Assessment of Coping Mechanism of Rural Women in Ensuring Food Security in Abeokuta North Local Government Area, Ogun State

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Abstract

This study was conducted to assess food security among rural women in Abeokuta north local government area of Ogun state. With a multistage sampling procedure, primary data were obtained from 120 respondents in the study area through a structured questionnaire and interview schedule. The data obtained were analyzed using descriptive instruments such as frequency and percentages while Pearson Product Moment Correlation (PPMC) was used as the inferential statistical tool to test the hypothesis of the study. Results obtained from the study give it that most of the respondents were married. About (37.8%) were traders and (44.5%) had no formal education. About (75%) of the respondents has a household size between the range 1-5. Low income capital is the major constraint affecting household food insecurity among the rural women. Majority of the respondents claimed they used less preferred/less expensive food as coping strategies used to ensure food security. The results obtained from Pearson Product Moment Correlation shows that ($r=0.470^{**}$; $P <0.000$), household size($r=0.215^{*}$; $P <0.019$), monthly income ($r=0.249^{**}$; $P <0.006$) respectively exhibited significant relationship with coping mechanism for food security employed by the respondents. Based on the findings of the study, it was concluded that most households had adopted both the long term and short term strategies to ensure food security. The study recommended that; There is need to improve on assess to income activities that are more sustainable because the mechanisms engaged upon by the respondents have short term effect; The poverty alleviation programme of government should focus on how to boost non-firm businesses so as to boost income and subsequently enhance food security.

Keywords: Assessment, Coping mechanism, rural women, Food security

INTRODUCTION

Food is regarded as the basic means of sustenance as such, it is a basic necessity of life. An adequate intake in terms of quantity and quality is a key for healthy and productive life (Irohibe and Agwu, 2014). Food accounts for a substantial part of a typical Nigerian household budget. Various foods serves as important vehicles for taking nutrients into the body and bringing about a healthy state, hence the need for food to be taken in the right quantity and quality.

To measure the quantity of food taken, there are classes of essential nutrients, which must be combined in appropriate proportion to ensure an adequate food intake. Food is of economic and political significant especially in issues relating and ensuring peace and stability among the populace (Adebayo, 2012).

The need for food tops maslow's hierarchy of needs as it is essential for a healthy living. Thus achievement of food security is important in any given country, food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preference for an active and healthy life. Freedom from hunger is the most important and fundamental human right that can be attained if an individual is food secure. Despite this reality, the number of people suffering from food insecurity globally is disproportionally big and is estimated at 925 million (Food and Agriculture Organization and world food program 2010).

Food security, or the lack thereof, has become a topical issue (Olagunju et al, 2012; Makombe et al, 2012).the problem of an increase in the number of cases of food insecurity among households is an uncontested and globally recognized phenomenon, especially in developing countries where the problem is so prominent(World bank, 2016). Tracing the origins of food surety shows it is a well-known concept throughout history tracing as far back as the mid-70s when the world experienced food crisis, which affected most people, at that time the focus was on food supply and price stability of foodstuff (Dunga, 2017).

Coping mechanism is said to be the measures taken by people to mitigate the effects of not having sufficient food to meet the household's dietary needs (Onunka et al, 2018). It plays a crucial role in the development of farm households. However, some mechanism seems difficult to achieve and are too general among farm households to fulfill their food requirements. Maxwell et al, (2018) argue that though many households adopt a number of food consumption coping mechanism, some coping mechanism are likely to be as norms as they do not contribute to improving food security among the population, for example eating of less preferred foods.

The most vulnerable region to food insecurity is the sub-sahara Africa and Nigeria is one of the food deficit countries in the region (FAO, 2015). However, ensuring food security in developing countries is a global goal. In Nigeria, majority of households are food insecure, especially the rural farming households and the women are left to manage/utilize the little resources available for family consumption. Women are major stakeholder in ensuring food security, they play a significant role as food producers, manager of natural resources, income generation and care provider for their family. Yet, women are often restricted to have access to land, education, credit, information, technology and decision making bodies which as contributed to food insecurity in the country.

Despite the contribution of women to food security, they tend to be invisible actors in development and all too often, their work is barely or not recorded in statistics or identified because of their vulnerability to glaring gender bias. Therefore, the need to carry out a study on the different coping mechanisms adopted by rural women in ensuring food security. The objectives of the study therefore were to: (1) Examine the socio-economic characteristics of the rural women in the study area. (2) Identify the coping mechanisms used by rural women to ensure food security in the study area. (3) Analyze the extent of use of the coping mechanism to ensure food security in the study area. (4) Identify the factors that influence the use of the coping mechanism. (5) Identify the causes of food insecurity in the study area.

Methodology

The study was carried out in Abeokuta North Local Government Area (LGA) of Ogun state, Nigeria. Its headquarters is located in Akomoje town, near Abeokuta. It has an area of 808km², it is situated in the north-east part of Ogun state with co-ordinates 7º12'N 3 º12'E. it's bounded in the North by Odeda LGA, Ewekoro LGA to the south, Abeokuta south LGA to the East and finally to the west by Yewa north LGA. The people of the area are predominantly arable crops farmers. In recent times however, the people of the area likewise engage themselves with quarry business, artisan works and handcrafts such as tie and dye making and pottery. The popular Adire fabrics are produced in some area of the local government.

The population of the study consists of all rural women in Abeokuta North Local Government Area of Ogun State. A multi-stage sampling techniques were used for the study. There are 16 wards in the local government area, the first stage involve a random selection of (10) villages from the study area. The second stage involve the random selection of twelve (12) women from each of the selected villages making a total of 120 respondents. Primary data were used for this research work with the aid of both structured interview and interview schedule. The data obtained was analyzed using both descriptive and inferential statistical tools. Descriptive statistics was used for frequency counts, percentages meanwhile; Pearson Product Moment Correlation (PPMC) was used to analyze the stated hypothesis.

RESULTS AND DISCUSSION

Socio-economic characteristics of the respondents

The result of socioeconomic characteristics of the respondents as presented on table 1 showed that 51.6 percent of the respondents were between the ages of 30-49 years. The mean age of the respondents was 49.73 percent implying that were still agile to go about their coping mechanism activities to ensure food security. Fairly above half (57. 1 percent) of the respondent were married, 0.8 percent were single, 36.1 percent were widowed while 6.7 percent were divorced. This implies that almost half of the respondents were married and shown responsibility in term of income to meet their family needs influencing the adoption of coping mechanism to ensure food security.

Table 1 also indicated that 44.5 percent of the respondents have no formal education, 29.4 percent completed primary education, 11.8 percent completed secondary education while 15 percent completed their tertiary education. This implies that, almost half of the respondents are illiterates and this is expected to have effect on the coping mechanism adopted to

ensure food security. Also, the result presented that 44.5 percent of the respondents were Christians, 43.7 percent were Muslims while 12.5 percent were traditional worshippers.

The result further showed that 30.3 percent of the respondents were into farming as primary occupation, 37.8 percent were traders, 8.4 percent were civil servants while 24.2 percent indicated artisanship. This implies that majority of the respondents were into trading. It is obtained from the result that majority (42.9 percent) of the respondents only have single secondary occupation being trading and only 6.7 percent of the respondents do not have secondary occupation, 29.4 percent were farmers while 21.7 percent were artisans. As such, this will positively influence the coping mechanism adopted to ensure food security.

It can be deduced from table 1 that majority (75 percent)of the respondents have 1-5 household members, while 25 percent had between 6-10, with the mean household size of 4.76. this implies that majority of the respondents have smaller household size. Household becomes more vulnerable to food insecurity as it size increases.

The result further asserts that, 29.2 percent of the respondent earned between ₦16,000-20,000 as their income, 28.3 percent earned between ₦11,000-15000 as their income, 15.8 percent earned less than 10000 monthly,11.76 percent earned between 21000-25000, 10 percent of the respondents earned above 35000, while 5 percent earned between 26,000-30,000, the mean income standing at 19,150.84. This will lead to adoption of several coping mechanism. This is expected to have a negative influence on their food security as low income will lead to household food insecurity.

The result rounded up that 24.4 percent of the respondent indicated cooperative as their source of capital, 21.0 percent through bank loan, 21.0 percent through relatives and friends, 20 percent through daily contribution while 14.3 percent of the respondents got capital from personal savings. The result implies that cooperative was the major source of capital for the respondents. This implies that respondents has access to credit facilities, which tends to affect food security status.

Coping mechanism used to ensure food security by the respondents

Table 2 shows the level of use of coping strategies to ensure food security. Based on the results on dietary change, rely on less preferred and less expensive food ranked 1st with WMS= 2.52. This implies that relying on less preferred/less expensive food were the major coping mechanism the respondents involved in and this is expected to provide food security for the respondents but will have a negative effect on their dietary change which might cause malnutrition.

Based on the results on increase short-term household food availability, purchased food on credit was ranked 1st with WMS= 2.2, borrow food or rely on help from friend or relative ranked 2nd with WMS= 2.08, gather wild food, hunt or harvest food immature crop ranked 3rd with WMS= 1.05, consumed seed stock held for next season ranked 4th with WMS= 0.85. This implies that they adopted this coping mechanism to ensure food security which is short term household food availability.

Based on the results on decrease numbers of people, send household members to eat elsewhere ranked 1st with WMS= 1.39, send household members to beg ranked 2nd with WMS= 0.95. This implies that they engaged these strategies to be food secured.

The results further revealed that rationing strategies, limit portion size at meal time ranked 1st with the WMS= 2.38, reduced number of meal eaten in a day ranked 2nd with WMS= 2.30, restricts consumption by adults in order for small children to eat ranked 3rd with WMS= 2.11, skip entire days without eating ranked 4th with WMS= 1.39. This implies that to be food secured the respondent limit portion size at meal times and reduced number of meals eaten in a day.

Household food security access-related domains

The distribution of the respondents by "in the past seven days, did you or any household member I have to eat a limited variety of foods due to lack of resources, reveals that how many times did it Happen this week was ranked first with the WMS of (2.17), in the past seven days, where are you or any also member not able to eat the kind of food you preferred because of lack of resources", "how many times did it happen this week was ranked second with the WMS (2.13), in the past seven days, did you or any household member have to eat some food that you really did not want to eat because of lack of resources to obtain other types of food", "how many times did it happen this week was ranked third With the WMS (2.10), in the past seven days did you worry that household would not have enough food", how many times did it happen this week was ranked fourth with the WMS (2.04), in the past seven days, did you or any household member have to eat smaller meals that you felt you needed, how many times did it happen this week was ranked fifth with the WMS (1.95) , in the past seven days was there ever no food to eat or any kind your household because of lack of resources, how many times did it happen this week was ranked sixth with the WMS (1.33), in the past seven days, did you or any household member go to sleep at night hungry, how many times did it happen this week was ranked seventh with the WMS (1.33) while in the past seven days, did you or any Family member go a whole day and night without

eating, how many times did it happen this week it was ranked eighth With the WMS (1.24). This implies that most respondents eat a limited variety of foods due to lack of resources.

The results presented in table 2 showed that, 35 percent claimed that in the past seven days, household members worried that they would not have enough food to eat, about 41.2 percent claimed that they were not able to eat the kind of food they preferred because of lack of resources, about 41.2 percent claimed that in the past seven days, household member have to eat some food that they really do not want to eat because of lack of resources to obtain other types of food, Most (75.6 percent) claimed that in the past seven days, there was no food of any kind in their household because of lack of resources to get the food , Most (79.2 percent) claimed that household member go a whole day and night without eating anything because there was not enough food, about 42 percent claimed that in the past seven days, household member I have to eat a limited variety of foods due to lack of resources, about 36.1 percent claimed that in the past seven days household member have to eat smaller meals than they felts because there was not enough food.

Constraints to household food insecurity

The distribution of the respondents by constraints to household food insecurity was measured on a 3-point scale of moderate, minor, not a constraint. While WMS was used in the ranking of the variables. This study shows that, low income capital was ranked first with the WMS (2.67), high cost of food item was ranked second with the WMS (2.67), poor marketing channel ranked third with the WMS (2.37), lack of credit facilities ranked fourth with the WMS (2.27), malnutrition ranked fifth with the WMS (2.24), poor storage facilities ranked sixth with the WMS (2.12), delayed and erratic rainfall ranked seventh with the WMS (2.00), poor health status ranked eight with the WMS (1.99), lack of input ranked ninth with the WMS (1.96), low agricultural productivity ranked tenth with the WMS (1.93), lack of good health ranked eleventh with WMS(1,85), crop failure ranked twelfth with the WMS (1.68), Erosion ranked thirteenth with the WMS (1.67), insufficient land ranked fourteenth with the WMS (1.65), while loss of job ranked fifteenth with the WMS (1.60). This implies that low income capital was the major constraints of the respondents which could have led to inability to purchase farm input thereby leading to poor farm yield/crop failure, hence, leading to high cost of food item which is also the second ranked constraints to Household food insecurity.

Test of hypothesis
The study hypothesis of this study was stated to be null

Ho: There is no significant relationship between selected socio-economic characteristics of the respondents and coping mechanism. For this hypothesis, Pearson Product Moment Correlation (PPMC) was used to test for the significant relationship between the variables. The result revealed that some of the selected socio-economic variables such as age (r=0.470**; P<0.000), Household size (r=0.215*; P<0.019), Monthly income (r=0.249**; P<0.006), respectively exhibited a significant relationship with the coping mechanisms for food security employed by the respondents.

The result implies that all the aforementioned socio-economic characteristics of the respondents have decisive influence in the coping mechanism employed. Therefore, the null hypothesis is rejected, hence alternative hypothesis is accepted.

Ha: there is significant relationship between the selected socio-economic characteristics of the respondents and the coping mechanism for food security.

CONCLUSION AND RECOMMENDATIONS
Conclusion

As a result of the findings of the study, it was concluded that most households had adopted both the long and short term strategies. The most popular coping strategies were less preferred/less expensive food against food insecurity, purchasing food on credit and relying on relative/friends. Some of the factors affecting food security among rural women are social factors, insufficient source of income, health factors, malnutrition and lack of education etc. constraint to household food security in the area includes; lack of credit facilities, lack of good health, insufficient land, lack of input, poor marketing channels etc.

Recommendations
It was Recommended based on the findings of the study that;
1. There is need to improve on access to income generating activities that are more suitable due to the fact that the coping mechanisms embarked upon by the respondents have shot term effect.
2. The rural women should be encouraged to engage in food production and other food security activities.
3. Also, considering the findings of the study, poverty alleviating programmes should focus on how to boost non-firm businesses so as to boost income and subsequently enhance food security.

Table-1: Distribution of respondents by socio-economic characteristics

Characteristics	Frequency	Percentage	Mean
Age			
30-39	28	23.3	
40-49	24	28.3	
50-59	30	25	49.73
60-69	16	13.3	
70-79	8	6.67	
>79	4	33.3	
Marital status			
Single	1	0.8	
Married	68	57.1	
Widowed	43	36.1	
Divorced	8	6.7	
Educational level			
No formal education	53	44.5	
Primary	35	29.4	
Secondary	14	11.8	
Tertiary	18	15	
Religion			
Christianity	53	44.5	
Islam	52	43.7	
Traditional	15	12.5	
Primary occupation			
Farming	36	30.3	
Trading	45	37.8	
Civil servant	10	8.4	
Artisan	29	24.2	
Secondary occupation			
None	8	6.7	
Farming	35	29.4	
Trading	51	42.9	
Artisan	26	21.7	
Household size			
1-5	90	75	4.76
6-10	30	25	
Monthly income			
<10,000	19	15.8	
11,000-15,000	34	28.3	
16,000-20,000	35	29.2	19,150.84
21,000-25,000	14	11.7	
26,000-30,000	6	5	
>35,000	12	10	
Economic Initial Capital			
Personal savings	17	14.3	
Cooperative	29	24.4	
Loans	25	21.0	
Relative/friends	25	21.0	
Daily contributons	24	20	
Total	**120**	**100.0**	

Source: Field survey, 2020.

Table-2: Distribution of respondents by coping mechanism to ensure food security

Coping mechanism Adopted	Frequency Percentage Level of use				WMS	rank
	always	sometimes	rarely	never		
Dietary change						
Rely on less preferred And less expensive food	72(60)	39(32.8)	8(6.7)	1(0.8)	2.52	1st
Increase short-term Food availability						
Purchase food on credit	54(45)	47(39.5)	8(6.7)	11(9.2)	2.2	1st
Borrow food or rely on Help from a friend or Relative	41(34.2)	56(47.1)	15(12.6)	8(6.7)	2.08	2nd
Gather wild food, hunt Or harvest immature crop	11(9.2)	31(26.1)	32(26.9)	46(38.7)	1.05	3rd
Consumed seed stock Held for next season	13(10.8)	26(21.8)	15(12.6)	66(55.5)	0.85	4th
Decrease numbers of people						
Send household member to eat elsewhere	14(11.8)	41(31.5)	38(31.9)	27(22.7)	1.35	1st
Send household member to beg	10(8.3)	22(18.5)	41(34.5)	47(39.5)	0.95	2nd
Rationing strategies						
Limit portion size at meal times	59(49.2)	48(40.3)	12(10.1)	1(0.8)	2.38	1st
Reduce number of meals eaten in a day	52(43.3)	54(45.4)	13(10.9)	1(0.8)	2.30	2nd
Restricts consumption by adults in order for small children to eat	49(40.8)	43(36.1)	21(17.6)	7(5.9)	2.11	3rd
Skip entire days without eating	11(9.2)	52(43.7)	30(25.2)	27(22.7)	1.39	4th

Source: Field survey, 2020.
WMS: weighted mean score
Figures in parentheses are percentage

Table-3: Distribution of respondents according to household food insecurity conditions

Extent of use	Frequency (percentages) LEVEL OF OCCURRENCE			WMS	rank
	often	sometimes	rarely		
In the past seven days, did you or any household member have to eat a limited variety of foods due to lack of resources? How many times did it happen this week in the past seven days, were you or any household member not able to eat the kind of food you preferred because of lack of resources? How many times did it happen this	45(37.0)	50(42.0)	25(21.0)	2.17	1st

week in the past seven days, did you or any household member have to eat some food that you really did not want to eat because of lack of resources to obtain other types of food?	43(35.3)	49(41.2)	28(23.5)	2.13	2nd
How many times did it happen this week in the past seven days, did you worry that your household would not have enough food?	39(31.9)	49(41.2)	32(26.9)	2.1	3rd
How many times did it happen this week in the past seven days, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?	42(35.0)	41(33.9)	37(31.1)	2.04	4th
How many times did it happen this week in the past seven days, was there ever no food to eat of any kind in your household because of lack of resources to get the food?	36(29.4)	43(36.1)	41(34.5)	1.95	5th
How many times did it happen this week in the past seven days did you or any household member go to sleep at night hungry because there was not enough food?	10(7.6)	20(16.8)	90(75.6)	1.33	6th
How many times did it happen this week in the past seven days, did you or any household member go a whole day and night without eating anything because there was notenough food?	8(5.9)	24(20.2)	87(73.1)	1.33	7th
How many times did it happen this week?	6(4.2)	18(15.1)	95(79.2)	1.24	8th

Source: Field survey, 2020.
Figures in parenthesis are percentage.

Table-4: Distribution of constraints to household food insecurity

	Frequency (percentage)				
	Level of severity				
Constraints	Moderate	Minor	Not a Constraint	WMS	Rank
Low income capital	83(68.9)	34(28.6)	3(2.5)	2.67	1st
High cost of food item	85(70.6)	30(25.2)	5(4.2)	2.67	1st
Poor marketing channel	53(43.7)	58(48.7)	9(7.6)	2.37	3rd
Lack of credit facilities	49(40.3)	54(45.4)	17(14.3)	2.27	4rd
Malnutrition	51(42.0)	47(39.5)	22(18.5)	2.24	5th
Poor storage facilities	39(31.9)	56(47.1)	25(21.0)	2.12	6th
Delayed and erratic rainfall	39(32.8)	42(34.4)	39(32.8)	2.00	7th
Poor health status	51(42.0)	17(14.3)	52(43.7)	1.99	8th
Lack of input	26(21.0)	64(53.8)	30(25.2)	1.96	9th
Low agriculture input	40(32.8)	31(26.1)	49(41.2)	1.93	10th
Lack of good health	43(36.1)	17(14.3)	60(50.4)	1.85	11th
Crop failure	14(11.0)	53(44.5)	53(44.5)	1.68	12th
Erosion	12(9.2)	60(50.4)	48(40.3)	1.67	13th
Insufficient land	22(17.6)	34(28.6)	64(53.8)	1.65	14th
Loss of job	15(11.8)	43(36.1)	62(52.1)	1.60	15th

Source: Field survey, 2020.
WMS: Weighted mean score
Figures in parenthesis are percentages

Table-5: Test of the significant relationship between the selected socio-economic characteristics of the respondents and coping mechanisms for food security- using Pearson Product Moment Correlation (PPMC) analysis

Socio-economic Variables	Correlation coefficient (r-value)	P-value	Decision	Remark
Age	0.470**	0.0000	S	Reject H_o
Household size	0.215**	0.019	S	Reject H_o
Monthly income	0.249**	0.006	S	Reject H_o

Source: Data Analysis, 2020
**Correlation is significant at the 0.01 level
*Correlation is significant at the 0.05 level
S: Significant

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