GLOBAL JOURNAL OF BIOLOGY, AGRICULTURE & HEALTH SCIENCES
(**Published By**: Global Institute for Research & Education)
www.gifre.org

Analysis of Dietary Diversity of Food Consumption Pattern in Oyo State

Mustapha, I.O
Emmanuel Alayande College of Education, Oyo

Abstract

The producer of most varieties of staple food are found in rural areas and are mostly subsistence/smallholder farmers who most often consumed leftover on their farm after selling food product from their farms. The study examined the socio-economic and dietary diversity of food consumption in Oyo State. Multi-staged random sampling technique was employed to select eleven Local Government Areas from thirty three existing one and five households from each of the eight villages from every LGA in selection. 440 respondents now constitute the sample for the study. Results reveal that the mean age of the respondents was 52.01 and male constitutes the majority of the respondents. About 80% were married while the mean household size was 10. In the dietary diversity, food such as yam, with mean value of 0.091, maize (0.97), plantain (0.73), millet (0.055) and rice were mostly consumed. Other foods with high diversity are fish (0.095), bush meat (0.093), chicken (0.90), snail (0.80), beef (0.80), legume (0.87) and goat meat (0.77) showed high consumption rate. Correlation result revealed that year of residence ($r = 0.128; \leq 0.01$) had significant relationship with diet diversity. Age and residence ($r = 0.344 \leq 0.01$) had positive and significant contribution to one another. It is concluded that wide variety of food have a high diversity, years of residence determines food consumption pattern and the more the age of respondents, the more the year of their residence. It is recommended that traditional food system should be enhanced in such a way that important nutrients are retained during the food preparation process.

Key Word: Consumption Pattern, Dietary Diversity of Food and Socioeconomic Characteristics.

Introduction

The consumption of food and other relevant sources of nutrient had evolved over ages. Different culture is known for specific food recipe, choices and preparation, which are often influenced by complex interrelated factors. Factors affecting selection of food according to Barasi (2002) include availability, accessibility, affordability, taste, preferences, cultural demand and situations. The Oxford English Dictionary (2006) defined food as "what one takes into the system to maintain life growth and to supply nourishment, eliminate waste and ailment". Food had also been seen as what people eat but however, not everything eaten is food.

Habit and pattern of eating may vary from one person to another person, and diets may be selected from hundreds of different foods, the same six types of nutrients are needed by everybody of the same age group in roughly the same proportion. Energy is needed for all forms of activities on earth. A calorie by definition is a measure of energy content (in kilojoules) in one or more foods. The more calories one eats, the more energy one will have (Barasi, 2002). Therefore, food calorie intakes have been found to have strong empirical linkage with both human health and productivity. The level of calorific intake by an individual should therefore be adequate to sustain his function over his expected lifespan. However, the amount of calorie intake together with the proportion of other nutrients in the food depends on the type, quantity and frequency of meal taken on daily basis by individual.

Meal is often named and patterned according to choices. It plays a role in all important socio occasions such as the celebration of cultural and religious festivals. A meal can be used as means for feeding a single individual or shared simultaneously by two or more people (Anita, 2001). In addition, the number of meals consumed by an individual in a day, their quantities, when and how they are prepared and eaten varies greatly according to traditions and the extent of modernization. For instance, in societies where the availability of food has risen above subsistence levels and beyond staple foods, pattern of food selection in such societies are diverse and beyond the local choices. Meal could also be sold as prepared for immediate consumption in restaurants and other retail premises over and above local selection. Besides, the extent of influence is to modernization, different people in different culture have a pattern of food preparation and choices. These are based on individual or societal drive for taste, health conditions, guest entertainment, tradition, visitors' preferences, cultural festivals/ceremonies and in most cases available staples. This diverse pattern of food selection and preparation determines the quality of the basic nutrients found or consumed by the people. This forms the pre-disposing factor to adequate diet of the respective culture.

In some societies, these staple foods are going into extinction due to over liberal economy, development of many industries which is demanding for women's employment, the oil boom, civilization and movement of people from rural area to urban in search of white collar jobs. Consequently, only few and aged people are left at home, women also spend less hour at home and prefer convenience foods than home prepared ones because of time and labour required. This introduces new or modern food to African table e.g. Semovita, instant pounded yam, ground beans, spaghetti, macaroni, indomie and others. It is unfortunate even that women of nowadays cannot pass some cooking skills to their younger ones because they possess little of such skills. Previous study (Laniran, 1995) focussed on the analysis of food consumption recipes, development and dissemination of improved food recipes to rural people. Yet, symptoms of malnutrition and situation still pervade the entire rural communities. Hence, there is need to evaluate factors associated with food consumption pattern in relation to the knowledge, attitudes and practice (KAPs) of rural households in Oyo State.

So, in doing these, the study is set to provide explanation to the following posers:

1. What are the cultural and socio-economic characteristics of the rural dwellers in Oyo State?
2. What are the types and dietary diversity of food consumed as a proxy for nutritional quality in the study area?

Study Hypotheses

Ho: 1 : There is no significant relationship between the selected cultural and socio-economic characteristics of the respondents and food Consumption Patterns.

Ho:2 : Food types, nutritional quality and food consumption pattern are Not significantly correlated.

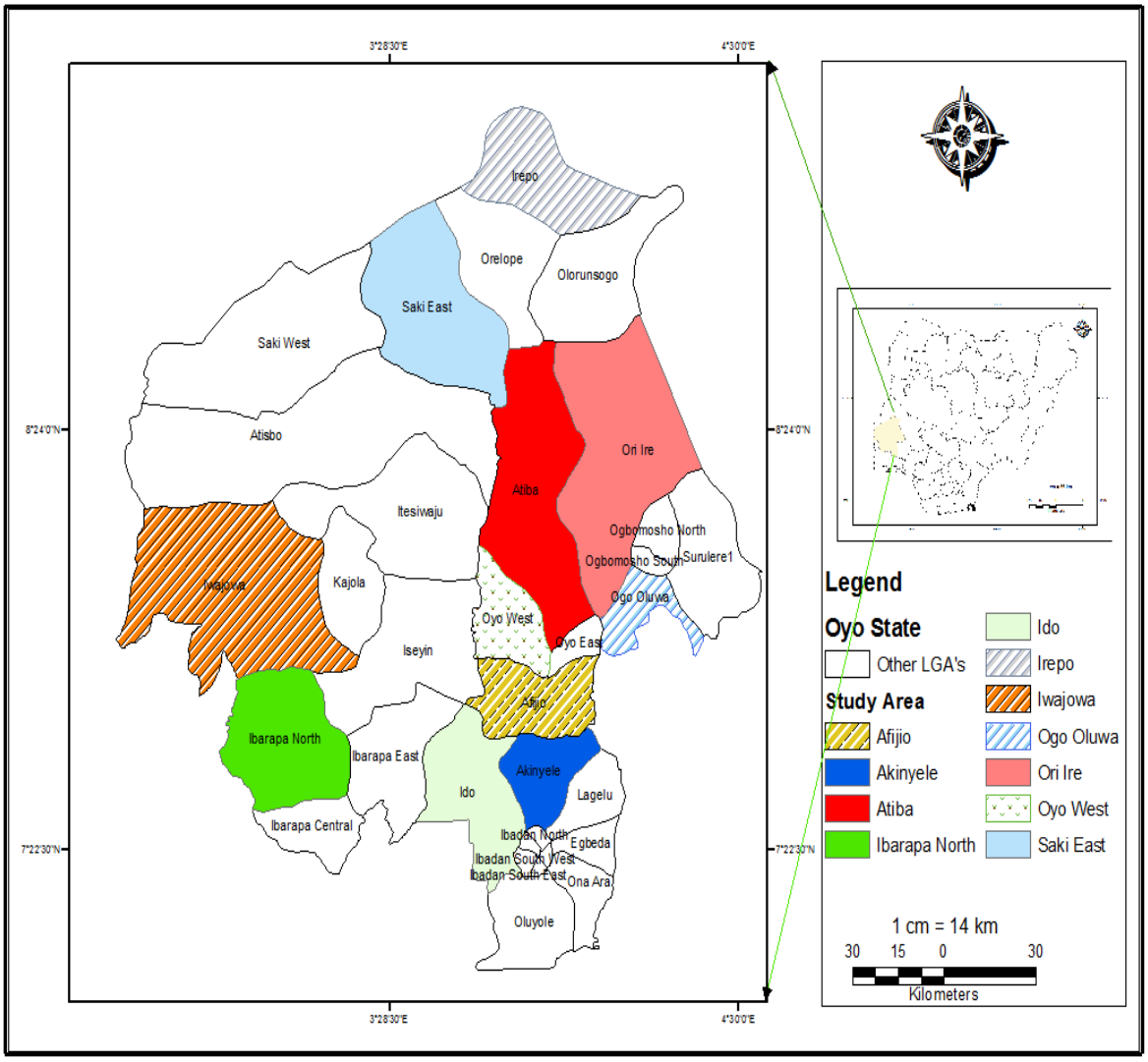
Methodology

The study was conducted in Oyo State, western part of Nigeria. According to 2006 census, the state population was 5,501,589 comprising 2,809,840 male and 2,781,749 females. It covers a land area of 27,249 square kilometres. Agriculture is the major source of income for the greatest number of the people and the mainstay of the economy. Climate favours the growth of food crop such as yam, cassava, millet etc. Three vegetation regions are identified, namely: forest, savannah and derived savannah. Ibadan/Ibarapa zone falls within the forest region while Ogbomoso and Oyo zones are in the derived savannah region.

Population comprises of all household while the multi-stage sampling procedures was employed in selection of the sample for the work. This involves the stratification of the Local Government Areas into its agricultural zone as follows: Ibadan/Ibarapa (3), Saki (8), Oyo (6) and Ogbomoso (5). In the first stage, one-third of the Local Government Area in each of the agricultural zone were randomly selected, which accounts for 3,3,3 and 2 Local Government Areas (LGA) in Ibadan/Ibarapa, Saki, Oyo and Ogbomoso respectively. In all the eleven Local Government Areas (LGA) were selected for the study. Second stage comprises of random selection of eight (8) villages/communities in each of the chosen Local Governments. The third and the last stage was a random selection of five household from each of the village/communities selected and the total now gives 440 (four hundred and forty) respondents for the study.

Interview schedule and focus-group discussion were used to collect data on cultural and socioeconomic traits, type of food, food traits, commonly related factors, and knowledge level of the respondents on food consumption pattern as the independent variables of the study while consumption pattern of the rural household in the study area which was determined by using daily food frequency method represents the dependent variable of the study.

Data were analyzed by both descriptive and inferential statistics. The descriptive tools include frequency counts and percentages while inferential statistics used to test the hypotheses includes correlation and regression analysis. Factor analysis was employed to isolate most crucial factors influencing food consumption pattern in Oyo State, Nigeria.



Results and Discussions

Socioeconomic Characteristics of the Respondents.

Information on socioeconomic characteristics was computed. As revealed on table one, the mean age of the respondents was 52.01 with standard deviation of 7.77 revealing that majority of the respondents were still in their active age. Male (88.10%) constitutes the majority while 89.5% were married. The result corroborates Farinde (1995) that a larger proportion of married people reside in rural areas. Larger proportion, 80.0% practiced farming. Only 2.5% were civil servant. In the file of occupation characteristics, it was revealed that 61.4% engaged in secondary occupation.

The main of household size was 10 with SD of 3.23. result further shows that 57.1 percent spent between 1 – 6 years in school while minority 11.1% spent 13 years and above in school. This might have a greater effect on their consumption pattern due to their exposure and interaction with their peers from different cultural background during schooling.

Dietary Diversity of Selected Food

Identification of dietary diversity of selected food was examined. Results on table two revealed that the grand mean of 0.86 for cereal and tubers was obtained. It was observed that those foods that score above the grand mean have high consumption of the food group (cereal, root and tubers) and those that scored below the ground mean have low consumption of the food. Food mostly consumed in this group are yam and products (mean = 0.91); maize and product (mean = 0.97); plantain and products (mean = 0.73); millet (mean = 0.55) and rice (mean = 0.90). The reason for high consumption of these foods could be due to the processing technique, availability, accessibility and perception about the food.

Further on this note is meat and meat substitutes. The grand mean for meat and substitutes is 0.73. Those with high diet diversity in this group according to the table were fish (mean = 0.95); bush meat (mean = 0.93); chicken (mean = 0.90); snail (mean = 0.95); beef (0.80), legumes/ pulses/ nut (mean = 0.87) and goat meat (mean = 0.77). Those with low diet diversity were soya cheese (mean = 0.58); Turkey (mean = 0.52); mushroom (mean = 0.99) and insect (mean = 0.29). The low diet diversity in some food could be due to either processing technique, availability of such food (Turkey); effect of culture (insect) and others. This act may contribute negatively to the consumption level of food that shows low dietry diversity.

Testing of the Null Hypothesis

Relationship between the selected socioeconomic characteristics of the respondents and food consumption pattern in the study area was sought. The correlation results shows that year of residence ($r = 0.128; \leq 0.01$) had positive and significant correlation on diet diversity and food consumption pattern. This implies that year of residence had positive and significant correlation at $p \leq 0.01$ level of significance. It could therefore be deduced that the longer the year of residence, the more the experience and knowledge on food consumption.

This shows that the more the year of residence in the community, the better one accustomed to the food consumed in the area. This implies that the higher the year of residence, the higher the food consumption pattern.

Findings from inter-correlation result also shows that age and year of residence ($r=0.3344 \leq 0.01$) had positive and significant contribution to one another. This implies that the more the age of the respondents, the more the year of their residence. Correlation results further reveals that food types ($r = 0.290; p \leq 0.001$) had positive and significant contribution with food consumption pattern. Diet diversity index ($r = -0.312; P \leq 0.01$) had negative but significant contribution with food consumption pattern.

The coefficient of determination shows that food type ($r^2 = 0.054$). This show that food type index contributed 8.4% to food consumption 9.7% to food consumption pattern. This shows that both the diet diversity and type significantly contributes to food consumption pattern in the study area.

Summary, Conclusion and Recommendations

Varieties of staple foods exist in Nigeria and are vary from culture or ecological zone to another. The producer of these food are mostly subsistence and/or smallholder farmers who most often consumed leftover on their farm after selling food products from their farm. They just eat foods without consideration for quality and adequate diets. Even, in the previous study it was confirmed that most rural dwellers do not eat the right type, quantity and quality of food they need to live a healthy and productive life (UNDP, 1998).

This study made an exploration of socio-economic and dietary diversity of food consumption in Oyo State. Result of multi-staged sampling process produced 440 (four hundred and forty) respondents for the study. Result revealed that yam, maize, plantain, millet and rice had high consumption rate due to varieties of processing techniques available, accessibility and perception about the food. Other foods with high dietary diversity were fish, bush meat, chicken, snail, beef, legumes and goat meat. There were also strong relationships between year of residence and food consumption pattern. Correlation result further reveals that food types determine to a greater extent the food consumption pattern in the study area.

It is therefore, recommended that a coordinated effort by the government should be in place to train rural household on nutrition and its adequacy in terms of adequate diet for good health of the rural household. This would call for the recruitment of qualified nutritionist/dietetics to educate people on nutritive value of foods. Traditional food system should also be enhanced in such a way that important nutrients are retained during food preparation process.

Table One:- Distribution of Respondents' According to Cultural and Socioeconomic Characteristics of the Respondents .

N=440

Age(years)	Frequency	Percentage	Mean	Std
>30	04	0.9	52.01	7.770
31-60	388	88.2		
61 and above	48	10.9		
Gender				
Male	379	86.1		
Female	61	13.9		
Marital status				
Married	394	89.5		
Widowed	27	6.1		
Separated	09	2.1		
Divorced	06	1.4		
Main occupation				
Farming	356	80.9		
Trading	61	13.9		
Artisan	12	2.7		
Civil servant	11	2.5		
Sec. Occupation				
Having secondary Occupation	270	61.4		

Source: Field survey, 2010

Distribution of Respondents' According to Household Size, Years of Residence and Years of Schooling

N = 440

Characteristics	Frequency	Percentage	Mean	Std
Household size				
1-5	142	32.3	6.88	3.23
6-10	268	60.9		
11-15	16	3.6		
16 and above	14	3.2		
Years of residence				
>10	75	17.1	26.73	15.72
11-20	12 2	27.7		
21-30	103	23.4		
31-40	62	14.1		
41-50	45	10.2		
51-60	25	5.7		
61 and above	08	1.8		
Years of formal education				
1-6	251	57.1	7.76	5.47
7-12	140	31.8		
13 and above	49	11.1		

Source: Field survey, 2010

Table Two:-Distribution of Respondents According to Dietary Diversity on Cereal, Roots and Tubers

Food group	Examples	Mean	STD	Grand mean
Cereals/grains/roots/tubers	Rice	0.90	0.281	
	Millet	0.55	0.498	
	Maize and products(Eko and Ogi)	0.97	0.163	0.86
	Cassava products(Fufu/Gari/Lafun)	0.90	0.272	
	Yam and products(Porridge and pounded yam)	0.91	0.804	
	Plantain and products(Roasted,boiled, porridge and flour)	0.95	0.214	

Source: Field survey, 2010

Correlation analysis showing relationship between respondents' socio–economic characteristics and food consumption pattern

Variables	Correlations (r)	Determination(r^2)
Age	0.027	0.00072
Household size	0.006	0.00004
Year of residence	0.128**	0.0163
Year of formal education	0.084	0.0071
Income	0.054	0.0029

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Summary of linear correlation and coefficient of determination showing relationship between food type, diet diversity and food consumption pattern

Variables	Correlation (r)	Coefficient of determination(r^2)
Constant		
Food type index	0.290**	0.0841
Diet diversity index	-0.312**	0.0973

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Field survey, 2010

References

Anita, T. (2001). *Food and Nutrition.*Oxford University press, New York pp. 1-10

Barasi, M.E. (2002). *Human Nutrition: A health perspective.*University of Wales institute Cardiff U.K New York. New Delhi pp. 3-15

Dibsdall, L.A., Lambert,N., Bobbin, R.F., and Frewer, L.J.(2003). Low income consumers' attitudes and behaviour toward accessibility,availability and motivation to eat fruit and vegetables.*Public Health Nutrition* 6(2):159-68

Farinde A.J. (1995). Factors associated with the effectiveness of the training and visit extension system of the Lagos State Agricultural Development Progrmme, Nigeria. *An unpublished Ph.D Thesis.* Department of Agricultural Extension and Rural Sociology Obafemi Awolowo University pp 114-117

Laniran, A.M.(1995).Standardization of Traditional Recipes.*Unpublished M.Sc Thesis,*Department of Human Nutrition, Faculty of Basic Medical Sciences, College of Medicine, University of Ibadan ,Ibadan, Nigeria. Pp 35-60

UNDP (1998). Human Development Report New York: Oxford University Press.