HOUSEHOLD FOOD SECURITY CHALLENGES IN LAGOS STATE, NIGERIA

Adeloye, F. F., Aminu, O. O. and Oyesola O. B.
Department of Agricultural Extension and Rural Development, University of Ibadan, Nigeria
Correspondence contact details: florenceadeloye4@gmail.com, +2348134950453

ABSTRACT

Food insecurity is still a major problem of concern among Nigerian households, hence the need to critically and empirically examine the associated challenges to food security in view of proffering solutions. This study identified households' food security challenges in Lagos State, Nigeria. Household heads were randomly sampled from 135 households in four LGAs in Lagos State, Nigeria. Data were garnered on food security status and challenges using a well-structured questionnaires. Data were analysed using descriptive statistics such as percentages and means. Inferential statistics used were Chi-square and Pearson Product Moment Correlation. Most of the respondents were married (92.6%) and had tertiary education (60.7%). The mean age was 46±18 years, while average monthly income was N97,807.41±14,5017.47. Major information sources on food security were social media ($\bar{x}$=1.65), television ($\bar{x}$=1.62) and family members ($\bar{x}$=1.48). More than half (56.3%) of the households were food secure. Prominent challenges to food security were food availability ($\bar{x}$=1.65), high cost of food ($\bar{x}$=1.47), health status of individuals ($\bar{x}$=1.47) and food accessibility ($\bar{x}$=1.39). Marital status (χ^2= 14.011, p<0.01), household size (r= -0.236, p<0.01) and monthly income (r= 0.235, p<0.01) significantly related with household food security status. The study recommends promotion of information on food security in social media and television. Also, home gardening should be encouraged among respondents so as to aid availability of and accessibility to food items.

Keywords: Food security, Challenges, Households, Information sources, Food accessibility

INTRODUCTION

The importance of food for the survival of mankind cannot be overemphasized. Food, according to Ibok, Idiong, Brown, Okon and Okon (2014) is defined as any substance that human beings eat or drink for sustenance. There is the need for man to be agile and active in its day-to-day activities if productivity is to be ensured. According to FAO (2010), food security is achieved when it is ensured that everyone at all times, have physical, social and economic access to adequate, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. In the opinion of Wusterfeld (2013), food security exists when all people at all times have physical, social, economic and adequate access to food, which is consumed in sufficient quantity and quality to meet their dietary needs and food preferences, and is supported by an environment of adequate sanitation, health services and care, allowing for a healthy and active life. Attaining food security is a challenge requiring concerted effort of the entire populace in the world. The United Nations Food and Agriculture Organisation - FAO (2015) estimated that about 795 million people of the 7.3 billion people in the world or one out of nine suffered from chronic undernourishment in 2016. It was reported that Sub-Saharan Africa including Nigeria is the region with the highest prevalence of undernourishment in the world at 23.2 percent, or almost one in every four people (FAO, 2017). The opposite of food security is food insecurity. One of the major contributor to various health related problems of human and slow pace of economic development is food insecurity and hunger (Premanandh, 2011). It is noteworthy that food security hinged on food availability, accessibility and affordability. Food availability do not necessarily connotes food accessibility and food affordability. For food to be accessible and affordable, households must have the required financial strength. Notwithstanding, it had been noted that food production in Lagos State can only meets 10-15% of the local demand; hence food crisis is inevitable in Lagos State (Academia, 2020). Owing to the fact that Lagos is one of the State with numerous economic activities contributing to the nation's economy, it becomes imperative to assess food security challenges of the populace so that appropriate measures can be put in place to combat food insecurity. Hence, this study assessed households' food security challenges in Lagos State, Nigeria. Specifically, the study described respondents' socioeconomic characteristics, identify information sources on food security, determine households' food security status and examine the challenges to food security.

METHODOLOGY

Lagos State is located in the southwest Nigeria and was created on May 27, 1967. The State lies approximately on longitude 20 42'E and 32 2'E, and between latitude 60 22'N and 60 2'N (Lagos State Government, 2019). Lagos State is very big and populous for its numerous economic activities. The population for this study consist of household heads in Lagos state. There are 20 Local Government Areas (LGAs) in Lagos State and 20% of the LGAs were randomly sampled to give four LGAs namely; Agege, Lagos mainland, Ikoyi/Obalende and Epe LGAs. Three communities were sampled each from the selected LGAs. In Agege LGA, Ogba, Ajegunle and Mangoro communities were selected; in Lagos Mainland, Otto Abule-nla and Iponri communities were selected; in Ikoyi-Obalende LGA, Obalende, Dolphin and Barracks communities were selected; while in Epe LGA, Abule Alabi, Ayesan and

Obada communities were selected. Ten households were sampled each from the selected communities in Agege, Lagos mainland and Ikoyi/Obalende LGAs, while 15 households were sampled each from the selected communities in Epe LGA. More households were sampled from Epe LGA relative to other LGAs because it is the only rural LGA; others were urban LGAs. A total of 135 households were sampled for this study from Agege (30), Lagos mainland (30) Ikoyi/Obalende (30) and Epe (45) LGAs. Information on food security and its challenges were elicited from the household heads.

Data were collected with the aid of well-structured questionnaires. A list of information sources (10) were presented to respondents on a scale of Always, Sometimes and Never with scores of 2, 1 and 0 assigned, respectively. Weighted mean score for each information source was generated and this was used to rank the information sources in order of importance. Food security status of the respondents was assessed using FANTA scale consisting of 17 statements and this was measured on a 3 point scale of Always, Sometimes and Never with scores of 0, 1 and 2 assigned, respectively. Food security index was computed for each respondents; likewise the mean of the distribution was determined. The mean was used as bench mark for categorising respondents as either food secure for respondents whose food security index was equal to and above the mean or food insecure for respondents with food security index below the mean. Challenges to food security was measured on a 3 point scale of severe challenge, mild challenge and not a challenge with scores of 2, 1 and 0 assigned, respectively. The weighted mean score for each challenge was generated and this was used to rank challenges faced by respondents in order of severity. Data were analysed using descriptive statistics such as percentages and means. Inferential statistics used were Chi-square and Pearson Product Moment Correlation.

RESULTS AND DISCUSSION

Socioeconomic characteristics

Table 1 reveals that the average age of respondents was 45.48±18.42 years, depicting that the respondents were within the working age population. Thus, they are at the advantage of engaging in livelihood activities that will help meet the food demands of their households. Respondents who were male were 50.4%, female were 49.6% and majority were married (92.6%). In attaining food security, it is expected that the married harnessed their financial resources in meeting their household food demand. Similarly, Roberts, Osadare and Inem (2019) reported mean age of 41.6±9.4 years among households in Shomolu LGA of Lagos state; also majority were married and had formal education. It was found that most households in the study area were of the Christian faith (81.5%). Majority of the respondents (88.8%) were formally educated; 60.7% had tertiary education while 14.8% had secondary education. Very few of the respondents (6.6%) had no formal education. Hence, this result indicates that most of the respondents in the study area were elites who are expected to be abreast of information on food security. It is noteworthy that education could enhance acquisition of knowledge on food security. Primary occupation engaged in by respondents include being civil servant (37.0%), trading (28.1%), farming (18.5%), artisan (10.4%) and sporting (5.9%). This result might be due to the fact that most of the LGAs sampled were urban where farming is not a predominant livelihood activities. Economic activities thrive in urban areas and there are opportunities of getting white collar jobs. It is worthy of note that a good source of income can help households attain food security. Respondents with household size between 4-6 persons (49.6%) were more compared to other household size categories: 1-3 persons (18.5%), 7-9 persons (18.5%) and > 9 persons (13.3%). The average household size of the respondents was 6.05±3.04 persons. Thus, it can be inferred that the household size of the respondents were relatively small. Households with a relatively small household size coupled with good source of income had a chance of achieving food security compared to households with large family size. It was found that 28.1% of the respondents realised more than N80,000 monthly, the amount realised by 24.4% of the respondents was between ₦40,001 and ₦60,000, 23.0% realised between 20,001-40,000. On the average, the amount realised by respondents monthly was ₦97,807.41±145,017.47. Thus, this result implies that households had requisite financial potential to attain food security. It important to note that individuals cannot live beyond their income and according to Bashir *et al.* (2010), individual income influences their food security status. The result on respondents' income is at variance with Roberts, Osadare and Inem (2019) who found that most households in Shomolu LGA of Lagos state realised less than ₦20,000 monthly.

Table 1: Distribution of respondents based on their socioeconomic characteristics (n=135)

Variables	Category	Freq	%	Mean±SD
Age	< 31	33	24.4	
	31 – 40	32	23.7	
	41 – 50	21	15.6	45.48±18.42
	51 – 60	18	13.3	
	> 60	31	23.0	
Sex	Male	68	50.4	
	Female	67	49.6	
Marital status	Married	125	92.6	
	Divorced	2	1.5	
	Separated	3	2.2	
	Widowed	2	1.5	
Religion	Christianity	110	81.5	
	Islam	21	15.6	
	Traditional	4	3.0	
Education	No formal education	9	6.6	
	Primary	18	13.3	
	Secondary	20	14.8	
	Tertiary	82	60.7	
	Vocational	6	4.4	
Primary occupation	Farming	25	18.5	
	Trading	38	28.1	
	Civil servant	50	37.0	
	Artisan	14	10.4	
	Sporting	8	5.9	
Household size	1 – 3	25	18.5	
	4 – 6	67	49.6	6.05±3.04
	7 – 9	25	18.5	
	> 9	18	13.3	
Monthly income (₦)	≤ 20,000	19	14.1	
	20,001 - 40,000	31	23.0	97,807.41±
	40,001 - 60,000	33	24.4	14,5017.47
	60,001 - 80,000	14	10.4	
	> 80,000	38	28.1	

Source: Field Survey, 2017

Sources of information

Table 2 shows that respondents in the study area sourced information mainly from social media ($\bar{x}$=1.65), television ($\bar{x}$=1.62), family members ($\bar{x}$=1.48), colleagues ($\bar{x}$=1.45) and radio ($\bar{x}$=1.30). The use of social media has been a veritable tool for information sharing in recent times.

Table 2: Distribution of respondents based on their sources of information on food security (n=135)

Information sources	Regularly	Occasionally	Never	Mean	Rank
Radio	42.2	45.9	11.9	1.30	5th
Television	65.9	30.4	3.7	1.62	2nd
Magazine	16.3	60.0	23.7	0.93	7th
Extension workers	25.2	38.5	36.3	0.89	8th
Health practitioners	5.2	39.3	55.6	0.50	10th
Family members	50.4	47.4	2.2	1.48	3rd
Colleagues	50.4	44.4	5.2	1.45	4th
Newspaper	34.1	60.0	5.9	1.28	6th
Social media	71.1	23.0	5.9	1.65	1st
Seminar	5.2	75.6	19.3	0.86	9th

Source: Field Survey, 2017

It is not surprising it ranked first as major source of information on food security among the respondents. As earlier reported, majority of the respondents were elites who had tertiary education, hence the prominence of social media and television as sources of information on food security. As rightly noted by Billedo, Amsterdam, Kerkhof and Finkenauer (2015), the utilisation of social networking sites is motivated by the need to communicate and build relationships that are socially based and useful for everyday life. It was noted that the family is still a potent source of information on a wide range of issues, food inclusive.

Household food security of respondents

Table 3 reveals that majority of the respondents had never been in a situation whereby children lose weight because there was not enough food to eat (80.0%), did not eat for a whole day because there was not enough money for food (80.7%) and never skipped meals because there was not enough money for food (73.3%) in the past 30 days. Least prominent as items in the scale that determined respondents' food security status were eating food not preferred because of lack of resources to obtain other types of food and having few kinds of food to eat day after day due to lack of resources in the past 30 days. Findings from this study implies that most of the respondents were food secure.

Table 3: Distribution of respondents based on their food security (n=135)

Items	Often	Sometimes	Never
In the past 30 days, did you worry that your household would not have enough food?	13.3	36.3	50.4
In the past 30 days, were you or any household member not able to eat The kind of foods you preferred because of poor income?	5.9	45.2	48.9
In the past 30 days, were you or any household member eat just a few kinds of food day after day due to lack of resources?	10.4	41.5	48.1
In the past 30 days, did you or any household member eat food that you preferred not to eat because of lack of resources to obtain other types of food?	4.4	54.1	41.5
In the past 30 days, did you or any household member eat smaller meal than you felt needed because there was not enough food?	5.9	45.9	48.1
In the past 30 days, did you or any household member eat fewer meals in a day because there was not enough food?	9.6	37.0	53.3
In the past 30 days, was there ever no food to eat at all in your household because there were no resources to get more?	4.4	23.7	71.9
In the past 30 days, did you or any household member go to sleep at night hungry because there was not enough food?	4.4	20.0	75.6
In the past 30 days, did you or any household members go a whole day without eating anything because there was not enough food	5.9	18.5	75.6
In the past 30 days you relied on only a few kinds of low-cost food to feed children because there was no enough money to buy food.	3.7	34.1	62.2
In the past 30 days you could not feed children on balanced meal because you could not afford it.	3.0	31.1	65.9
In the past 30 days children did not eat enough food because you could not afford it.	3.7	28.9	67.4
In the past 30 days you cut size of children meal because there wasn't enough money for food.	3.0	37.8	59.3
In the past 30 days children were hungry for more food but you could not afford it.	2.2	29.6	68.1
In the past 30 days children skipped meals because there was not enough money for food	2.2	24.4	73.3
In the past 30 days children did not eat for a whole day because there wasn't enough money for food.	6.7	12.6	80.7
In the past 30 days children lose weight because there was not enough food to eat.	3.7	16.3	80.0

It is noteworthy that measures are being taken by Lagos State Government to combat food insecurity. In order to avoid food crisis in Lagos State, the State Government has evolved programmes to boost food security which include marine agriculture, fisheries development, artisanal fisheries, development/replenishment of open water bodies, provision of wholesome meat, and establishment of modern abattoirs, integrated livestock expansion, acquisition of expansive

arable lands in other states for farming, agricultural input supply to farmers and fishermen and credit delivery to farmers, redevelopment of agricultural cooperatives, provision of agricultural land services, root and tuber expansion and partnership with other states to enhance food security (Lagos State Government, 2017).

Categorisation of households by their food security status

The food security status of the respondents is presented in Table 4. It was found that majority of the respondents were food secure (56.3%), while 43.7% were food insecure. Food security of the respondents in the study area might be attributed to the increased awareness on food security as major source of information identified in this study was the use of social media and perhaps participation of respondents in entrepreneurial activities that aid their food security. Smith, Greene and Silbernagel (2013) noted that in recent years, urban agriculture has become an increasingly relevant topic in the science and planning of urban food systems aimed at reducing food insecurity at the level of the household. It is noteworthy that Lagos State is one of the monumental city in Nigeria where there is an active and profitable numerous economic activities that can help boost household income, hence the food security status observed among respondents. It is also noteworthy that Lagos State government is making assiduous effort to address food insecurity in the state. As an example, the Nigeria Agricultural Sector Food Security and Nutrition Strategy 2016-2025 (AFSNS) has been developed to guide the activities of the Federal Ministry of Agriculture and Rural Development and the wider agricultural sector in Nigeria for improved nutrition with Lagos State being one of the four focal States that have been selected for implementation of the strategy (Lagos State Government, 2019).

Table 4: Categorisation of households based on their food security status (n=135)

Variable	Freq.	%	Min	Max	Mean	Std Dev
Food insecure (< mean)	59	43.7	13.00	34.00	26.78	5.89
Food secure (≥ mean)	76	56.3				
Total	135	100.0				

Challenges to food security in the study area

Table 5 reveals that in the study area, food availability ($\bar{x}$=1.65) ranked fist as the most prominent challenge to attainment of food security with 74.5% indicating it as a severe challenge. Availability of food would influence respondents' food security as most food choices are made depending on the food that are at the disposal of the individual making the choice of what to eat. Hence, it is noteworthy that the choice of what food to eat depends on the available resources. This result agrees with Reicks *et al* (2015) that availability of food is a factor that influences what and how much one eats. Food availability as the most prominent food security challenge was followed by health status ($\bar{x}$=1.47) and high cost of food ($\bar{x}$=1.47) which both tiled as the 2nd major challenge to food security. Majority of the respondents indicated health status (64.7%) and high cost of food (64.7%) as a severe challenge in the study area. It noteworthy that the status of an individual's health will inform the kind of food he/she would take in a bid to boost the individual's immunity, improve the state of health and ensure recovery from a particular illness. Findings from this study aligns with Anugwa and Agwu (2019) who reported perceived causes of food insecurity to include high food price. Also, Hadley *et al*. (2012) noted that rising food prices exacerbates the problem of food insecurity.

Table 5: Percentage distribution of the respondents based on their challenges to food security (n=135)

Items	Not a challenge	Mild challenge	Severe challenge	Mean	Rank
Food availability	9.8	15.7	74.5	1.65	1st
Health status	17.6	17.6	64.7	1.47	2nd
High cost of food	17.6	17.6	64.7	1.47	2nd
Preparatory time	19.6	21.6	58.8	1.39	4th
Accessibility to food items	17.6	25.5	56.9	1.39	4th
Seasonality of food items	21.6	19.6	58.8	1.37	6th
Lack of storage facilities	27.5	19.6	52.9	1.25	7th
Insufficient income	27.5	19.6	52.9	1.25	7th
Unpredictable climate	21.6	41.2	37.3	1.16	9th
Culture	27.5	29.4	43.1	1.16	9th
Locality	27.5	35.3	37.3	1.10	11th
Religion	33.3	27.5	39.2	1.06	12th
Illiteracy	47.1	11.8	41.2	0.94	13th

Source: Field survey, 2017

Relationship between selected independent variables (socioeconomic characteristics, sources of information, knowledge, challenges) and food security

Chi square and Pearson's Product of Moment Correlation (PPMC) results between selected independent variables and respondents' food security status are shown in Table 6. The negative correlation between the age of the respondents and food security status was not significant (r=- 0.117, p>0.05). However, there was a significant relationship between marital status and food security status (χ^2= 14.011, p< 0.01). This result is an indication of the fact that being married can help ensure household food security, particularly when couple are gainfully employed. There was an inverse and significant relationship between household size and food security (r=0.236, p< 0.01). This result implies that respondents with fewer number of people in their households were more food secure compared to respondents with large household size. The correlation coefficient of 0.235 obtained for respondents' monthly income was significant at 1% implying that household income influence their food security status. Similarly, Roberts, Osadare and Inem (2019) established that households with higher monthly incomes had higher levels of food security level among sampled respondents in Shomolu LGA of Lagos state. There was no significant relationship between respondents' sources of information (r= 0.093, p>0.05), knowledge (r= 0.110, p>0.05) and their food security. This implies that increase in access to information on food security and being knowledgeable on the kinds of food to eat do not necessarily translate to being food secure. This indicates that other factors might hampered food security efforts of the respondents. Food security status of the respondents was not significant with challenges to food security (r= -0.100, p>0.05).

Table 6: Relationship between selected independent variables (socioeconomic characteristics, sources of information, knowledge, challenges) and food security

Variables	χ^2 value	df	r value	p value	decision
Age			-0.117	0.178	Not significant
Marital status	14.011**	4		0.007	Significant
Educational level	8.044	5		0.154	Not significant
Primary occupation	8.063	4		0.089	Not significant
Household size			-0.236**	0.006	Significant
Monthly income			0.235**	0.006	Significant
Sources of information			0.093	0.284	Not significant
Knowledge			0.110	0.205	Not significant
Food security challenges			-0.100	0.248	Not significant

CONCLUSION AND RECOMMENDATIONS

Respondents were in their productive years and were formally educated with majority having tertiary education. Social media and television were the most utilised information sources on food security. Information on food security through newspapers, magazines and through seminars was sparing in the study area. Prominent challenges to food security were food availability, respondents' health status, high cost of food and food accessibility. Food security status of respondents was influenced by marital status, household size and monthly income. The study recommends promotion of information on food security in social media and television as they were prominently used by respondents in the study area. Also, home gardening should be encouraged among respondents by the state government and non governmental organisations so as to aid availability of and accessibility to food items; this will also help reduce amount of money spend on food by respondents.

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