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Rural Households Food Availability and Affordability In Osun State, Nigeria

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ABSTRACT

The level of poverty and food insecurity in developing countries especially in Nigeria is high. The study investigated rural dwellers' seasonal household food availability and affordability. Multi-stage random sampling procedure was used in the selection of 388 respondents. Both qualitative and quantitative measures were used in data gathering. Data collected were analysed using frequency, percentages and chi-square. Sixty eight percent of the respondents are male, 82.0 percent are married, 80.9 percent are from male headed households, 18.3 percent had no formal education while significant percentage of the rural dwellers are Muslims. Findings from the study revealed that food that contain carbohydrates, minerals, vitamins and plant proteins are moderately available for rural dwellers in both seasons. A high percentage of rural dwellers in the study areas could only afford food items that contain carbohydrates (78.6%) minerals and vitamins (53.4%) on a moderate level in both seasons, while about 69.8 percent could not afford animal proteinous foods in both seasons. The study concluded that home economics extension workers and nutrition educators are yet to organize fruitful developmental nutrition oriented programmes in the areas used for the study. Development efforts should therefore focus on improving the rural dwellers household food and nutrition security through the introduction of underutilized crops and rearing of small ruminants within rural dwellers.

INTRODUCTION

Over the years, various stakeholders have been committed to the upliftment of the food sector in Nigeria since the attainment of independence. Such stakeholders include government, the organized private sector, development agencies, non Governmental Organisations (NGOs), democratic society, community based organisations (CBOs) and farmers. Despite all the measures introduced by the aforementioned stakeholders, it is very clear that food insecurity still persists. Food insecurity is a significant issue in Nigeria because average calorie and protein intake is only at the threshold of adequacy. According to Olayemi (1995), at least 41 percent of the population is food-insecure, with 16 percent being severely undernourished.

Poverty is a major reason for food insecurity, and indeed, food security is used as an indicator of degree of poverty. This implies that people living in poverty are also at risk of food insecurity. According to Okunmadewa (2002), almost a billion people in the world overline in absolute poverty and suffer from chronic hunger. Presently in Nigeria, poverty and hunger are on the increase, and food production activities had not result in poverty reduction, hunger and malnutrition. Child malnutrition, which is the single and most outstanding index for examining welfare of the nation, still persists with increased infant and maternal mortality (MDG, 2004).

The bulk of the Nigerian population dwells in the rural areas and the economy of the rural inhabitants is dominate by agriculture. In Nigeria, many rural households are unable to meet the nutritional needs of their members. It is becoming more difficult for breadwinners to provide food, which is a basic family need for their dependents. This gives a sense of non-accomplishment to the breadwinners and predisposes him or her to have low self-morale, an index of psychological unwellness (Sokoya, 1998). There are important differences in factors affecting household food security between rural and urban households in Nigeria. In the rural areas, food security is primarily a function of food production and cash income earnings from agriculture and other livelihood activities unlike urban areas where people primarily engage in secular jobs and collect wages to purchase food for their household members (Ajala, 2005).

The seasonal variations of food availability and affordability affect household food security in rural areas. Rural households tend to suffer from hunger during the planting seasons. This critical period usually confines the household's food consumption patterns to be starch-based with little or no protein intake. This may likely result to widespread protein energy malnutrition among the rural population.

A nation is food secure when majority of the population have access to nutrition and adequate diet in the required quantity, consistent is also a matter of both limited food availability and diet in the required quantity, consistent is also a matter of both limited food availability and restricted access to food. According to Sen (1981), food insecurity existed in situation where food was available but not accessible because of problems in people's entitlement to that food. Food entitlements of rural households derive from their own production, income, gathering of non-timber forest products, assets, migration, community supports and so on. This implies that a number of socio-economic variables have an influence on rural households' access to food.

The results of a nutritionally inadequate diet are not always visible, since most undernourished people are thin but not emaciated. However, undernourishment leads to a lower nutritional status or under nutrition, to which the body adjusts by slowing down its physical activity, and in the case of children, growth. Food insecurity also results in lack of social and human capital, fatigue, worry, disrupted family dynamics and aggression. The strength of a nation depends on the strength of its people. Healthy, strong and well-nourished people will have the energy and courage to work, learn, solve problems and live fulfilled lives. Well-fed citizens are creative and productive citizens who assist in advancing civilization to new heights. Development represents the process where by changes are effected within any society to achieve progress given access to basic social services and enhance factors that will generate economic growth, regenerate the environment and empower rather than marginalize the people (Akinyele, 1999).

It is therefore pertinent to assess the respondents' food availability and affordability in Osun State, Nigeria.

METHODOLOGY

The study was carried out in Osun State. Osun State had a population of 2.53 million people (NPC, 1991). Using the annual population growth rate of 2.7%, its population is estimated as 3.25 million as of 2002. It has an area of approximately 8.802 square kilometers.

Agriculture is the major source of livelihood for the teaming majority of the people in the state. Prominent among the available food crops in the state are cassava, cocoyam, maize, rice, sweet potatoes, yams, cowpea, groundnut and green vegetables. The major cash crops produced in the state are coffee, rubber, kolanuts and oilpalm. Other livelihood

activities of the rural dwellers are weaving, processing, smithing, leather working, food vending, livestock rearing, hunting and gathering NTFPs.

Data were gathered with the use of structured questionnaire and focus group discussions. The state was selected on the basis of its contribution to arable and tree crop production in the region. The target population for the study comprised of all adult rural dwellers in Osun State. Multi-stage random sampling procedure was used in the selection of respondents. The 30 Local Government Area (LGAs) in the state were stratified into 2 agro-ecological zones i.e. rain forest and derived savanna zones. Irewole (rain forest) and Ifelodun (derived savannah) LGAs were randomly sampled for the study. There are ten wards in each of the LGAs selected and an average of 10-15 communities per ward. Two communities each were randomly selected from each of the 20 wards covering the two LGAs selected. Twenty-five adult rural dwellers were interviewed from each of forty communities selected making a total sample size of 500 respondents. However, about 388 questionnaires were useable for the data analysis and the response rate was 77.6%. The composition of the sample size is as shown in Table 1.

TABLE 1: Sample selected for the study

Ecological	LGA	Headquarter	No. community used	No. of respondents selected	No. of usable questionnaires
Rainforest zone	Irewole	Ikire	20	250	209
Derived Savannah zone	Ifelodun	Ilorin	20	250	179
Total			40	500	388

Content and construct validity were consulted on the instrument to know how well the behavioural constraints covered by the instrument match those specified in the stated objectives. The household food security scale was validated using "known group" method (Patel and Anthonio, 1974). The reliability of the instrument was conducted using test retest method and this procedure resulted in a reliability of (r 0.82).

Variables for the study were measured thus: Household food security level of rural dwellers was measured using availability and affordability as indicators.

Availability was sought using a 3 point scale of always available (3), occasionally available (2) and never available (2).

Affordability of consuming food items on 4 point scale of 5-7 times (4), 4-3 times (3), 2-1 times (2) and do not eat at all (1). The foods included in the scale were grouped into the basic food nutrients i.e. carbohydrates, plant proteins, animal protein, minerals and vitamins, fats and oil.

RESULTS AND DISCUSSION

Respondents Socio-Economic Characteristics

Results of the study show that 68% of the respondents are male. This implies that majority of the respondents were male even though the role of women in household food activities is very important. Development practitioners are still making efforts to recognize and document the enormous roles played by the women folks in household food security issues. The percentage difference between males and females as shown in table 2 could

have also arise from the random sampling procedure adopted by this study; which gave every respondents equal chance irrespective of sex. With regard to household headship. Table 2 shows that most of the respondents households are headed by men, (80.9%), however, there is clear indication that some women head households and these women are likely to be either single, widowed or divorced women, or those whose husbands have migrated to towns or citrus to ensure better livelihoods. Majority of the respondents (78.3%) had no formal education. Findings by the National Population Commission (NPC, 1991) also revealed that the proportion of rural dwellers with no education is almost doubled that of urban dwellers. Education is an essential tool for development and it enables individuals to broaden their minds and assists in taking important decisions regarding accepting of new innovations. Agricultural and home economics extension workers should recognize that a large percentage of the rural dwellers are not educated and this will affect how messages on food and nutrition issues will be disseminated to them. Findings on Table 2 also revealed that over half of the respondents sampled for the study are Muslims (60.85). Household food consumption patterns that conflict with religious beliefs and practices may not augur well for any community. For example, the rearing of animals like pigs for consumption in a Islamic community may not be allowed.

TABLE 2: Respondents personal characteristics (N = 388)

Variables	Frequency	Percentages
Sex		
Male	263	68.0
Female	125	32.0
Total	388	100.0
Household headship		
Husband	314	80.9
Wife	50	12.9
Other male relations	24	
Total	388	100.0
Educational level		
No formal education	303	78.3
Some primary	34	8.6
Completed primary	18	4.7
Adult literacy	3	0.8
Some secondary	11	2.8
Completed secondary	8	2.0
OND/NCE	7	1.8
University	4	1.0
Total	388	100.0
Religion		
Christianity	147	38.0
Islam	236	60.8
Traditional	3	0.8
Others	2	0.4
Total	388	100.0

Household Food Availability Level

Respondents' level of food availability within households was measured on a 3 point scale. Result of analysis revealed a maximum score of 120 points, a minimum score of 40 points and a mean score of 71.0 approximately. Therefore, respondents with a score of between 94 -120 were categorized as always having food available, while respondents with a score between 67 93 as moderately having food available and 40 66 points as rarely having food available. Result of analysis on table 3 revealed that majority (59.8%) of the respondents had food available moderately, while 30.7% of the respondents rarely had food available.

Further information gathered during Focus Group Discussion (FGD) revealed that foods that contain carbohydrates, minerals and vitamins and plant proteins are moderately available for rural dwellers in the study area. This analysis also revealed that 62.6 percent of the respondents rarely have access to foods that contain animal protein in both seasons. These findings has serious implications on the household food security level vis a viz the nutritional status of rural dwellers in the study areas. Findings from the qualitative aspect of the study also revealed that the proteinous foods that are mostly consumed are obtained from plant sources (beans, groundnut, fermented locust beans). Rural dwellers in the study areas are likely to lack some essential amino acids that cannot be manufactured by the body. Failure to consume first class proteinous foods like fish, meat, eggs, crayfish, which yields sufficient supply of essential amino acids makes the body to slow down on its ability to produce new proteins. This will consequently slow down immunity system thereby increasing the risk of infections diseases (protein energy-malnutrition, marasmus, kwashiorkor) and eventually death.

Furthermore, the moderate availability level of food also revealed that rural dwellers in the study areas do not have access to nutritious and adequate diets at all times. In Fidiwo Community it was observed that inappropriate storage due to lack of electricity has led to wastage of some fruits and vegetables (FGD, 2005). Substantial amounts of vitamins in foods could be lost from the time vegetable are harvested before consumption. Qualitative aspect of the study also revealed that rural women prepare their vegetables in such a way that almost all the nutrients are lost before consumption. Heat, light, exposure to the air, cooking in water and alkalinity are all the factors that could destroy vitamins and minerals (Wardlow and Kessel, 2002). Lack of inadequate vitamins in the diet will lead to diseases like rockets and osteomalacia (lack of vitamin D) poor vision (lack of vitamin A), excessive bleeding (lack of vitamin K) Aneamia (folic acid) and so on. Rural dweller that are attacked with such diseases will not be able to engage in more profitable livelihood activities that will boast their household food security level and ensure sustainable livelihoods.

Rural dwellers do engage in farming and other rigorous activities and they are likely to need adequate energy giving foods on a consistent basis. Muscles do rely on a dependable supply of carbohydrates in order to support these intense physical activities. FGD, sessions revealed that rural dwellers' major source of carbohydrates are from root tubers. This finding implies that some of the rural dwellers may become obese through the over-consumption of food items like yam, cocoyam, sweet potatoes and cassava.

TABLE 3: Distribution of Respondents by Level of Food Availability

Level of Availability	Rainforest (%)	Derieved Savannah (%)	Total (%)
Rarely (40-66)	39 (10.1)	80 (20.6)	119 (30.7)
Moderately (67-93)	141 (36.3)	91 (23.5)	232 (59.8)
Always (94-120)	29 (7.5)	8 (2.1)	37 (9.5)
Total	**209 (53.9)**	**179 (46.1)**	**388 (100.0)**

Figures in parenthesis are percentages

Source: Field Survey (2005)

Household Food Affordability Level

Affordability was measured on a 4 point scale and result of analysis shows a minimum score of 40 and maximum score of 162, with a mean score of 84.0 approximately. Therefore, respondents with a score of between 40 60 points were categorized as rarely affordable, 81 -120 as moderately affordable and 121 162 as very affordable. Result of analysis on table 4 shows that majority of the respondents (55.4%) can only afford food at moderate level. These findings actually give insight into the poverty level of rural dwellers. The fact that they produce some of these crops should not have prevented them from buying some after consuming the ones they produced.

Findings from FGDs revealed that majority of the rural dwellers cultivate most of the food items they consume on a subsistence level. They also lack skills; credits and educational background that will enable them to engage in other productive livelihood activities that would have assisted them in coming out of the vicious cycle of poverty, ensure sustainable livelihoods and boost their household food security levels. The fact that about 70 percent of these rural dwellers could not afford animal proteinous food items implies that they lack financial capacity to purchase these essential foods. These findings agree, with FAO (1997), which explained that animal foods are not regularly served as a main component or meals, as they tend to be too expensive for regular use by the poorer sections of the community. The following shows the kind of opinions that were common in FGD sessions on frequency of consumption of dishes from animal protein.

"..... We seldom drink milk and we do not have access to cow meat here. We believe that milk is for people that are sick and are on admission in the hospital. Our major sour of animal protein is obtained from rats hunted during the dry season. In dry seasons, bush rats are always available and many households consume meat regular. However, meat consumption always decrease dramatically during wet seasons. The major substitution we have for meat are different types of vegetables and mushrooms when ever they are available....."

These findings, therefore suggest that rural dwellers need to be informed on food that are nutritious and adequate and rearing of live stock such as pigs, goats, sheep, rabbits and poultry with the aim of increasing the amount of protein from animal sources in their household food consumption patterns.

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