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Household Food Insecurity Coping Strategies during Violent Conflict in Taraba State Nigeria

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Abstract
Violent conflict has had its toll on Nigerian economy and food security situation. One major consequence of this conflict often not considered is food insecurity. This study investigated the food insecurity coping strategies adopted by households in Taraba State during conflict. Primary data for this study were collected from 450 randomly selected households. The data for the study were analysed using descriptive and inferential statistics. Food insecurity coping strategies index was used in capturing the food security status/levels of the households. Comparing the coping strategies index (CSI) of households in conflict and non-conflict areas of the state, Chi-square result showed a significant difference between the food security levels of the two groups. Households in conflict areas significantly ($p \leq 0.01$) used more food insecurity coping strategies and erosive coping strategies like begging for food than their counterpart. Households in conflict areas also depended heavily on food aid (18%). Household size, having children below 12 years, female head, married head and conflict were significant($p \leq 0.001$)factors that positively influenced households coping strategies. However, education, number of plots of land and income were factors that negatively and significantly($p \leq 0.001$) affected households coping strategy. The study recommended a constant monitoring and appropriate intervention to ameliorate the sufferings that conflicts inflict on these people especially households with children and those with female heads.

Keywords: Violent conflict, coping strategies, food security, households

1 Introduction

After many decades of conflicts, the welfare of the people living in southern part of Taraba is of great concern. It is still in record that the Tiv-Jukun conflict in Taraba is one of the bloodiest and fiercest communal clashes ever recorded in Nigeria, and have lasted for many decade (Aluaigba, 2008). This conflict has been recurring between religion divide; Christianity and Islam, and different ethnic groups; the Jukuns and Tiv, Jukun and Hausa-Fulani, Hausa- Fulani, Tiv and the Mambila, and the others tribes in the state (Aluaigba, 2008; Nnorom & Odigbo, 2015; Vanguard, 2020; World Watch Research, 2015). The conflict takes different forms ranging from shooting people, setting people, houses, farms, food storage, and other properties ablaze, to beheading or mutilating victims before torturing them to death(The Eagle Online, 2014). This has always resulted to internal displacement of some of the inhabitants of the state and instability in their economic activities(The Eagle Online, 2014). Markets and other physical infrastructure in these areas are usually destroyed, leaving the place desolate, with farming, school activities or other productive activities halted. So this crisis could have contributed

immensely to economic, educational and nutritional backwardness of the state.

Little or no research has considered conflict as a factor that can lead to entitlement failure, and so food insecurity and low literacy level in the northeast states of Nigeria. Much attention has been given to the economic losses and the problem of immediate loss of human life during the conflict, but little has been done on the effects of these crises on food security, which can be sudden, stretched and pervasive. The study aimed to identify the effects of conflicts on the food security, food insecurity coping strategies of the households,and the differences in the Coping Strategies Index (CSI) of households in conflicts and non-conflict areas.Achieving these objectiveswill certainly improve the economy, environmental sustainability, and also reduce health costforthe society.

2 Research Design and Methodology

The study was carried out in Taraba State, Nigeria. Taraba is located in North-East Nigeria. It occupies a land area of 54,473sqkm.The state has a population of 2,294,800 (National Population Commission (NPC) 2006) and is located between latitudes 6°25'N and 9°30'N and longitudes 9°30'E and 11°45'E. It shares boundary with Adamawa State on the northeast and on the west with Plateau and Gombe States, on the south west with Benue State. Ithas an international boundary with the Republic of Cameroun On the east (Online Nigeria, 2003). Farming is the key occupation of the people of Taraba.

2.1 Study design

To answers the questions poised in this study, field survey was carried out. The study adopted both quantitative and qualitative methods. The survey involved the use of expert opinion, focus group discussion, and questionnaire which served as interview schedule in collecting households' food security data. Primary data was collected using a well validated interview administered questionnaire containing the adapted food insecurity coping strategies questions. Data on socio-economic characteristics, food consumption, and food insecurity coping strategies were collected and analysed.

Multi-stage random sampling technique was used in selecting 480 households from five Local Government Areas (LGA). To draw conclusion at the state, the study covered five LGAs from the three agricultural zones in Taraba state. Two LGAs was selected from agricultural zones with six LGAs and one from the zone with only three LGAs proportionately. The only two LGAs experiencing violent conflict at the time of the data collection was purposely selected as part of the five LGAs to capture the effects of violent conflict on food security. So, two LGAs having violent conflict and three from non-conflict LGAs (Wurkari, Jalingo, Yorro, Bali, and Takum) were selected. It is important to note that Taraba state has a long history of violent conflict and one between 2013 and 2015. But the LGAs categorized as violent conflict affected LGAs were the once experiencing it at the time of the data which is Bali and Wukari LGA. Data collected were analysed using both descriptive and inferential statistics. Information gathered through observation and informal discussions were helpful in discussing the results.

Food Insecurity Coping Strategies Adaptation in Taraba State

Though majority of the items/questions in the CSI module have been found to be universal in their applicability. But the localization of this measure is very crucial in identifying what is obtainable and peculiar to any society under study (Maxwell & Caldwell, 2008).

Table 1: Food insecurity coping strategies ranking

Food insecurity coping strategies	Focus group ($fg_{1..7}$) ranking of each strategies								
	FG1	FG2	FG3	FG4	FG5	FG6	FG7	Av.Score	Rank
1. Rely on less preferred and less expensive foods (less exp)	1	1	1	1	1	1	1	1	1
2. Borrow food, or rely on help from a friend or relative (borrow)	3	2	2	2	2	2	2	2.1	2
3. Purchase food on credit (credit)	2	1	2	2	2	2	2	1.9	2
4. Working (house chore, farm) in exchange for meal or money to buy food	4	3	3	3	4	4	4	3.6	4
5. Attending uninvited occasions e.g. wedding, burial, naming ceremony etc. to eat food	1	1	2	2	2	2	1	1.6	2
6. Wild food hunt (wild)	3	3	3	4	3	2	3	3	3
7. Consume seed stock held for next season (stock)	3	3	3	3	3	3	3	3	3
8. Send household members to eat elsewhere, e.g. neighbours, friends, or relatives house	3	2	2	3	4	3	3	2.9	3
9. Send household members to beg for food (beg)	4	4	4	4	4	4	4	4	4
10. Limit portion size at mealtimes (limit)	1	1	1	1	1	1	1	1	1
11. Restrict consumption of adults in order for small children to eat (restrict)	2	1	2	2	1	1	2	1.6	2
12. Feed working members of household at the expense of non-working members (working)	2	3	3	3	3	3	2	2.7	3
13. Ration the money you had and buy prepared food (ration)	1	1	1	2	1	1	1	1.1	1
14. Reduce number of meals eaten in a day (reduce)	1	1	2	1	1	1	1	1.1	1
15. Skip entire days without eating (skip)	3	4	4	4	3	4	4	3.7	4

FG= Focus groupSource: Authors

The data collected lasted for two months between June 2014 to August 2014. As part of this study seven focus groups were formed across the state to adapt the CSI survey questions to local condition. The focus group discussions were used in identifying the coping strategies and severity ranking of the strategies (see Table 1). The CSI severity ranks range from 1 - 4, with the least severe coping strategies designated as 1 and most severe as 4.To get the CSI for each item, the frequency of use of a strategy is multiplied by its severity score. The score of each household strategies are summed to get theCSI for the household.

3 Results and Discussion

The survey collected data on gender, presence of children in the households, marital status, education, occupation, income, expenditure, CSI and access to resources.

Table 2: Characteristics of theHousehold

	Non-conflict	conflict
Household characteristics	**%**	**%**
Household with children	78.2	89.5
Gender		

Male	79.0	80.1
Female	21.0	19.9
Marital status		
Single	19.3	12.3
Married	67.2	66.7
Divorce or separated	13.4	21.1
Educational qualification of the female head in the household		
No education	13.9	42.7
first school leaving certificate	19.3	22.8
O level	31.5	19.3
NCE/OND	18.5	8.8
first degree/ HND	6.3	5.8
Post graduate	4.2	
Primary Occupation		
Civil servant	25.2	32.2
Farmer	25.2	29.8
private sector employed	14.7	8.2
Artisan	15.1	18.7
Trader	16.8	7.6
Student	1.7	1.2
Unemployed	0.4	2.3
public servants	0.8	0.0

Source: Fieldwork

Though households in Taraba State are affected one way or the other by conflict, but the sample for this study contained hundred and seventy-one (171) households directly affected by the violent conflictand 238 households that did not experience the conflict directly. A household is classified as a conflict affected household if at the time of the data collection, which coincided with the 2014 Tiv, Fulani and Jukun crises, was found still staying in this conflict areas and have lived in this area for at least six months. A comparison of the socio-economic characteristics of the households that experienced crisis and those that did not is presented in Table 2. About 90% of the households in the conflict areas had children below the age of 18 compared with 78.2% of the non-conflict area. Generally, greater proportion of the household heads was male and married. The conflict areas had slightly more male headed households (80.1%) than the non-conflict areas (79%), but more of the household heads (67.2%) in the non-conflict area were married compared to the conflict areas (66.7%). The household heads in conflict areas were between the ages of 18 and 76 years, compared with the age range of 23 -76 years of their counterparts.

The survey shows a variation on thenumber of years spent in formal education by the household heads in the two groups. Although non-educated household heads were found in both the conflict and non-conflict region, but the mean (8.11) and the maximum (15) years of education in the crisis area were lower compared with the mean (10.87) and maximum (18) years of formal education by the household heads in the non-conflict areas. Most of the female heads in conflict affected households were uneducated (42.7%), compared with the households in non-conflict areas, where only 13.9% were uneducated. But greater proportion of female heads in non-conflicted area had an O level certificate (31.5%). There was no female with postgraduate degree in the conflict area compare with 4.2% of the other households. This may be an indication that the people in the conflict areas are less educated than the others or that the more educated ones are leaving the

community due to the conflict. The low level of education in this area can be attributed to the conflict afflicting this area, which usually affects educational activities and facilities intermittently.

Greater proportion of the households head in both areas are primarily employed in the civil service sector and farming. Conflict areas had about 32% and 30% of their household heads employed in the civil service sector and farming respectively, compared with25% working in the civil service and 25% working in the farm for the household heads in the non-conflict areas.Public servants (politician) were completely absent in the conflict area compared to the other area with 0.8% politician household heads.

Household income and expenditure

Household total income captured in this survey is the sum of all the disposable income accruing to the members of the household. The survey showed that households in the conflict areas generally earned lower income than the ones in the non-conflict areas. The mean monthly total income of conflict affected household was ₦18,645.03, with a minimum income of ₦1500 and maximum income of ₦55,000 per month, compared with the mean income of ₦93,455.88, with the minimum and maximum income of ₦5,000 and ₦133,5000 in the non-conflict areas.

Table 3: Comparison of household income and expenditure

	Min. Non-conflict	Min. conflict	Max. Non-conflict	Max conflict	Mean non-conflict	Mean Conflict
The total monthly income of the household	5000	1500	1335000	55000	93455.88	18645.03
Number of income earners in the household	1	1	12	12	2.26	2.22
Monthly income of the female head of the household	0	0	300000	30000	40508.97	6348.24
Total monthly expenditure of the household	3000	800	500000	40000	56852.94	15202.92
Household monthly expenditure on food	3000	500	480000	25000	32710.08	8640.35

Source: Fieldwork

Also the conflict affected female heads in the households earned less monthly income than their counterparts in the other households. These females in the conflict area earned the maximum of ₦30,000 and a mean income of ₦6,348.24, compared with their counterparts in the other households who earned a maximum income of ₦300,000 and mean income of ₦40,508.97. The mean number of income earners in the conflict areas was also lower (2.22 person) compared with 2.26 person in the other areas.

Household in the conflict areas spent generally less money as a household, compared with the other households. As a household, the conflict areas had a mean total household monthly expenditure of ₦15,202.92, a minimum of ₦800 and maximum of ₦40,000, compared with the other households with a mean total expenditure of ₦56,852.94, a minimum of ₦3,000 and a maximum of ₦500,000.

The survey equally shows that the minimum monthly food expenditure of the households in the non-conflict areas were about six (6) times that of the conflict affected households. The maximum monthly food expenditure of the households in the non-conflict areas were about 19 times the other households. The mean food expenditure of household in the conflict areas was ₦8,640.35 per month, with a minimum of ₦500 and a maximum of ₦25,000, compared with the total food expenditure of the other households with a mean food expenditure of ₦32,710.35, a minimum of ₦3,000 and a maximum of ₦480,000. The result generally indicated that households in the conflict area are income poorer than the ones in the non-conflict areas. This result confirms the findings of Aluaigba (2008) and Moti (2010), that conflict affected households earned and spent less income than the other households.

Comparison of the Food Security Status of Conflict Affected and Non-Affected Household

The food security status of the households in Taraba state was measured using theCSI. The result was compared across households in conflict and non-conflict areas.

Table 6: comparison of coping strategies used by conflict affected and non-affected household

Food insecurity coping strategies	Severity rank	Non-conflict CSI (n =238) (Mean=83.4912, Min=31, Max=156)	Conflict CSI (n=171) (Mean=34.5504, Min=0, Max=145)
		%	%
a. Rely on less preferred and less expensive foods	1	96.6	100
b. Borrow food, or rely on help from a friend or relative	2	44.5	96.5
c. Purchase food on credit	2	51.7	80.7
e. gather wild food or hunt	3	25.2	82.5
f. Consume seed stock held for next season	3	17.6	74.3
g. Send HH member(s) to neighbours/friends/relatives house to eat	3	16.0	78.8
h. Send HH members to beg	4	13.4	46.2
i. Limit portion size at mealtimes	1	84.9	100
j. Restrict consumption of adults in order for small children to eat	2	51.3	89.5
k. Feed working members of HH at the expense of non-working members	3	28.2	83.6
l. Ration the money you had and buy prepared food	1	44.4	40.4
m. Reduce number of meals eaten in a day	1	51.3	100
o. Skip entire days without eating	4	7.1	80.1

Source: Fieldwork

The result presented in table 6 shows that the conflict affected households were using more of every of the food insecurity coping strategies than the other households, except rationing money to buy prepared meals. Rationing money to buy prepared foods is not a coping strategy that all household types use equally (Coates, Swindale, & Bilinsky, 2007). As movement was restricted in the conflict areas during this survey, it was likely that people could not move around freely as to sell or buy prepared food. The survey shows that the conflict affected households had a minimum CSI index of 31, maximum of 156, and a mean of 83.4912, compared with the minimum CSI of Zero (0), maximum of 145, and mean of 34.5504. The result of the LSmean shows that the CSI of the two groups of household were statistically

significant at $p \leq 0.01$.The general indication of the food security status comparison between the conflict andnon-affected households presented in table 6 is that households in conflict area experienced more food insecurity, leading to theuse of more coping strategies. All the households in the conflict area used coping strategies in the last 7 days from the time of the survey. So the survey shows that household affected by the conflict were significantly food insecure when compared with the other households in the State.

Table 7. Regression result on factors affecting the use of coping strategies

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	15.906	9.134		1.741	.082
Household size	1.538	.275	.211	5.587	.000
Households with children	19.565	3.198	.199	6.119	.000
Gender of household head	11.711	3.045	.127	3.846	.000
Age of household head	-.026	.119	-.009	-.215	.830
Marital status of the head	7.163	2.365	.111	3.029	.003
Years of formal education	-1.371	.277	-.179	-4.958	.000
Primary occupation	-1.491	.820	-.061	-1.818	.070
INCOME	-7.988E-005	.000	-.207	-5.624	.000
Conflict	32.791	2.663	.436	12.312	.000
Number of plots of land owned	-14.298	3.819	-.133	-3.744	.000

R Square = 0.642, Adjusted R square =0.633. Dependent Variable: CSI. Source: Fieldwork

The regression result on factors affecting the CSI of a household showed that about 64% of the changes in the dependent variable were explained by the independent variables in the model (R^2 = 0.64). Household size, presence of children in the household measured as a dummy variable (yes=1, no= 0), having a female household head, married household headand presence of conflict (yes=1, no= 0) were significant at $p \leq 0.001$ and positively influenced CSI. However, number of years of formal education, number of plots of land owned by the household and income were significant at $p \leq 0.001$ and negatively affected the CSI.

This result shows that large household size increases the number of CSI used by households. Households with children tended to use more CSI in order to feed their children. This further highlights the vulnerability of this group of household to food insecurity. The result on the effect of having a female head on CSI is a confirmation that female usually lack access to productive assets. Having a married household head predisposed the households to the use of more food insecurity coping strategies. This could be as a result of large household size and other responsibilities(Jian, 2014).The result also showed that households that experienced conflict crisis significantly used more coping strategies that the ones without conflict. Confirming that conflict is a very serious threat to development and food security, since it leads to the used of more coping strategies. Education significantly reduced the CSI of the households.

4 Conclusion and Recommendation

Conflicts is normal in human societies. However, the negative consequences of violent conflict on the economy, human relationships, and environmental sustainability cannot be over emphasised. Hunger and food insecurity is one of the major problems resulting from violent conflict which can have a devastating effect on the health of the individuals and the environment. It is obvious from the study that violent conflict has a significant negative effect on food security. Works done on the effects of violent conflicts has shown that it is important to make deliberate plans in helping the victims of this crisis through poverty and food insecurity interventions. Violent conflicts, having a female household head and large household size have a significant negative effect on food security.

Income and education should be explore to improve the food security situation of the households, while working to reduce or end conflict. The study recommended a constant monitoring and appropriate intervention to ameliorate the sufferings that conflicts inflict on these people especially households with children and those with female heads.

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