

Coping Strategies Adopted By Female-Headed Households in Combating Food Insecurity during Corona Virus-19 (COVID-19) Lockdown in Rural Areas in Anambra State

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Abstract

The study focused on coping strategies adopted by female-headed households for combating food insecurity during COVID-19 in the rural areas of Anambra State, Nigeria. Specifically, the study determined coping strategies adopted by female-headed household in combating food unavailability, inaccessibility and challenges of food utilization during COVID-19 in the rural areas. Three research questions guided the study. Population of the study comprised of all the female-headed households in all the four agricultural zones of Anambra state. Multi-stage sampling method was used in selecting 192 female-headed households. Questionnaire was used for data collection. Data were analyzed using mean and standard deviation. Results of the study are 13 coping strategies for combating food unavailability. These include facilitating food system innovations ($\bar{X} = 3.55$), preserving food stuff using containers ($\bar{X} = 2.91$), engaging in crop production ($\bar{X} = 2.88$) and others. There are also six coping strategies for combating food inaccessibility, including storing available food within the household ($\bar{X} = 2.82$), among others. Other findings are coping strategies for challenges of food utilization. These include, use of improved food preparation methods ($\bar{X} = 3.33$), consuming more fruits and vegetables found within the home environment ($\bar{X} = 3.88$), storing of food at home ($\bar{X} = 3.28$), reduction in food wastage ($\bar{X} = 3.66$), consumption of low quality food substitutes ($\bar{X} = 3.11$) and others. The study recommends, among others, that government should give palliatives to women; women should diversify family diets, and women should source fund for food outside the family.

Key Words: Food, Insecurity, Coping, Strategies, Female-headed, Households, COVID-19

Introduction

Women play a key role in supporting their households and communities in achieving food security, generating

income and improving livelihoods and overall well being. According to Nnadi (2010), women provide food and are critical change agents assuming the

primary responsibility for children's health and nutrition. Okoli (2010) opined that rural and urban women contribute to household and food security by the time-consuming activities they perform in food processing. Food processing not only contributes to food security by reducing food losses; it also permits greater diet diversity throughout the year.

Food security is the access by all people at all times to enough food all the year round for an active healthy life (Shively et al, 2011). According to Food Crisis Prevention Method (2016), food security exists when all people at all times have physical and economic access to sufficient, safe and nutritious food that meets dietary needs and food preferences for an active and healthy life. World Bank (2011) reported that food security dimensions include availability, which is the availability of sufficient quantities of appropriate quality; access, which is access by individuals to adequate resources for acquiring appropriate foods for a nutritious diet on a regular basis; and utilization of food through adequate diet, clean water, sanitation and healthcare to reach a nutritional well-being where all physiological needs are met. These dimensions include availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports, access by households and individuals to adequate resources to acquire appropriate foods for a nutritious diet and utilization of food.

On the other hand food insecurity is a situation when a household is unable to provide adequate food for its members on a sustainable basis either due to inability to produce its own food or through purchases. Davis (2009) stated that food insecurity implies indeterminate contact with adequate food required for metabolic processes, active and healthy growth of man.

Available reports indicate that female-headed households in most rural areas of the developing countries are mostly prone to food insecurity (Gupta, 2013). A female-headed household occur when a female provides for the up-keep of the household even when the male is available. Dauda (2014) reported that female-headed household is occasioned by the absence of the male-head throughout the year or for a longer period of time. Where this occurs, the woman becomes the main decision maker and economic breadwinner of the household.

Food insecurity results from various factors, some of them are generic such as poor governance and lack of institutional support. Other factors relate to the different elements of food security such as unavailability of food or low production because of drought, flood, post-harvest losses, high poverty level, poor utilization of food because of poor health, poor usage, disaster, low level of nutrition education, diseases such as AIDS, influenza, corona virus (COVID-19) etc. Presently, COVID-19 has become a global pandemic.

Nigeria was affected by the COVID-19 pandemic. Following the exponential increase in the spread of the dreaded COVID-19, the Federal Republic of Nigeria government proclaimed a total lockdown and this was a move to prevent further spread of the virus as well as for the government to trace and isolate persons who might have come in contact with the confirmed cases. This lockdown affected the movement of people, food and other commodities. Borders were closed and those areas that are noted for food production do not have means to bring their agricultural produce to the market. Markets were even closed. Often in times of food shortage, the price of food rises and rising food prices in turn leads to decreased access to food by the poor. As a result of COVID-19, households in Nigeria have been experiencing household food insecurity problem. Demand for food spurred by both population growth and lockdown has begun to outrun food production and distribution capacity. This results in declining food reverses, skyrocketing food prices, placing special burden on the poor hence hunger has remained the lot of a large segment of the people. Household food insecurity in the era of COVID-19 is one of the most serious challenges of the Nigerian women in both urban and rural areas. The rural households face crucial challenges.

In rural areas, population density is very low. The household pattern is community extended family. A female-headed household occur when a

female provides for the up-keep of the household even when the male is available. Dauda (2014) observed that female-headed household is occasioned by the absence of the male-head throughout the year or for a long period of time.

It has been documented that female-headed households in most rural areas of the developing countries including Nigeria are prone to food insecurity (Buvinic and Gupta, 2013). The females face enormous challenges and require to adopt coping mechanisms, so as to meet the nutritional needs of their households. Dixnet (2011) opined that food related coping mechanisms adopted by female-headed households in rural areas during crisis include: cooking whatever food is available at home, borrowing money to buy food, and sale of assets.

Rural areas in Anambra state is richly endowed with abundant human and material resources. The area is characterized by high level of poverty, endemically low productivity, smallness of cultivable land owned by a farmer, technical inefficiency of agriculture due to poor production methods, low per capital income of average rural dweller. Rural areas are also noted for comparatively low level of living.

Female-headed have the problems of poor access to productive inputs, assets and services. Many of them have household size range of 7 to 12 persons, have farming experiences, majority of the female-headed households had no access to extension

service, literacy level of the majority of them is low and the majority were not members of organization. This implies that they cannot pull resources together to enjoy advantages of large scale production including having access to agricultural training and other production input. All these characteristics of the female-headed households must have contributed to the food insecurity situation in terms of food unavailability, challenges of food utilization and food accessibility.

In the era of COVID-19, many of the rural female-headed were faced with the problems of food insecurity. These women need coping strategies to help them cushion the effects of food insecurity. Coping strategies refers to the ways of dealing successfully with food insecurity.

Purpose of the Study

The main purpose of the study was to find out the coping strategies adopted by female headed households in combating food insecurity during COVID-19 lockdown in rural areas in Anambra state. Specifically, the study determined coping strategies adopted by the female-headed households during the COVID-19 era in combating challenges of:

1. food unavailability.
2. food inaccessibility.
3. food utilization.

Research Questions

The following research questions guides the study:

What are the coping strategies adopted by female-headed households during

the COVID-19 era in combating challenges of:

1. food unavailability?
2. food inaccessibility?
3. food utilization?

Methodology

Design of the Study: Descriptive survey design was adopted for the study.

Study Area: The study area was rural areas in Anambra state. The state is situated in the South East geopolitical zone of Nigeria and comprises of 21 local government areas. The area is characterized by the smallness of cultivable land owned by a farmer. Social infrastructure including educational facilities, health facilities, water supply, electricity are poor relative to the level. The urban sector physical facilities including transportation facilities, storage facilities, processing facilities and irrigation facilities are generally poor. Institutional infrastructures including rural credit and financial institutions, farmers' union, agricultural extension services are either weak or ineffective. All these affect food security directly or indirectly.

Population for the Study: The population of the study comprises of all the female-headed households in the four Agricultural zones of Anambra state. The estimated number of these female-headed households are 3,020. Female-headed households are the main decision maker and economic bread winner of the household. Female-headed household is faced with all forms of discriminations to

poor access to productive inputs and assets. These groups are engaged in farming and other income generating activities in the study area.

Sample for the Study: Multi-stage sampling was used in selecting respondents for the study. First, two zones were purposively selected from the four Agricultural zones of the state. The selected zones were Aguata and Anambra. In the second stage, four local government areas (LGAs) were selected from each of the two zones. This gave eight LGAs. Thirdly six communities were selected from each of the sampled local government areas. The total number of communities selected for the study were 48. Fourthly, six villages were selected from each of these communities. This gave a total of 96 villages. Finally, two female-headed households were purposively selected from each of the 96 villages. This brought forth a total sample of 192 female-headed households.

Instrument for Data Collection: A 31-item questionnaire was used for data collection. It was developed based on literature review and the purposes of the study. It had a four point scale of Strongly Agree (4), Agree (3), Disagree (2) and Strongly Disagree (1). The instrument was validated by three experts, in Agricultural Education, and two in Home Economics from Colleges

of Education. The recommendations of the validates were used to improve the instrument. The reliability of the instrument was determined by administering the instrument to ten (10) female-heads of households outside the study area and who did not constitute the actual subjects for the study. Data collected was analyzed using Cronbach Alpha which yielded reliability co-efficient of 0.79.

Data Collection Method: A total of 192 copies of questionnaire were administered to the respondents by hand. Most of the respondents were illiterates, therefore the questionnaire was used as interview schedule for them. Questionnaire items were explained to them. All 192 copies of the questionnaire administered to the respondents were collected back. This represent 100 percent return rate.

Method of Data Analysis: Data collected from the study were analyzed using mean scores and standard deviations. A cut-off point of 2.50 was adopted for decision making. Items with mean ratings of 2.50 and above were regarded as "Agreed" while those below 2.50 were regarded as "Disagreed".

Results

The results of the study were presented in Tables 1, 2 and 3, as follows:

Table I: Mean Responses of Female-headed Households on Coping Strategies Adopted during COVID-19 Lockdown for Combating Food Unavailability

S/N	Coping Strategies for Combating Food Unavailability	\bar{X}	D	Decision
1.	Receiving food from members of extend family members	.99	0.71	Agreed
2.	Facilitating food system innovations.	3.55	0.75	Agreed
3.	Preserving food stuff using air-tight containers.	2.91	0.46	Agreed
4.	Engaging in crop production.	2.88	0.58	Agreed
5.	Using whatever food that was in season.	3.11	0.39	Agreed
6.	Sale of house properties to buy food.	2.68	0.99	Agreed
7.	Home gardening to improve food supply.	2.77	0.82	Agreed
8.	Skipping meals/reducing number of meals eaten each day in the home.	3.01	0.88	Agreed
9.	Adopting effective farming techniques to raise quality and quantity of products.	3.57	0.56	Agreed
10.	Improved harvesting techniques to prevent food spoilage.	3.51	0.78	Agreed
11.	Engaging in crop diversification.	3.51	0.55	Agreed
12.	Borrowing money to buy food.	3.16	0.63	Agreed
13.	Collecting food from neighbours.	3.77	0.49	Agreed

\bar{X} = Mean, SD = Standard Deviation, N = 192

Table 1 shows that all the items had mean reponses above the cut-off point of 2.50. This implies that they were all agreed upon by the respondents. The respondents agreed that the items such as, facilitating food system innovations (\bar{X} = 3.55), preserving food using air-tight containers (\bar{X} = 2.91), engaging in crop production (\bar{X} = 2.88), using

whatever food that was available (\bar{X} = 3.11), sales of house properties (\bar{X} = 2.68), home gardening (\bar{X} = 2.72) etc, were the coping strategies adopted by female-headed households for combating food unavailability during the COVID-19 Lockdown in the area of the study.

Table 2: Mean Responses of Female-Heads Households on Coping Strategies Adopted during COVID-19 Era for Combating Food Unaccessibility.

S/N	Coping Strategies for Combating Food Unaccessibility	\bar{X}	SD	Decision
1.	Storing available within the household.	.82	.81	Agreed
2.	Using foods that were in season.	.25	.50	Agreed
3.	Preserving food using traditional methods.	.01	.43	Agreed
4.	Improving post harvest food handling.	.33	.53	Agreed
5.	Consumption of fewer food items each day.	.09	.49	Agreed
6.	Reducing consumption of food for adults family members.	.88	0.61	Agreed

\bar{X} = Mean, SD = Standard Deviation, N = 192

Table 2 shows that the respondents agreed that all the items; including storing food within the household ($\bar{X} = 2.82$), preserving food using traditional methods ($\bar{X} = 3.01$), improving post harvest handling ($\bar{X} = 3.33$), reducing food consumption by adults members of the households ($\bar{X} = 2.88$) are among

the coping strategies adopted by female-headed households in coping with food inaccessibility. These imply that all those items had mean responses above the cut-off point of 2.50 and were all “agreed” upon by the respondents.

Table 3: Mean Responses of Female-headed Households on Coping Strategies Adopted during COVID-19 Lockdown for Combating Challenges of Food Utilization.

S/N	Coping Strategies for Challenges of Food Utilization	\bar{X}	SD	Decision
1	Increased dietary diversity.	3.66	0.61	Agreed
2	Using of improved food preparation methods.	3.33	0.79	Agreed
3	Use of available complements to enrich available food items.	3.81	0.92	Agreed
4	Storing of food at home.	3.28	0.90	Agreed
5	Improved meal management practices.	3.39	0.48	Agreed
6	Consuming more fruits and vegetables found within the home environment	3.88	0.45	Agreed
7	Decrease frequency of meal preparation and consumption.	3.51	0.63	Agreed
8	Proper packaging of food.	3.02	0.66	Agreed
9	Consumption of low quality food substitutes.	3.11	0.51	Agreed
10	Reduction in food wastage.	3.66	0.71	Agreed
11	Consumption and sharing resources with other households.	3.92	0.59	Agreed

\bar{X} = Mean, SD = Standard Deviation, N = 192

Table 3 reveals that all the items had mean responses above the cut-off point of 2.50. This shows that the respondents agreed that all the strategies in Table 3 were adopted by female-headed households in coping with challenges of food utilization during the COVID-19 Lockdown. These include, increased dietary diversity ($\bar{X} = 3.66$), use of improved food preparation method ($\bar{X} = 3.33$),

use of available complements to enrich food items ($\bar{X} = 3.81$), and the others.

Discussion of Findings

Results of research question 1 revealed that the coping strategies adopted by female-headed households in combating food unavailability during COVID-19 lockdown include facilitating food system innovations ($\bar{X} = 3.55$), preserving food stuff using air-

tight containers ($\bar{X} = 2.91$), engaging in crop production ($\bar{X} = 2.88$), using whatever food that was in season ($\bar{X} = 3.11$), sale of household properties to buy food ($\bar{X} = 2.68$), home gardening to improve food supply ($\bar{X} = 2.77$), adopting effective farming techniques ($\bar{X} = 3.57$), improved harvesting techniques to prevent food spoilage ($\bar{X} = 3.51$), engaging in crop diversification ($\bar{X} = 3.51$) and borrowing money to buy food ($\bar{X} = 3.16$). These findings are consistent with the work of Fanzo (2015) who stated that food availability is increased by crop diversification, home gardening system and use of effective farming techniques. Also Thompson (2015) opined that food could be made available at household level through re-engaging in crop production and also engaging in home gardening. Furthermore, the findings of this present study are consistent with those of Webb (2019) who reported that female-headed household can combat food unavailability through cooking whatever food that is available and also can source help from the neighbours.

Research question 2 was dealt with the coping strategies adopted by female-headed households in coping with the challenges of food inaccessibility during COVID-19 lockdown. Results are in Table 2, revealing such strategies as storing available food within the household ($\bar{X} = 2.82$), using foods that were in season ($\bar{X} = 3.25$), preserving food using traditional methods ($\bar{X} = 3.01$), improved post harvest food handling

($\bar{X} = 3.33$), consuming of fewer food items each day ($\bar{X} = 3.09$), reducing consumption of food for adults family member ($\bar{X} = 2.88$). These findings were in line with those of Franzo (2015) who reported that food accessibility could be enhanced through tracking of seasonal food. Davis (2009) also stated that food accessibility could be enhanced during lean period through improved post harvesting handling. Also Dixconet (2011) stated that household combats the challenges of food inaccessibility by allowing the adults to consume limited food.

Research question 3 focused on the coping strategies adopted by female-headed households during COVID-19 lockdown for combating challenges of food utilization. Results of Table 3 revealed that the following strategies were adopted: increased dietary diversity ($\bar{X} = 3.66$), use of improved food preparation methods ($\bar{X} = 3.33$), use of available complements to enrich available food items ($\bar{X} = 3.81$), storing of food at home ($\bar{X} = 3.28$), reduction in food wastage ($\bar{X} = 3.66$), etc. These findings are consistent with findings of Gupta (2013) that food utilization could be increased through increased dietary diversity. Also World Health Organization (2009) opined that use of available complements to enrich available food items could help in food utilization among rural households. Dauda (2014) noted that food utilization could be encouraged through use of improved food preparation methods and use of available complements to enrich

available food items. He also reported that food utilization especially in rural areas can be improved through reduction of food waste and proper packaging of food. The findings also support the work of Webb (2019) who stated that female-headed households should be encouraged to reduce improper food utilization by good food preparation and proper storage of foods.

Conclusion

The study has explored the various coping strategies adopted by female-headed households during the COVID-19 lockdown in coping with the challenges of food unavailability, inaccessibility and challenges of food utilization in the rural areas. Adequate attention should be given to women in form of access to productive inputs, assets and services, since they are mainly responsible for food preparation and processing. Furthermore, policies aimed at improving female-headed household access to education should be enhanced because, this will help them in coping with food insecurity. It becomes necessary that there is the need to foster better use of food grown and purchased at the household level through preservation, cooking, storing and processing.

Recommendations

Based on the findings of the study, the following were recommended:

(1) Government should give palliatives to women through their

women leaders during the outbreak of diseases.

- (2) Women should diversify their diets to ensure a healthy diet that contains a balanced and adequate combination of macronutrients and essential micronutrients.
- (3) Female-headed households should source for fund outside to cater for their household food.
- (4) Female-headed households with large household size should be encouraged to be actively involved in agriculture.
- (5) Female-headed household should have access to education to enable them cope with their families.
- (6) Female-headed households who are into farming should form co-operative societies in order to help them obtain assistance from government.

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