are based on the findings of this study:

- Students should be given enough allowance by their parents, so that they can have enough money to purchase required foods for their wellbeing.
- Parent should also be encouraged to take into consideration their family size because it will affect the allowance of their children. The larger the family, the lower the allowance available to students.
- Students should not see environment as a major constraints to their food consumption pattern. They should

adapt to any environment they found themselves, while in terms of taste.

- There should be food nutrition awareness education on proper food consumption pattern especially on more consumption of fruits and vegetables.
- Fruits and leafy vegetables vendors should be allowed to sell within and around the hostels.

References

Ayse, B. (2012). Consumption and the Place of the Economy in Society: Houses and Household Durables in Republican Turkey. *Transitions in Domestic consumption and family life in Modern Middle East Houses in motion.* P113.

Delisle H. (2009). Dietary patterns and quality in West African immigrants in Madrid. *Nutrition journal. 8:3* P3

F.A.O. (2010). Food and Agricultural Organization of the United Nations statistical databases. http:// faostat.fao.org

Hall J.N., Moore S., and Lynch J.W. (2009). Global Variability in Fruit and Vegetable Consumption. *American Journal of Preventive Medicine.* 36(5): 402- 409.

Ibrahim M. M., (2008). The change in food consumption pattern of male and female students of Tabriz University of Medical Science, after Entering University. *Medical Journal of Tabriz University of Medical Sciences.* 30 (1) 1.

Neha C. and Devanshi P. (2012).Food and Nutrition Security for Happiness and Satisfaction. Saving Humanity: Swani Vivekam and Swadhyay Mandal, Pp 229-232.

Mintah B.K., Eliason A.E., Nsiah M., Baah E.M., Hagan E. and Ofusu D.B. (2012). Consumption of Fruits Among Students: A case study of A public University In Ghana, *African journal of Fruit, Agriculture, Nutrition and Development*. 12(2): 5978-5993.

Omonona B.T. and Agoi G.A., (2007). An analysis of food security situation among Nigerian urban households: Evidence form Lagos State Nigeria. *Journal of Central European Agriculture.* 8 (3) 397-406.

Norman, P. (2014). Feeding the Brain for Academic Success: How Nutrition and Hydration Boost Learning. *Healthy Brain for life* Pp 1-5.

Popkin B.M., (2006). Global Nutrition dynamics: the World is shifting rapidly towards diet linked with non communicable diseases. *Journal of Public Health Nutrition*. 84(2): 289- 298.

Story M. (2005). *Nutritional requirements during adolescence. Textbook of adolescent medicine* Philadelphia: WB Saunders, Pp 75-84.

WHO (2003): Diet, nutrition and preventive of chronic diseases. Report of a joint FAO/WHO workshop on fruits and vegetables for health, 1-3 September, 2004, Kobe, Japan.

Yu Yuanpei, (2005), *Text Review of Classical Marxist Philosophy*, Beijing, Higher Education press

.