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FOOD INSECURITY AMONG THE ELDERLY IN AKWA IBOM STATE

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ABSTRACT
Food insecurity is a major challenge to the well-being of the elderly in Nigeria. This study examined the problem of food insecurity among the elderly in Akwa Ibom State. 300 elderly persons aged 70 and above were purposely selected as sample for the study. A structured questionnaire adapted and reviewed from Household Food Insecurity Access Scale (HFIAS) was used for data collection. Data collected were analysed using frequency counts, percentages and mean. Findings revealed that majority of the elderly were severely food insecure. Poverty, functional limitations, social isolation, health problems and lack of help in activities of daily living etc, were identified as predictors of food insecurity among the elderly in the study. Coping strategies used by the elderly to manage food insecurity include trade-offs, buying less nutritious foods, informal support, compromising medical needs etc. Recommendations were made for the elders to adopt better coping strategies; individuals should plan ahead for old age, while the government should institute social security scheme and other food and nutrition programmes for the elderly.
Keywords: Food insecurity, elderly, poverty, functional limitations, health care, old age.

INTRODUCTION

Food insecurity is a major challenge to the well-being of the elderly in Nigeria. Food insecurity is the lack of regular access to a sufficient quantity and quality of food for a healthy life (Medanth, 2012). Food insecurity is also the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways (Quandt, *et al.,* 2001). Household food insecurity results when food is not available, cannot be accessed with certainty in socially acceptable ways or is not psychologically utilised completely (Frongillo & Nanama, 2006). Quandt *et al.* (2001) maintain that when such foods are unavailable or a person's ability to acquire them is limited, food insecurity exists.

Several factors contribute to the experience of food security among the elderly, which is at variance from other household

In the elderly, food insecurity may imply that there may be food availability but not accessible because of limited mobility, or the food may be accessible but not consumed or utilised because of impairments. Lee and Frongillo (2001) observe that food insecurity in the elderly persons is also a function of impairments, suggesting that food insecurity in the elderly persons comprises not only limited food affordability, availability and accessibility but also altered food use. Curtis (2008) observes that among the elderly, food insecurity exacerbate acute chronic diseases, leading to decreased quality and length of life. The existence and extent of food insecurity among older adults is of interest because food insecurity is considered a basic measure of population well-being (Quandt *et al.,* 2001).

members. According to Grosvenor and Smolin (2002) there are social and economic changes common in older adults that increase the risk of

food insecurity. Quandt *et al.* (2001) confirm that social and economic factors also affect the nutritional status through insufficient food or limited food choice. These factors include poverty and economic stress due to lack of income and assets, as well as to competing demands for money, such as medications, health care, transportation, and housing costs. Curtis (2008) confirms that food insecurity is most often the result of poverty and that the US Department of Agriculture has identified high costs, low wages and high tax burdens especially on low income households as factors that influence food insecurity. According to Akwa Ibom State Government Online (2011), food insecurity may be caused by the unavailability of food, insufficient purchasing power, or the inappropriate distribution or inadequate use of food at the household level.

Food Security Guide (2011) emphasises that poverty is the driver of food insecurity and that lack of money precludes the purchase of food however plentiful its availability. Food insecurity and hunger rates among the elderly households also varies by household composition, income, race and ethnicity, location, functional impairments, social isolation, reduced ability to regulate energy intake, greater susceptibility to depression, reductions in olfactory senses, poor health status and poor dentition (Global Action on Aging, n.d.). A study by Wolfe *et al.* (2003) on the experience of food insecurity among the elderly population reported that some elderly people who are food insecure sometimes had enough money to purchase food but did not have the resources to access or prepare food due to lack of transportation, functional limitations or health problems.

Certain dimensions of food insecurity are culturally and socially defined including what acceptable food is and what are socially acceptable sources. For older adults living in rural areas, several factors promote more food insecurity relative to the general populations of older adults (Quandt *et al.,* 2001). Rural elders have lower incomes and poor health than their urban and sub-urban counterparts (Glasgow, 1993, Van Nostrand, 1993). On the other hand, certain features of rural environment and characteristics of rural elders may protect against food insecurity (Quandt *et al.,* 2001). Quandt *et al.* (1994) explain that many rural elders have traditionally practiced gardening and other forms of home food production, as well as variety of food preservation techniques that help to sustain them when financial resources are strained.

Living alone may also increase the risk of food insecurity among the elderly. Nord (2002) found that food insecurity rates were higher in households with elderly men living alone (6.9%) and women living alone (6.6%). Gender is also associated with food insecurity. Being married means more regular household food preparation for men, but overall, a higher proportion of males food insecurity has been reported (Quandt *et al.,* 2001).

However many elderly people adopt various strategies to cope with food insecurity. Research on coping strategies among food insecure households show that trade – offs are often made between food quantity and food quality (Curtis, 2008). According to Coates *et al.* (2007), efforts to measure food insecurity (access) have sometimes relied on an index of coping strategies, but explain that not all coping strategies are accessible and available to all families, for example taking a loan may not be an option for extremely food insecure households. Curtis (2008) maintains that when money and resources for food are stretched, low income families and individuals may buy cheaper and less nutritious food to maximise calories in order to starve off hunger.

Many studies have been conducted in United States to measure food insecurity including some that have focused on older adults. Most of the rates of food insecurity from these studies varied widely from 5 to 40% (Quandt, *et al.,* 2001). Report from Nigeria shows that 90million Nigerians are food insecure, seventy percent of which are in rural areas (Akwa Ibom State Government Online, 2011). Research on food insecurity in Akwa Ibom State is generally scanty, but few studies show that the State is not food secure because of the incidence of poverty (Ekpenyong, 2007; Ekot and Inyang, 2007). Little attention has been given to the elders in Nigeria as a whole, and

Akwa Ibom State in particular. The purpose of this research is therefore to contribute to existing body of knowledge on food insecurity by examining food insecurity among the elderly in Akwa Ibom State.

The major objective of the research was to examine the problem of food insecurity among the elderly in Akwa Ibom State. Specifically, the study sought to; assess the nature of food insecurity among the elderly in Akwa Ibom State; identify the predictors or causes of food insecurity among the elderly in Akwa Ibom State; and determine the coping strategies adopted by the elderly in Akwa Ibom State to manage or deal with food insecurity.

MATERIALS AND METHODS

Research Design

The survey research design was adopted for the study.

Area of the Study

The study area was Akwa Ibom State, one of the 36 states in Nigeria with Uyo as the State Capital, and thirty – one 31 Local Government Areas. The state is located on the coastal south southern part of the country, lying between latitudes $4^0$321 and $5^0$331 North, and Longitudes $7^0$251 and $8^0$251 East of the Meridian, and occupies a total landmass of 7245939Sqk. The state is a major crude oil producing state and a predominantly civil service state. Others outside the public sphere are mainly farmers, and fishermen in the coastal areas, with a few others involved in local crafts such as raffia work, pottery, etc. Ibibio is the major ethnic group and Ibibio language is the major language spoken in the state, with a few dialectical differences. The people are predominantly of the Christian faith, with a few practicing traditional African religion.

Population for the Study

The population for the study consisted of all male and female elderly persons in Akwa Ibom State aged 70 and above.

Sample and Sampling Technique

A sample of 300 elderly men and women aged 70 and above was purposely selected from the three senatorial districts of the state.

Instrument for Data Collection

Structured questionnaire was the instrument used for data collection. The questionnaire as developed by the researcher was based partly on questions adapted and reviewed from Household Food Insecurity Access Scale (HFIAS) consisted three sections. Questions in Section A had to do with personal characteristics of the respondents, while section B was structured to establish the experience of food insecurity. The respondents were required to tick the appropriate responses applicable to them based on their experience in the last one month. Sections C and D consisted of a 4 point Likert scale questions with Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The questionnaire instrument was validated by two lecturers in the Department of Home Economics, University of Uyo.

Data Collection and Analyses Techniques

300 copies of the questionnaire were distributed to the respondents by the researcher and two assistants by hand. The respondents were guided to complete and return the instruments on the spot. The researcher and the assistants interpreted the questions in local dialects to non – literate respondents, and their responses were ticked in the appropriate columns in the instrument. Data collected were analyzed using frequency counts, percentages and mean scores. A mean score of 2.5 and above was accepted as agreed response, while any mean below 2.5 was rejected.

RESULTS

Personal information on the respondents shows that 48.3% of the respondents were within the age brackets of 70 – 74, 36.7% were aged 75 – 79, while 15% were above 80 years. On marital status, 41.3% were married, 52.7% were widows/widowers, 5.3% were divorced, and 0.7% was never married. Distribution on educational level shows that 15.3% of respondents were non – literate meaning they had no formal education, 24% were holders of First School Leaving Certificate (FSLC), 25.7% had WASC/SSCE/Grade 2 certificates, 10% had NCE/ Diplomas, 21% were holders of first Degree/ HND, while 4% possessed higher degrees. Distribution of respondents by income levels shows that 28% of respondents were

financially dependent, 45.3% were in the low income bracket, 21.7% were in the medium income group, and only 5% were in the high income group.

Table 1: Percentage Distribution of Responses to assess Food Insecurity among the elderly in Akwa Ibom State based on experience in the last one month.

S/N	Food insecurity Questions	Frequency(n=300)	Percentage (%) **
1	Anxiety and worry about food	167	55.7
2	Unable to eat preferred foods because of lack of resources	185	61.7
3	Eating a limited variety of food	192	64
4	Eating foods they really did not want to eat.	163	54.3
5	Eating smaller meals than considered adequate	143	47.7
6	Eating fewer meals or skipping meals in a day	128	42.7
7	Having no food of any kind to eat due lack of resources	121	40.3
8	Going to sleep hungry because there was not enough food	98	32.7
9	Going a whole day and night without eating food because of lack of food	27	9

** Multiple responses

Table 2: Frequency and Status of Food Insecurity experienced by the elderly in Akwa Ibom State

S/N	Food Insecurity Questions	Number Reporting	Frequency (%)		
			Rarely	Sometimes	Often
1	Anxiety and worry about food	167	17.96	29.34	52.7
2	Unable to eat preferred foods because of lack of resources	185	23.24	29.73	47.03
3	Eating a limited variety of food	192	18.75	33.85	47.40
4	Eating foods they really did not want to eat.	163	7.97	38.04	53.99
5	Eating smaller meals than they considered adequate	143	24.47	33.57	41.96
6	Eating fewer meals or skipping meals in a day	128	23.44	36.72	39.84
7	Having no food of any kind to eat because of lack of resources	121	22.31	42.15	35.54
8	Going to sleep hungry because there was not enough food	98	30.61	32.65	36.74
9	Going a whole day and night without eating food because of lack of food	27	44.45	33.33	22.22

Table 3: Mean scores of responses on the predictors or causes of food Insecurity among the elderly in Akwa Ibom State

S/N	Items	Mean	Decision
1	Poverty or lack of money to buy food cause insecurity among the elderly.	3.5	Agreed
2	Health problems such as diabetes, etc prevent some elderly from eating certain kinds of food thereby contributing to food insecurity.	3.03	Agreed
3	Social isolation exposes some elderly to food insecurity through consumption of less quantities of food.	2.98	Agreed
4	Lack of help in Activities of Daily Living (ADL) contributes to food insecurity in the elderly.	3.47	Agreed
5	Dental problems prevent some elderly people from consuming certain foods resulting in food insecurity.	2.83	Agreed
6	Lack of appropriate nutrition knowledge contribute to food insecurity in the elderly.	2.7	Agreed
7	Functional limitations in mobility prevent many elderly from purchasing and preparing food and increasing food insecurity risk.	3.18	Agreed
8	Lack of appetite due to changes in taste associated with ageing can contribute to poor food consumption in the elderly.	2.75	Agreed
9	Medications restrict meal times and affect absorption of nutrients in the elderly.	2.16	Disagreed
10	Depression common in many elderly may prevent them from consuming food.	2.87	Agreed
11	Culturally prescribed taboos affect access to nutritious foods by the elderly.	2.12	Disagreed
12	Poor sanitation and lack of accessibility to portable water for domestic use affect the quality of food available for consumption.	2.80	Agreed

Table 1shows the elderly responses to questions to assess food insecurity. 167(55.7%) of the respondents reported experiencing uncertainty and anxiety about acquiring food during the previous month, 185(61.7%) reported being unable to eat preferred food or having limited choices in the type of foods because of lack of resources, 192(64%) reported eating a limited variety of food and 163(54.3%) reported eating foods they really did not want to eat or personally undesirable foods. Also, 143(47.7%) of the respondents reported eating smaller meals than they considered adequate, 128(42.7%) reported eating fewer meals or skipping meals in a day, 121(40.3%) reported having no food of any kind to eat because of lack of resources, 98(32.7%) reported going to sleep hungry because there was not enough food, while only 27(9%) reported going a whole day and night without eating food because of lack of food.

Based on the responses in Table 1 to the questions to assess the experience of food insecurity among the elderly, the above table shows that from the number reporting food insecurity, majority indicated that they had the experience often and sometimes in the last one month, while few of them indicated that they rarely had the experience.

Table 3 shows that the respondents agreed to 10 out of the 12 items listed as predictors or causes of food insecurity among the elderly in Akwa Ibom State. The items agreed to were 1(3.5), 2(3.03), 3(2.98), 4(3.47), 5(2.83), 6(2.7), 7(3.18), 8(2.75), 10(2.87) and 12(2.80), while the items disagreed to were items 9(2.16) and 11(2.12). The above distribution shows that factors accepted by the respondents predictors or causes of food insecurity among the elderly in Akwa Ibom State in order of importance are poverty or lack of money to buy food, lack of help in Activities

of Daily Living (ADL), functional limitations in mobility, health problems such as diabetes, and social isolation. Others are depression, dental problems, poor sanitation and lack of accessibility to portable water for domestic use, lack of appetite due to changes in taste associated with ageing, and lack of appropriate nutrition knowledge.

Table 4: Mean scores of responses on coping strategies adopted by the elderly in Akwa Ibom state to deal with or manage food insecurity.

S/N	Items	Mean	Decision
1	Trade – offs between food quantity and quality	3.44	Agreed
2	Begging	1.93	Disagreed
3	Consuming socially unacceptable meals	2.09	Disagreed
4	Buying cheaper and less nutritious foods	3.22	Agreed
5	Stealing	1.74	Disagreed
6	Informal support from family members, church members and friends	3.01	Agreed
7	Compromising health and medical needs	2.94	Agreed
8	Scavenging	1.67	Disagreed
9	Resorting to actual hunger	2.91	Agreed
10	Taking a loan	1.91	Disagreed

Table 4 shows that the respondents agreed to five out of the 10 items listed as the coping strategies adopted by the elderly in Akwa Ibom State to deal with or manage food insecurity. The items agreed to were 1(3.44), 4(3.22), 6(3.01), 7(2.94), and 9(2.91), while the items disagreed to were 2(1.93), 3(2.09), 5(1.74), 8(1.67) and 10(1.91). The above distribution shows that the coping strategies adopted by the elderly in order of importance are trade – offs between food quantity and quality, buying cheaper and less nutritious foods, informal support from family members, church members and friends, compromising health and medical needs and resorting to actual hunger.

DISCUSSION

The results revealed that majority of the elderly are severely food insecure judging from the percentage reporting the experiencing the items in Table 1. For instance, 64% reported eating a limited variety of food, 61.7% reported being unable to eat preferred food or having limited choices in the type of foods because of lack of resources, 55.7% of the respondents reported experiencing uncertainty and anxiety about acquiring food, 54.3% reported eating foods they really did not want to eat or personally undesirable foods, 47.7% of the respondents reported eating smaller meals than they considered adequate, 42.7% reported eating fewer meals or skipping meals in a day, 40.3% reported having no food of any kind to eat because of lack of resources, 32.7% reported going to sleep hungry because there was not enough food, while only 9% reported going a whole day and night without eating food because of lack of food. Table 2 also revealed that majority of the respondents had the experience either often or sometimes in the last one month, while few of them indicated that they rarely had the experience. These findings are in line with the views of Coates *et al.* (2007) that a severely food insecure household graduates to cutting back on meal size or number of meals often, and/or experiences any of the three most severe conditions (running out of food, going to bed hungry, or going a whole day and night without eating), even as infrequently as rarely.

Table 3 revealed that factors accepted by the respondents as predictors or causes of food insecurity among the elderly in Akwa Ibom State in order of importance were poverty or lack of money to buy food, lack of help in

Activities of Daily Living (ADL), functional limitations in mobility, health problems such as diabetes, and social isolation. Others are depression, dental problems, poor sanitation and lack of accessibility to portable water for domestic use, lack of appetite due to changes in taste associated with ageing, and lack of appropriate nutrition knowledge. The revelation that poverty or lack of money to buy food had the highest mean score (3.5) as the predictor of food insecurity among the elderly in the state is not surprising judging from the poverty profile of the state. Ekpenyong (2007) in his study on food security, urbanisation and poverty in Akwa Ibom State, found that the state was not food secure because of the incidence of poverty. This also agrees with Curtis (2008) that food insecurity is most often the result of poverty, and Food Security Guide (2011), that poverty is the driver of food insecurity, and that lack of money precludes the purchase of food however plentiful its availability. Lack of help in Activities of Daily Living (ADL), functional limitations in mobility and health problems were also rated high as predictors of food insecurity in the elderly with mean scores of 3.47, 3.18 and 3.03 respectively. Many elderly people suffer physical disability and other health problems that limit their mobility, therefore requiring them to need assistance in carrying out Activities of Daily Living (ADL) including moving around the house, shopping and food preparation. Where such assistance are lacking, the elderly are exposed to food insecurity even when there is enough money and food availability. These findings are in line with Wolfe *et al.* (2003) in a study on the experience of food insecurity among the elderly population, reported that food insecure seniors sometimes had enough money to purchase food but did not have the resources to access or prepare food due to lack of transportation, functional limitations or health problems. Lee and Frongillo (2001) concludes that food security in elderly persons is associated with functional impairments, suggesting that food insecurity in elderly persons comprises not only limited food affordability, availability, and accessibility but also altered food use. Other factors identified as predictors or causes of food insecurity among the elderly in the study based on their mean scores include social isolation (2.98), depression (2.87), dental problems (2.83), poor sanitation and lack of accessibility to portable water for domestic use (2.80), lack of appetite due to changes in taste associated with ageing (2.75), and lack of appropriate nutrition knowledge (2.7). The fact that social isolation is rated highly agrees with Roberts (2000), that fewer calories are typically consumed at meals eaten alone than those eaten with other people. Since many elderly usually eat alone, they are likely to consume less food. These also confirm the observation that food insecurity and hunger rates among the elderly varies by household composition, income, race and ethnicity, location, functional impairments, social isolation, reduced ability to regulate energy intake, greater susceptibility to depression, reductions in olfactory senses, poor health status and poor dentition (Global Action on Aging, n.d.). Ekpenyong (2010) also confirms that any of these factors - endemic disease, poor sanitation, lack of appropriate nutrition knowledge etc can cause food insecurity. Ekot and Inyang (2007) maintain that poor sanitation can predispose a family to hunger and food insecurity by raising the risk for infection, and that the stress of trying to secure portable water for domestic use does affect the quality and quantity of food available. The findings of the study disagrees with other factors that could cause food insecurity in the elderly such as medications, which restrict meal times and affect absorption of nutrients and culturally prescribed taboos that affect access to nutritious foods by the elderly, thus disagreeing with Ekpenyong (2010), who identified these factors as causing general household food insecurity. The argument here may be that many elderly people do not even have access to medications due to poverty which could affect absorption of nutrients, while many also at present eat available foods without minding cultural taboos.

The findings of the study also revealed that the respondents agreed to five out of the 10 items listed as the coping strategies adopted by the elderly in Akwa Ibom State to deal with or manage food insecurity as shown in Table 4. The coping strategies adopted by the elderly in order of importance are trade – offs between

food quantity and quality, buying cheaper and less nutritious foods, informal support from family members, church members and friends, compromising health and medical needs and resorting to actual hunger. The finding that trade- offs between food quantity and quality, and buying cheaper and less nutritious foods are rated higher is in support of other researches such as on coping strategies which show that trade-offs are often made between food quantity and quality. This also supports the view that when money and resources for food are stretched, low income families and individuals may buy cheaper, less nutritious food to maximise calories in order to stave off hunger (Curtis, 2008). The respondents in the study rejected other coping strategies listed, such as begging, consuming socially unacceptable meals, stealing, scavenging and taking a loan. This also support the views of Coates *et al.* (2007) that not all coping strategies are accessible and available to all families, for example taking a loan which may not be an option for extremely food insecure households. Anderson (1990) also maintains that people should have the ability to acquire food in socially acceptable ways without resorting to emergency food supplies, scavenging, stealing or other coping strategies. The findings generally support Wolfe *et al.* (1998) that elderly food insecurity appears to follow a progression of severity beginning with compromised diet quality, followed by food anxiety, socially unacceptable meals, use of emergency food strategies and finally actual hunger.

CONCLUSION

This research focused on food insecurity among the elderly in Akwa Ibom State. Findings revealed that many elderly are severely food insecure. Poverty or lack of money to buy food, lack of help in Activities of Daily Living (ADL), functional limitations in mobility, health problems such as diabetes, and social isolation, depression, dental problems, poor sanitation and lack of accessibility to portable water for domestic use, lack of appetite due to changes in taste associated with ageing, and lack of appropriate nutrition knowledge were identified as predictors or causes of food insecurity among the elderly in the study. The coping strategies adopted by the elderly in the study to manage or deal with food insecurity include trade – offs between food quantity and quality, buying cheaper and less nutritious foods, informal support from family members, church members and friends, compromising health and medical needs and resorting to actual hunger. Finally, food insecurity in the elderly is worse than in other populations since many elderly are not able to help themselves out of the situation because of health problems, functional impairments, and limitations in mobility.

It is therefore recommended based on the findings of the study that individuals should make adequate plans for old age to ensure continued availability of resources for food. Food insecure elderly should learn to adopt better coping strategies, while the government should institute social security scheme and other food and nutrition programmes and policies for the elderly.

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