

ASSESSMENT OF FOOD INSECURITY AMONG RURAL HOUSEHOLDS IN ABIA STATE

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ABSTRACT

Background and objective: Food insecurity and hunger are forerunners to nutritional, health, human and economic development problems. The study was carried out to assess food insecurity and its effects on rural dwellers in Oloko and Oboro in Ikwuano Local Government Area, Abia state.

Methods: A random sampling technique was employed in selecting 400 households in Oboro and Oloko villages, in Ikwuano Local Government Area. A validated questionnaire was used to elicit information from the respondents. The study was a cross-sectional study. Data was analysed using descriptive statistics and presented in tables and figures

Results: The study showed that a good number (75.5%) of the households were aware of food insecurity. Some (16.2%) households indicated they had experienced food scarcity, which was mostly as a result of (75.0%) crop failure which led to reduction in frequency of food consumption in 67.0% of the respondents. A good number (7.2%) worried that they did not have enough to eat, while 7.2% worried that they may have enough but not the kinds they want. Majority (71.0%) of the households sometimes worried that they do not eat a balanced diet. A total of 9.8% of the households reduced meals for family members. Adults (15.0%) skip meals because food wasn't enough to go round (8.5%) while (1.2%) were in order to allow children have enough.

Conclusion: This study has revealed that a good number (16.2%) of rural households have experienced food insecurity, which made them reduce the frequency of food consumption (67.0%), reduce meals for family members, and skip meals. Using the food security scale developed by USDA, it has been found that majority of the studied households are food insecure without hunger.

Key words: *Food-Insecurity, Rural, Households,*

INTRODUCTION

Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (1). Household food security is the application of this concept to the family level, with individuals within households as the focus of concern. It consists of four essential parts; food availability, food access, food utilization and stability. (1).

Food insecurity exists when people do not have adequate physical, social or economic access to food as defined above (1). Food insecurity could be chronic; this means it is long term and persistent, it could also be transitory; which means it is short term and temporary (2).

Household food security can be measured in four categories; Food Secure with households showing no or minimal evidence of food insecurity, Food insecure without hunger, with evidence of food insecurity in household members' concerns about adequacy of the

household food supply and in adjustments to household food management, including reduced quality of food; Food insecure with hunger (moderate) with evidence in the reduction of food intake for adults in the household to an extent that implies that adults have repeatedly experienced the physical sensation of hunger; and finally Food insecure with hunger (severe), at this level, all households with children have reduced the children's food intake to an extent indicating that the children have experienced hunger.(3).

Household food security is necessary but of itself not sufficient to ensure adequate individual nutrition. It may be possible to be malnourished in a food secure household through the effects of disease, inadequate care or inequitable food allocation. While household may be secure in terms of calories, dietary quality will determine the likelihood of micronutrient deficiencies occurring in individuals. (4). It should also be pointed out that it may be possible for an individual to be well nourished in a food insecure household, although this

will usually be at the expense of other individual's nutritional status, due to preferential food allocation and care. In the 1980s, shift of emphasis from food production via food security to household food security brought the household into the picture as a target and unit of analysis (5).

Households are the basic institutional units of nutrition related action (6). The first contact with the individuals outside world is the household; then the immediate neighbourhood followed by the village, ward, division, district and eventually higher levels. It is at the level of the household that malnutrition manifests and it is the level at which the immediate causes of malnutrition are most apparent (7).

Most of the world's hungry people live in rural areas and depend on the consumption and sale of natural products for both their income and food. It tends to be

STUDY DESIGN

This is a cross sectional survey work.

AREA OF STUDY

The study was carried out in Ikwuano local Government Area (L.G.A.) in Abia state. Ikwuano is a developing Local Government with mixed population of civil servants, traders and farmers. It has an area of 281km squared and a population of 137,993 at the 2006 census. The postal code of the area is 440. The foods cultivated include plantain, cassava etc.

POPULATION OF STUDY

The population of this study comprises households in Oloko and Oboro in Ikwuano Local Government Area.

SAMPLING AND SAMPLING TECHNIQUE

$$\text{Sample size } (n) = \frac{Z^2 \times P(100-P)}{X^2}$$

Where n= sample size

P= Percentage of food insecurity.

Z = Confidence interval taken at 95% degree of probability which is 1.96%

concentrated among the landless or among farmers whose plots are too small to provide for their needs. For young children, lack of food can be perilous since it retards their physical and mental development and threatens their very survival. (8)

The ability to cope with food insecurity determines vulnerability to food insecurity. "Coping strategies are short term, temporary responses to declining food entitlements which are characteristic of structurally secure livelihood systems" (9). Coping strategies could be reversible, causing no lasting damage to livelihood or irreversible causing permanent damage (10). The general objective of this study was to assess household food insecurity and common health conditions of the households in rural communities in Abia State.

X^2 = width of confidence interval at 5% level of probability.

$$n = \frac{4 \times 50(100-50)}{25}$$

$$= 400$$

In order to make space for attrition, 16 was added to the sample size, making it 416

PROCEDURE FOR DATA COLLECTION

A random sampling technique was employed in selecting 400 households in Oboro and Oloko villages, in Ikwuano Local Government Area. A validated questionnaire was used to elicit information from the respondents. The study was a cross-sectional study

STATISTICAL ANALYSIS

Simple descriptive statistics such as percentages, and frequency distribution were used in analysing the data obtained.

RESULTS

HOUSEHOLD FOOD INSECURITY

The households' experience of food insecurity, the reasons and duration are presented below. Also the families most preferred/ consumed food and how it is affected by food scarcity are also presented.

Table 1: Experience of food scarcity

Variables	Frequency	Percentage
Have experienced	65	16.2
Not experienced	327	81.8
No response	8	2.0
Total	400	100.0

Table 1 revealed that (16.2%) of the respondents agreed that their household had suffered food scarcity in the past while 81.8% said they haven't suffered or experienced food scarcity within their household. Household food security is defined as "access by all people at all times to the food needed for a healthy life"(11). "Household food security requires a fair

degree of stability in food availability to the household both during the year and from year to year and access of each family member to sufficient food to meet nutritional requirements"(12)

Table 2: Cause of Food Scarcity

Cause	Frequency	Percentage
Illness of mother	8	2.0
Crop failure	300	75.0
Do not know	48	12.0
No money to buy food	38	9.2
No response	6	1.5
Total	400	100.0

Table 2 indicates that majority (75.0%) of the households studied had food scarcity as a result of crop failure. Furthermore, a good number (12.0%) did not know the cause of the food scarcity. Only (9.2%) said the food scarcity was due to lack of money. Households can obtain food supplies either from their own food production or from food purchases, but more often it is through a combination of both. Some factors that help assure that communities have enough of a variety of foods at the household level are access to sufficient water, fertile land, seeds, planting materials,

agricultural implements, extension advice, credit, good storage and a sufficient number of family members who are healthy and strong enough to work on the farm and undertake off-farm employment.

A survey by Adugna and Fikadu on household vulnerability and coping strategies in southern Ethiopia revealed that majority of the households in the study area were far from fully meeting their food requirements from own production (13).

Table 3: Duration of Food Scarcity

Duration	Frequency	Percentage
3 months	5	1.2
4-6 months	16	4.0
We have recovered from it	47	11.8
I don't know	332	83.0
Total	400	100.0

Table 3 shows that a good number (8.3%) of the households did not know the duration of their food scarcity. However, 4.0% of the households said food scarcity lasted for 4-6 months while 11.8% indicated that they have recovered from the food scarcity. The duration of the food scarcity is also a good indicator of the past and present food security status of a household.

Table 4: Food mostly eaten in the households

Foods	Frequency	Percentage
yam	307	76.8
Cassava	53	13.2
Cocoyam	58	14.5
Sweet potato	101	25.2
Garri	400	100.0
Semolina	71	17.8
Rice	276	69.0
Maize	58	14.5
Millet	17	4.2
Guinea corn	13	3.2
Bread	133	33.2
Beans	400	100.0
Soya beans	400	100.0
Bambara nut	21	45.2
African yam bean	17	4.2
Beverage	8	2.0
Tea	215	53.8
Bournvita	5	1.2
Fruits and vegetable	147	36.8

Table 4 shows that yam (76.8%), garri (100.0%), rice (69.0%), bread (33.2%) and beans (100.0%) are normally eaten by the studied households. Few

(36.8%) normally eat fruits and vegetables. The ability of a household to diversify their diet goes a long way in making sure that the members of that household

maintain an appropriate nutritional status. Consumption of starchy staples is a common response to declines in income. This is in line with five country case studies of the effects of the global downturn on food and nutrition security, by Food and Agricultural

Organization of the United Nations and World Food Programme which cited dietary changes as the primary coping mechanism in each country (14).

Table 5: Effect of food scarcity

Effects	Frequency	Percentage
Not effect at all	85	21.2
Frequency reduced	269	67.0
Quality of food reduced	18	4.5
Quantity reduced	23	5.8
No response	6	1.5
Total	400	100.0

Table 5 revealed that food scarcity affected majority (67.0%) of the households by bringing about a reduction in the frequency of consumption of some foods. Also a good number (221.2%) indicated that food scarcity does not have any effect on them while few (5.8%) indicated that the quantity of their food is reduced during food scarcity. Only (4.5%) indicated that the quality of their food reduced as a result of food

scarcity. Based on the Russian Longitudinal Monitoring (1994~2000), it was reported that the use of less expensive food and consumption of home-prepared meals were prevalent coping mechanisms among low-income Russian households to protect the dietary intakes of children (15). In another study, it was reported that households consumed fewer meals, meal quality was reduced as their coping strategy (13).

Table 6: Worries in the last 12 months

Reasons	Frequency	Percentage
Your family would not have enough of all kinds of foods you like to eat	18	4.5
Enough but not the kinds you want for them	29	7.2
Sometimes, not enough to eat	29	7.2
Often, not enough to eat	5	1.2
No response	319	79.8
Total	400	100.0

Table 6 shows that a good number of the households (7.2%) worried that they did not have enough to eat. Also 7.2% worried that they may have enough but not the kinds they want. Only (4.5%) worried that their family would not have enough of all kinds of foods they like to eat. Scale items assessing worry and anxiety over future food supply are central to the concept that experiential food security scales seek to measure; these are the questions that most closely approximate perceived vulnerability, or, food

insecurity itself. Exposure to risk coupled with uncertainty about the future and the ability to manage it is likely to prompt the types of behaviours captured through other questions in the scale. In other words, whether or not any adversity is actually experienced, merely the fear that supplies will be disrupted can provoke food intake reductions and a savings response (16). Those people that experience periodic supply shocks are often better able to manage (and perhaps worry less) than people for whom it is truly a surprise (17).

Table 7: Worry that food will run out before the next harvest.

How true	Frequency	Percentage
Always true	5	1.2
Sometimes true	62	15.5
Never true	312	78.0
Undecided	21	5.2

Table 7 showed that majority (78.0%) of the households never worry that they will run out of food. Only (1.2%) always had such worries while (5.2%) were undecided. This theme corresponds to what is described as the psychological (17) aspect of

individual hunger and food insecurity (18; 19) Subsequent ethnographic studies focused on this dimension of food stress in the different populations observed that the psychosocial impacts of food insecurity on household dynamics and individual

mental health constitute a serious social threat, with consequences such as impaired learning for children,

productivity loss, and an increased need for health care(20; 21)

Table 8: Worry that the food bought didn't last

How true	Frequency	Percentage
Always true	13	3.2
Sometimes true	65	16.2
Never true	296	74.0
Not sure	26	6.5
Total	400	100.0

Table 8 revealed that many (74.0%) of the households never worry that the food bought didn't last, while (16.2%) said they sometimes worry. Only (3.2%) indicated that they always worry while (6.5%) were not sure. Work on the causes of malnutrition demonstrated that food is only one factor in the malnutrition equation, and that in addition to dietary intake and diversity, health and disease and maternal and child care are also important determinants (22). Household food security is a necessary but not sufficient condition for nutritional security. Researchers identified two main processes that have a bearing on nutritional security. The first involves the household's access to resources for food. This is the path from production or income to food. The second process involves translating the food obtained into satisfactory nutritional levels (23)

Table 9: Meal reduction by family members

Variables	Frequency	Percentage
Yes	39	9.8
No	351	90.2
Total	400	100.0
Meal skipping		
Yes	60	15.0
No	340	85.0
Total	400	100.0
Reasons		
Weight watching	8	2.0
Not enough to go round	34	8.5
Allow the children have enough	5	1.2
Religious fasting	8	2.0
No response	345	86.2
Total	400	100.0
How often		
Every month	5	1.2
Some months	50	12.5
No response	345	86.2

Table 9 shows that 9.8% of the households reduced meals for family members and 15.0% indicated that adults skip meals. The reasons were weight watching (2.0%) and not enough to go round (8.5%). However, some (1.2%) said it was in order to allow children have enough. Only 2.0% was due to religious fasting. Use of questions pertaining to "adults reducing food intake" is based on the assumption that, under budget pressure, adults will sacrifice in order to protect the food consumption of their children. In households where there are no children, the presence of adult hunger is the most severe manifestation of a hypothesized 'food security continuum'. Earlier

studies have also shown that households follow rationing strategies in the situation of food insecurity. It have been reported that households reducing number of meals per day as a coping mechanism (24). Research also found that women cut down on number of meals consumed per day during food insecurity situation (25). It has been identified that food insecure households following strategies such as restricting consumption of adults to make children eat, feeding working members of households at expense of non-working members, reducing or skipping meals eaten in a day (26).

Table 10: Ability of household to eat desired meal

How often	Frequency	Percentage
Never	69	17.2
Rarely	161	40.6
Sometimes	134	33.5
Often	16	4.0
Very often	10	2.5
No response	10	2.5

Table 10 shows that majority (33.5%) of the studied households sometimes ate their desired meal, while 40.6% rarely ate a meal of their choice. Also a good number (17.2%) never ate a meal of their choice, 4.0% ate the desired meal often. Only (2.5%) of the respondents ate their desired meal. The ability of households to afford desired meal is another important aspect of food

security is stability. The family or household must have the ability all year round to produce or procure the food its members require. The food must provide for all family members essential micronutrients and energy requirements, plus their wants, or desirable allowances provided (12).

Table 1: Loss of weight in the last 12 months

Weight loss	Frequency	Percentage
Very often	5	1.2
Often	29	7.2
Sometimes	318	79.5
Never	17	4.2
Not sure	31	7.8
Total	400	100.0
Reasons		
When they were sick	334	83.5
When we did not have enough food	10	2.5
When they forgo or skip meals	34	8.5
No response	22	5.5
Total	400	100.0

Table 11 shows that majority (79.5%) of the households indicated weight loss in the last 12 months. The reasons were sickness (83.5%) and forgoing meals (8.5%). However, some households indicated that weight loss was as a result of not having enough (2.5%) food. In defining and measuring food security, there is a notion

that food quality and quantity is compromised. This notion is borne out of a research finding that women and families reported compromising on portion sizes, skipping meals or eating the same food over and over again.

4.5 HEALTH STATUS OF THE HOUSEHOLD MEMBERS

The major health problems in the households' studied and the reasons for visiting the hospital in the last 1 month are presented below.

Table 13: Major health problems.

Health problems	Frequency	Percentage
Eye problem	94	23.5
Cold, cough, Pneumonia	15	3.75
Lack of blood	5	1.25
Malaria	286	71.5
Total	400	100.0

Table 13 showed that most (71.5%) of the households had malaria as a major health problem. Furthermore, 23.5% and 3.75% had Eye problem and cold, cough,

Pneumonia respectively as the major health problem. According to (14) family members must be in good health status in order to benefit from the food consumed.

Table 14: Reason for visiting the hospital in the last 1 month.

Adults	Frequency	Percent
Fever	59	14.8
Lack of blood	6	1.5
High blood pressure	10	2.5
Diabetes	4	1.0
Arthritis	26	6.5
Malaria	207	51.8
No response	88	22.0
Total	400	100
Children		
Fever	34	8.5
Diarrhoea	85	21.2
Cold cough, pneumonia	11	2.8
Malaria	64	16.0
No response	206	51.5
Total	400	100
Elderly		
Fever	21	5.2
High blood pressure	5	1.2
Arthritis	14	3.5
Cough/cold	5	1.2
Malaria	5	1.2
No response	350	87.5
Total	400	100.0

Table 15 revealed that majority of the adults (51.8%) visited the hospital as a result of malaria, while 14.8% were as a result of fever. Only 6.5% were as a result of arthritis and few (2.5%) were as a result of high blood pressure. Furthermore, majority (21.2%) of the children went to the hospital because of Diarrhoea, while (916.0%) were because of Malaria. Also a good number (8.5%) were as a result of fever while few (2.8%) were due to cough, cold, pneumonia. In

addition to household food security, people have to be healthy to get the full nutritional benefits from food otherwise some of the nutrients will be wasted. This means the nutrients are either passed through the digestive system unabsorbed, as in the case of someone suffering from diarrhoea, or consumed by parasites such as worms (14)

CONCLUSION

This study has revealed that a good number of rural households are food insecure. Using the food security scale developed by USDA, it has been found that majority of the studied households are food insecure without hunger. This study also showed that the coping

strategies adopted by some of the households are reversible coping strategies, which in the long run are not damaging to their livelihood.

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