

# ASSESSMENT OF FOOD INSECURITY AND COPPING STRATEGIES OF HOUSEHOLD DURING COVID-19 PANDEMIC IN IDO LOCAL GOVERNMENT AREA OF OYO STATE, NIGERIA.

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## ABSTRACT

The novel COVID-19 pandemic is a global health challenge of significant importance. Emergent action (lockdown) taken by the Federal government to curb its spread has contributed to food insecurity among households. A cross-sectional assessment of food insecurity and coping strategies of 200 households in Ido Local Government Area of Oyo State was carried out using multi-stage sampling technique to select household heads in the study area. Data was collected using semi-structure, interviewer-administer questionnaires in alliance with Household Food Access Insecurity Scale (HFAIS) to collect information on socio-demographic characteristics and food coping strategies during lockdown. Data was analyzed using statistical package for social science (SPSS) version 20 while the food security was categorized by number of coping strategies used. The result shows that 56.8 % were married, 54.2 % were from monogamous home, 59.2 % attended secondary school, 79.1 % were between 1-5 in their households, 31.8 % earn less than N18000 monthly, 73.7 % do eats 23 times daily before the pandemic sets in and part of coping strategy adopted revealed that 55.2 % reduced their intake due to limited resources, 53.7 % rarely ate their preferred food, 64.7 % got their food either from friends and relatives and 91.1 % did not receive palliatives. Significant association was observed between income and coping strategies  $p < 0.05$  except buying food on credit and effect of palliatives. Family setting has significant relationship with coping strategies and significant association was observed between age and food consumption  $p < 0.05$ . High level of food insecurity was observed in this study. Nutrition intervention through supplementary feeding program will go a long way if implemented properly in this kind of outbreak.

**Keywords:** *Coping strategies, Covid-19 pandemic, Food insecurity, household, Palliative*

## INTRODUCTION

Food security is defined as the condition in which all people, at all times, have physical, social, and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life (FAO, 2002). Attaining this level of food security requires the availability of food supply, adequate access to food supply, appropriate utilization of food and stability of food supply (Gross *et al.*, 1998). The World Food Summit of 1996 described food insecure households as those whose members do not have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (Aiga & Dhur, 2006). Household food insecurity is one of the major catastrophes in the Sub-Saharan Africa including Nigeria.

Consequently, food insecurity, malnutrition and poverty are realities in Nigeria especially among the poor and vulnerable rural farming households. Nigeria is nationally food insecure, providing estimates of the overall prevalence of food insecure, providing estimates of the overall prevalence of stunting, wasting and underweight at 42.0 percent, 9 percent and 25 percent, respectively (Akinyele, 2009), (Fahmida, *et al.*, 2017). Snell and Staring (2001) captures coping strategies as all the strategically selected acts that individual and households in a poor socio-economic position use to restrict their

expenses or earn some extra income to enable them to pay for the basic necessities (food, clothing, shelter) and not fall too far below their society's level of welfare and coping strategies as a response to advertise events or shocks (Onunka, *et al.*, 2018 ) or as methods used by households to survive when confronted with unanticipated livelihood failure (Ellis, 2008). The strategies pursued by households differ in several aspects that are within the household and between households (Maxwell *et al.*, 2003).

The novel COVID-19 pandemic is a global health challenge of significant importance "human history is observing a very strange time fighting and invisible enemy, the novel corona virus" (Nadeem, 2020). It has been observed that regardless of the long standing effort to improve the security situation of people over food deprivation and it's physical consequences remain a continuing problem in resource poor areas throughout the world especially with onset of the pandemic (Ballard *et al.*, 2011). COVID-19 pandemic in Nigeria has necessitated the initiation and implementation of diverse strategies by various levels of government and individual household (Adikari, 2014).

## **METHODOLOGY**

### **Study Area**

Oyo part of three states carved out of the former western state of Nigeria in 1976. It consists of 33 local governments. The state covers a total of 28,454 square kilometers of land mass and it is bounded by Osun state in the East, Ogun state in the South and partly by Benin republic in the west. Ido local government is one of the 33 local governments in Oyo State.

### **Study Design**

A cross-sectional study design was adopted to study food coping strategy and level of food security among household heads selected in Ido local government area in Oyo State

### **Sampling Techniques**

Multi-stage sampling was used in this study to select two hundred (200) representative samples of household heads in Ido local government of Oyo state. The second stage involved selection of five wards (ward 1,3,5,7 and 9) out of ten by simple random sampling (balloting). The third stage involved recruiting 40 households from each of the selected wards that are willing to participate in the study.

### **Sample Size Determination**

The total number of respondents is determined using the formula below (Adikari, 2014):

$N = (Z^2 \times P \times Q) / D^2$  where; N: Calculated sample size;

$N = [(1.96)^2 \times 0.214 \times (0.786) / (0.04)^2] = 200$  questionnaires.

### **Assessment of Food Insecurity**

Household Food Insecurity Access Scale (HFIAS) was used to determine the household food security status of the respondents. The HFIAS consists of two types of related questions, nine occurrence questions that ask whether a specific condition associated with the experience of food insecurity and its severity over the previous four weeks. (Coates *et al.*, 2007).

### **Food Coping Strategy (FCS)**

This is one of the indirect methods for assessing adaptive strategies adopted by a household to mitigate the risk of food insecurity. The food coping strategy questions modified survey instrument as described by the CARE/WFP field methods manual of 2007 was adopted.

## **Statistical Analysis**

Data collected were subjected to Statistical Package for Social Sciences, version 22 while descriptive statistics were computed for the categorized and continuous variables and Spearman correlation coefficient was used to confirm association between variables.

## RESULTS

**Table 1: Socio-demographic and economic characteristics of respondents**

<b>Variables</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Marital Status</b>		
Single	76	38.2
Married	113	56.8
Divorced	8	4.0
Separated	3	1.0
<b>Family Settings</b>		
Monogamous	119	59.5
Polygamous	81	40.5
<b>Occupation</b>		
Self- employed	79	39.3
Business	33	16.4
Artisan	20	10.1
Civil servant	31	16.4
Factory worker	8	4.0
<b>If Employed (income)</b>		
Less than 18,000	64	31.8
18,000 – 50,000	38	18.9
51,0000 - 100,000	11	5.5
Others	15	7.5
<b>Number in a Family</b>		
1-3	77	38.5
4-5	82	41
6-7	41	20.5

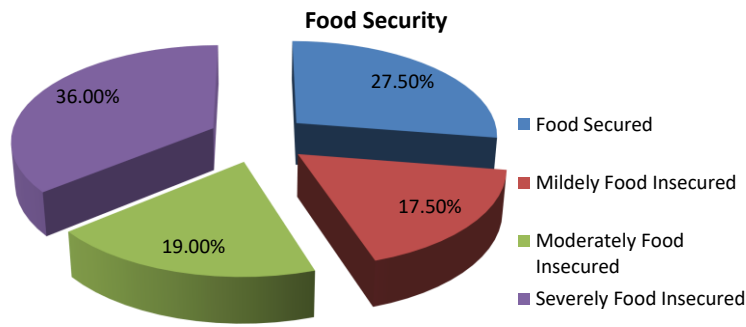
**Table 2: Food Coping Strategies of Respondents during COVID-19.**

<b>Variables</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Skip Meals during COVID</b>		
No	114.	56.7
Yes	<b>78</b>	<b>38.8</b>
<b>How often skip meals during COVID</b>		
Rarely	118	58.7
Sometimes	49	24.4
Often	8	4.0
<b>Worry for food during COVID</b>		
No	67	33.4
Yes	79	39.4
<b>Able to eat preferred food</b>		
No	80	39.8
Yes	109	54.2
<b>How well eat preferred food</b>		
Rarely	108	53.7

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Some time	84	41.8
Often	8	4.0
<b>Limited Food Due to Resources</b>		
No	31	15.4
Yes	111	55.2
<b>Eat smaller meals than needed</b>		
No	112	55.7
Yes	43	21.4
<b>No food to eat during COVID</b>		
No	113	56.2
Yes	29	14.5
<b>Sleep in hunger because no food</b>		
No	100	49.8
Yes	48	23.8
<b>Beg for food</b>		
Rarely	108	53.7
Sometimes	66	32.8
Often	26	13.0
<b>Buy food on credit</b>		
Yes	27	13.5
No	135	67.2
<b>How often buy on credit</b>		
Rarely	108	53.7
Sometimes	59	29.4
Often	33	16.4
<b>Limit food portion size</b>		
No	146	72.7
Yes	15	7.5
<b>How often limit food size</b>		
Rarely	85	41.3
Sometimes	67	33.3
Often	42	20.9
<b>Buy less expensive, less preferred food</b>		
No	116	57.7
Yes	43	21.4
<b>Buy food from vendors</b>		
No	121	60.2
Yes	34	17.0
<b>Receiving palliatives</b>		
No	183	91.1
Yes	17	8.5

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**Figure 1: Food Security Status of the Respondents during COVID-19**

**Table 3: Correlation between Coping Strategies and Socio-economic characteristics of Respondents during COVID-19**

Variable	Income		Education		Family settings		No in family		Marital status	
	r-value	p-value	r-value	p-value	r-value	p-value	r-value	p-value	r-value	p-value
Beg for food	-0.223	0.007	-0.153	0.040	-0.383	0.000	-0.022	0.769	-0.275	0.000
Skip meals	-0.344	0.000	0.107	0.188	-0.041	0.635	-0.424	0.000	-0.180	0.026
Sleep hungry	-0.197	0.021	-0.096	0.196	-0.258	0.001	-0.114	0.117	-0.008	0.915
Limit food	0.213	0.013	0.068	0.356	-0.433	0.000	-0.216	0.003	-0.114	0.110
Buy on credit	-0.162	0.051	0.056	0.448	-0.283	0.000	0.242	0.001	-0.043	0.553
Smaller meal than needed	-0.210	0.011	-0.001	0.985	-0.243	0.001	-0.082	0.258	0.221	0.002
Restrict adult consumption	-0.386	0.000	0.125	0.092	-0.377	0.000	-0.195	0.007	-0.037	0.606
Buy less expensive	-0.324	0.000	0.038	0.605	-0.399	0.000	0.034	0.648	-0.273	0.000
Effect of palliative	-0.021	0.828	-0.102	0.168	-0.410	0.000	-0.231	0.001	-0.090	0.207

## DISCUSSION

Majority of the respondents interviewed were married and basically monogamously which is in accordance with (Tiensin, 2020) who studied coping strategies during the pandemic in the south eastern part of Nigeria. He submitted that majority of household heads in his study were monogamously married which is a true reflection of the cultural and general practices in Nigeria. Majority were self-employed under which petty traders dominate the sector with maximum of #50,000 - #100,000 monthly although 39.3% of the respondents reported they were self-employed while most engaged in low paid jobs, petty

trading, this could be attributed to the high level of education as shown in the portion of 31.8% of those earning less than #18000 with only over one-third having tertiary education as inability of the majority to get highly paid job couple with their location. This suggests that an individual educational level affects their earning ability. This corroborates the believe of (Mohammed *et al.*, 2014) that the higher the years spent in formal education by household heads, the higher the likelihood of the household being food secured. About one-third of the household heads (30.3 %) were unemployed. This could be as a result of the retrenchment and compulsory retirement of workers by various organizations due to national lockdown. Larger percentage of the respondents are not more than seven all together in their household due to where the interview was carried out, this is in alignment with (UNDESA, 2017) in the research of households size and composition around the world which states that average household size across the globe ranges from 2-9 person per household. With reference to previous research reports, it is important to note that household food security and hunger status are affected by a cocktail of socio-economic and demographic factors than location alone (Zalilah & Khor, (2008). Two-third of the respondents reported not to worry about the sources and amount of food their family members get in the days to come which is in accordance with (Onunka *et al.*, (2018) which reported 55.1% of his respondents claimed to be worried about the sources and amount of food. This emotional part prevails when one is not sure of the consistency of where each meal is going to come for children and elderly persons in the household. It is also shown that large proportions of the respondents are not meeting society norms of eating —acceptability of food.

Households in this study used a number of coping strategies ranging from one or more principal coping strategies to various complementary strategies; switching between principal and complementary activities during chronic food shortage. A principal coping strategy is characterized by providing a main source of food and income for a household, while complementary coping strategies are opportunistic and often irregular, providing some food or income for shorter time periods. According to the respondent that was interviewed complementary coping strategies were used when no principal coping strategy was available or failed. The study has found that there is positive relationship between income, household size, and the level of coping strategies. This is in contrast with the study by Wolfe, 1996 that coping strategy used to ensure food security and health generally depends on the socioeconomic environment, which is determined by education, occupation, income and township status. Other strategies to lessen food insecurity in the following order of importance: purchase food on credit, limit portion size at meal times, rely on less preferred/ less expensive food, borrow food or rely on help from friends or relatives. The coping strategies adopted here are in consonance with the findings of (Mohammed *et al.*, 2014); (Ehebhamen *et al.*, 2017).

The food habit of the selected households before COVID-19 pandemic showed that skipping of meal is very common. Skipping of meal during the national lockdown was found among more households. Over half were found to be skipping meal, this habit was due to financial problem while others attributed it to the nature of their job, loss of appetite, dieting and fasting.

## **CONCLUSION**

Skipping meals and sleeping in hunger are major coping strategy adopted in this study. The level of income, family size and family setting influence the coping strategy adopted by the respondents. Level of education has no influence on the use of the coping strategy and majority of the respondents did not receive palliative during the COVID-19 pandemic.

## **RECOMMENDATION**

Empowerment of rural areas to enhance food production at all season and public enlightenment on controlled family settings/household are hereby recommended for the study population.

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