



DETERMINANT OF FOOD SECURITY STATUS AMONG FARMING HOUSEHOLD IN KANO STATE NIGERIA

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DOI: <https://doi.org/10.70382/mejav.s.v7i1.025>

Abstract

The study examines food security status and factors affecting it among farming household in Kano State, Nigeria. A total of 240 respondents were selected using a multistage sampling technique. Data were collected and analyzed using a schedule questionnaire and descriptive statistics respectively. The result showed that Majority are male (91.3 %) and 52.5% with education attainment below secondary school education. The mean age of the respondents is 44 years with an average of household number of 6people and an average income of 100, 708 Naira on a monthly basis. The study revealed an insignificant percentage (5%) of respondents as food secured

while 95% were food insecure. Some of the factors claimed for food security status with their mean score include

Keywords:

Farming
Household, Food
security status,
Extension
workers, climate
change, increased
income.

unavailability of local production of food consumed in the community(2.68), variability in weather(2.56), household income(2.66) as well as poor hygiene and manufacturing practices (2.39).It is

thereby recommended that more effort should be made by the extension workers through government policies to educate the farmers more on reducing the effect of climate change in their production, diverse ways of storing their produce for later use and training on improving hygiene in handling food produce as well as best processing technique practices in order to retain food nutritional value. These will go a long way in increasing their income and healthy living.

Introduction

The report on extent of hunger in the world began in 1974 by Food and Agriculture Organization of the United Nation and this has been followed with series of changes in terms of Population growth, food production, distribution and consumption worldwide. Hunger is an uncomfortable or painful physical sensation caused by insufficient consumption of dietary energy. According to United nation hunger is defined as the period when people experience severe food insecurity which might be due to lack of money, access to food or otherwise (FAO, 2023). It is the distress associated with lack of food .The chance to have consistent and adequate access to enough safe and nutritious food to maintain an active and healthy life is termed as being food secured. According to Ibukun &Adebayo (2021) food security is recently defined as a situation where everyone at all times have physical and economic access to sufficient, safe and nutritious food that meet their dietary needs and food preference for an active healthy life thereby making them free from hunger.

Globally, one (1) in every eleven (11) people around the world faces hunger. This global hunger crisis is majorly a resultant of conflict, climate change and inequality. Majority of the world’s hungry people resides in the developing world where extreme poverty and lack of access to nutritious food often lead to malnutrition.

In Sub-Saharan Africa, the number of underweight children increased from 29 million to 37million between 1990 and 2003(UN, 2005) while more than 800 million people have too little to eat in order to meet their daily energy needs (Ademu W.A, 2012 pg 175). It was reported that prices of staple food in sub-

Saharan Africa have surged by an average of 23.9percent between 2020 and 2021 while the house hold survey of expenditure using September 2018 to October 2019 showed that about 40 percent of the Nigerian population is identified as food in secured .There has been a great impact of global prices on rural food inflation as a result of the reliance of rural dwellers on home production.

Several factors have been shown to affect food security in the African settings, either directly or indirectly. Some studies have shown poverty, environmental factors as well as conflict as direct causes of food insecurity while climate change is not left out. Mabrouk and Mekni (2018) posited in their work that remittance has positively affected food security while Nsiah and Fayissa (2019) said that the concept of food security is hinged on four pillars namely availability of supply, accessibility, stability regardless of seasonal fluctuation and utility. Also the World Bank (2001) identified three pillars underpinning food security as food availability, food accessibility and food utilization. Many efforts made by the government towards agriculture elude a lot of the small and medium scale farmers as they do not have access to credit facilities coupled with the poor road, high cost of transportation and the transportation network as a whole. Agriculture is a key economic sector in Nigeria, representing about 23percent of real GDP. It provides employment opportunity for more than 50% of the populace (FAO, 2023). Although Nigeria has the manpower and large favourable arable land required for the advancement of food production and boosting of livestock, but there exist limited modern technology, infrastructure, training and education necessary to increase agriculture yield in order to meet national demands (Adedokun .B., 2021 pg 21).

The primary objective of this study is to assess the factors affecting food security status of the farming household in Kano state. Specifically the study will describe the socio demographic characteristics of the respondents; determine the food security status of the farming household. It will assess those factors responsible for food security status in the area.

METHODOLOGY

Study Area:

The study was carried out in Kano State. This is one of the 36 states of Nigeria, located in the Northern region of the Country. According to 2006 population census Kano State is the most populous state in Nigeria. It is located at 12°3'N, 8°32'E, and 1550ft. It borders on Katsina State to the northwest for about 210km (130miles), Jigawa state to the northeast for 355km (221miles), Bauchi state to the southeast for 131km (82miles) and Kaduna state to the southwest for 255m. It has a total area of 20,131km². The average annual temperature fluctuates between 26.3°C/79.4°F. The region is characterized by temperate climate. The main crops grown on the state light sandy soils are excellent for growing groundnut, onions cotton, tobacco, wheat, sorghum, vegetables, cowpeas and maize vegetables and cowpeas.

Sampling Procedure and Data Collection:

A multistage sampling technique was used to select 240 respondents for the study. Kano state comprises of three agricultural zones (Zone I, II and III) managed by the Kano State Agricultural and Development Authority (KNARDA). Three (3) local government areas were randomly selected; each from the three zones. This process resulted in Kura, Ungogo and Dawaki kudu local government areas. Two (2) villages were randomly selected from each of the local government areas resulting in Karfi and Imawa from Kura LGA, Kansuwa and Bacirawa from Ungogo LGA while Tanburawa and Dawakin kudu were selected from Dawai Kudu LGA.

The final stage witnessed collection of data from each village by staff of KNARDA from extension and monitoring unit using the list frame of the farmers in the area. Random selection of 40 farming household each from the areas resulted in 240 farming household.

Measurement of Variables:

The household food security status was measured using USDA approach. A three point rating scale comprising of often true, sometimes true and never true was used. Responses of often true and sometimes true were considered

to be positive (affirmative) and are thereby coded as 1 while those of never true were considered as negative and were coded as 0. In classifying the respondents, the total attainable score is 16 (16 questions were asked in the section) and an average score is 8 with a minimum score of 0. Household with a score below the average were classified as food secure household while those with average score and above were considered as being food insecure. The factors responsible for food insecurity in the household were measured with three point rating scale of major factor, minor factor and not a factor coded as 3, 2 and 1 respectively.

Data Analysis:

Data were analyzed using descriptive statistics such as frequency count, percentages and mean.

RESULT AND DISCUSSION

Socio Economic Characteristics of Respondents:

Table 1 showed the socio-economic characteristics of the respondents. It revealed that 91.3% of the respondents were male. This is in agreement with Pionce-Gutierrez (2016 as cited in Olagunju, 2022) which stated that majority of the household head in the rural area are male which might be due to limited access to available resources and lower decision making power of female compared to their male counterpart while the hereditary system allows men more access to farmland by the male gender. More than half of the household head; 52.5% have below secondary school while only 20.8% have secondary school education and 26.7% with post-secondary school education. Education is a positive driving factor towards acceptance and use of improved farming technique. It is a social capital which enhances positive attitudinal change in farmers. Lower educational level impedes access to better job opportunity in the labour market and hampers more profitable entrepreneurship (FAO 2012). Majority are married; 89.2% with a large proportion 78.4% between 30 and 59 years of age. The mean age was found to be 44 years. This implies that the study area has able men who can still participate actively in farming activities. Age is expected to affect labour

supply for food production while it determines the ability to seek and obtain off-farm jobs and income. The study area is predominantly occupied by Muslims 96.7% with an average monthly income of N100, 708. It was discovered that the average household size of 6 people with majority 45.4% having between 1-4 acre of farmland. In the present economic situation of the country the average income will hardly take care of an average household of 6 people on a monthly basis coupled with their subsistence production. The farming household can be referred to as low income earner and well experienced. Income is an important indicator of food security and better living standard. The level of income of a household enhances purchasing power and good quality of life, the higher the income, the greater the chance of being food secure.

TABLE1: Socio-economic characteristics of the respondents (n=240)

Variables	Frequency	Percentage (%)	Mean
Sex			
Male	219	91.3	
Female	21	8.7	
Educational Background			
Arabic/Islamic Education	70	29.2	
Primary Education	56	23.3	
Secondary Education	50	20.8	
Tertiary Education	64	26.7	
Marital Status			
Single	18	7.5	
Married	214	89.2	
Widow	8	3.3	
Age			
<than 30yrs	19	7.9	
30-39yrs	62	25.8	43.9
40-49yrs	67	28.0	
50-59yrs	59	24.6	
60-69yrs	26	10.8	

70yrs+	7	2.9	
Religion			
Islam	232	96.7	
Christianity	8	3.3	
Monthly Income(Naira)			
< 50,000	76	31.7	
51,000-100,000	77	32.1	100,708
>100,000	87	36.2	
Household Size			
1-5 persons	82	34.2	
6-10persons	93	38.8	5.5(6)
10person+	65	27.0	
Farm Size			
<1acre	78	32.5	
1-4acre	109	45.4	
>4acre	53	22.1	
Farm Experience			
<10yrs	60	25.0	
11-20yrs	83	34.6	
>20yrs	97	40.4	

Source: Field Survey 2024

Food Security Status of Respondents:

Table 2 revealed that majority of respondents 78.3% reported going hungry some of the time without eating while about two-third 60.8% claimed to have taken only one meal per day due to absence of food in the house. Almost all respondents 92.1% could not boast of having enough resources to get enough food for his household. The farming household 91.3% do worry about getting food stuff as the members of their household are exhausting available food items. These are signs of unavailability of good reserve as they are mainly into subsistence farming and household production. Large percentage of respondents supplement their children's food with low cost ones (83.8%) while 72.5% claimed their children are not eating well due to drastic cut 70.4%

of meal size. Most of the farming household 77.5% could not feed their household with balance diet while 85% of them reported constant experience of inadequate food supply in their household.

Table 2: Food Security Status of the respondents (n=240)

Variables Mean	Positive response	Negative response	
	Freq(%)	Freq(%)	
There are times i was hungry but did not eat	188(78.3)	52(21.7)	0.61
I took only one meal per day	146(60.8)	94(39.2)	0.78
I don't have enough resources to get enough food for my family	221(92.1)	19(7.9)	0.92
I do worry about food stuck finishing before getting another to eat	219(91.3)	21(8.7)	0.91
I can't afford to feed my household with balance diet	186(77.5)	54(22.5)	0.78
I often experience inadequate food supply in my household	204(85.0)	36(15.0)	0.85
Adult in my household skip meals or cut the size of their usual meals.	143(59.6)	97(40.4)	0.60
I lose weight because there was not enough food to eat.	162(67.5)	78(32.5)	0.68
I supplement my children food with low cost foods	201(83.8)	39(16.3)	0.84
I and other adults in my household did not eat for a whole day because there was not enough money to buy food.	145((60.4)	95(39.6)	0.60
My children were not eating enough food because i could not afford to purchase the right quantity of required food items.	174(72.5)	66(27.5)	0.73
I cut the size of any of my children's meal because there was not enough money for food.	169(70.4)	71(29.6)	0.70
The children skip meal because there was not enough food to eat.	175(72.9)	65(27.1)	0.73
Children were ever hungry but I could not afford more.	150 (62.5)	90(37.5)	0.63
I can't afford to eat balance diet.	181(75.4)	59(24.6)	0.75
There are times the children don't eat for a	109(45.4)	131(54.6)	0.45

whole day.

Source: Field Survey 2024

Category of Food Security Status in the study area:

Tale 3 showed that 95% of the farming household were food insecure while an insignificant 5% were found to be food secure. There is an alarming rate of food in security in the study area. Food insecurity can lead to malnutrition and leaves children weak, vulnerable and unable to fight childhood ailments like malaria, measles, infection and so on. According to Nafees et al (2021) food insecurity can result in reduced life expectancy, low birth weight among pregnant women, feeling of alienation and anger.

Table 3: Distribution of Food Security Status among the Respondents

Variables	Range of Score	Frequency (%)
Food Secure	0-7	12(5.0)
Food Insecure	8-16	228(95.0)

Source: Field Survey 2024

Factors responsible for food insecurity:

The result as shown in Table 4 revealed that food availability in the study area using the mean score is mostly affected by unavailability of production of local foods consume in the community (2.68) and non-availability of regular supply of food items in the community (2.50),non-provision of assistance during food inadequacy(2.48) as well as lack of storage facility during surplus (2.45).This is in line with Agbugbe et al (2022) who posited that several factors have been identified for the current food insecurity situation in Nigeria, among which is poor agricultural infrastructure and poor production output of farmers(Onyemekonu et al 2023).

Weather variation (2.56) and incessant change in cost of food items (2.53) are the major factors impeding on food sustainability in the study area while unfavourable policies on food production, preservation and storage(2.42) also disrupt food sustainability in the area .In terms of food accessibility, household income(2.66),unavailability of transportation and market

infrastructure for food supply system (2.52) and lack of purchasing power by farming household (2.31) are affecting food insecurity in the area.

Proper Utilization of food items to enhance food security has been adversely affected in the study area by poor hygiene and manufacturing practices (2.39), poor food processing practices (2.35), poor orientation of rural people on nutritional value of some food items (2.33) and poor diet quality and diversity (2.16).

Table 4: Distribution of Factors responsible for Food insecurity in the study area

Variables	Not a Factor Freq (%)	Minor Factor Freq (%)	Major Factor Freq (%)	Means
Food Availability				
Unavailability of local production of Food consumed in the community	14 (5.8)	49(20.4)	177(73.8)	2.68
Lack of storage of food during surplus harvest	29(12.1)	73(30.4)	138(57.5)	2.45
Non Provision of food assistance during food inadequacy	17(7.1)	91(37.9)	132(55.0)	2.48
Non availability of regular supply of food items in the community	16(6.7)	89(37.0)	135(36.3)	2.50
Food Sustainability				
The variability in weather does not support agricultural production	19(7.9)	68(28.3)	153(63.8)	2.56
Changing of price of food items	21(8.8)	70(29.2)	149(62.0)	2.53
Unfavourable policies for food production, preservation and storage	31(12.9)	78(32.5)	131(54.6)	2.42
Economic factors and Trading of food item	24(10.0)	116(48.3)	100(41.7)	2.32
Food Accessibility				
Household income of the farmer	18(7.5)	45(18.8)	177(73.8)	2.66
Transport and market infrastructure For food supply system	22(17.1)	72(30.0)	146(60.8)	2.52

Lack of purchasing power of rural household	41(17.1)	83(34.6)	116(48.3)	2.31
Food Utilization				
Poor orientation of rural people on the importance of certain food item	33(13.8)	95(39.6)	112(46.6)	2.33
Poor food processing practices	32(13.3)	91(37.9)	117(48.8)	2.35
Poor hygiene and manufacturing Practices	22(9.2)	102(42.5)	116(48.3)	2.39
Poor diet quality and diversity	42(17.4)	117(48.8)	81(33.8)	2.16

Source: Field Survey 2024

CONCLUSION AND RECOMMENDATIONS:

The findings have shown that the farming household is dominated by male household head having an average productive age and falls within the low income level with low formal educational background. The farming household in the study area are food insecure. The factors identified as leading to their food security status include unavailability of local production of foods consume by community members, lack of storage of food during surplus harvest, variability in weather, poor household income, poor hygiene and manufacturing practices among others.

The government should intensify their effort in training the farmers on combating the effect of climatic change on their production. All hands should be on deck in assisting the farmers in getting proper information on general improve farming techniques to utilize their land for optimum yield. The women folk should be enlightened on good dietary quality intake by their household members while they should be empowered to assist their husband financially through skills acquisition beneficial to their immediate surroundings .These will go a long way in increasing their income, improve their food security status positively as well as raised their standard of living.

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