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ASSESSMENT OF EFFECTIVENESS OF CONFLICT MANAGEMENT STRATEGIES AMONGST RURAL HOUSEHOLDS IN OSUN STATE, NIGERIA

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ABSTRACT

The study was conducted with the purpose of assessing the effectiveness of conflict management strategies amongst rural households in Osun State, Nigeria. 153 household heads, selected through multistage sampling technique, were interviewed for the study through the administration of pre-tested interview schedule in the three purposively selected rural Local Government Areas (LGAs). The mean age of the respondents was 47 ± 17.8 and 62.1% of them were male. In addition, the mean household size was 6.3 ± 3.9 and majority (78.4%) were farmers. Causes of rural household conflicts identified were inadequate finance, wives' insubordination and interference from third party, amongst others. The findings revealed that at $p < 0.01$, occupation ($\chi^2 = 33.483$); sex ($\chi^2 = 29.502$); and religion affiliation ($\chi^2 = 31.612$) of the respondents had significant association with effectiveness of conflict management strategies. Furthermore, at $p < 0.01$, respondents' age ($r = 0.512$) and household size ($r = -0.483$) had significant relationship with conflict management strategies' effectiveness. The study concludes that conflict management strategies amongst rural households were effective. It was recommended that policy makers, rural developers and extension agents should include effective conflict management strategies in programme packages.

Key words: Household conflict, conflict management strategies, effectiveness.

INTRODUCTION

Conflicts are found at every stage of life. Individuals, groups, associations, clubs, societies, local, national and even world community continue to experience conflicts and crises in one way or the other. Conflicts are features of life and they have been since the beginning of creation- between and among the first set of human beings created on earth (Rambaud, 2006; Alabi, 2010).

Conflict is inevitable and no relationship is immuned; Longman Dictionary (2016), defines conflict as a state of opposition between persons or ideas or interests. In the household, it could be between husband and wife, father and children, mother and children, among wives, among children to mention but a few; this may be initiated from within the household unit or from external sources.

Alabi (2010) is of the opinion that there is actually nothing wrong with conflict, it is a permanent feature of life; what is often questioned is how man responds to or manages it. Conflict management is referred to as how man has come to live with, cope with and resolve from time to time; that is, controlling it before or during and after it has occurred. When managed well, it could serve as a catalyst for change and opportunity for relational growth, while a poorly handled conflict could become violent or destructive which could hinder peaceful coexistence in the household (Francis, 2007; Helen, 2011). Conflict management in rural areas is quite different from that in the urban areas due to the difference in their level of education, traditional beliefs, level of living, and experience among others (Nikals and Mikael, 2005).

The socioeconomic stability of the household depends upon its emotional system which in-turn affects the whole community or

society (Nikals and Mikael, 2005; Onigu and Albert, 1999; Otomar and Paul, 2002). In developing countries, Nigeria alike, poverty and hunger found in rural families can be explained among other issues by endless conflicts. In order to be productive, the rural household needs an emotional health and the effective household economy may not be possible with conflicts among family members; All in all, the higher the household stability, the higher its level of socioeconomic development and thus the development of the whole society.

According to Ekong (2010), there is no specific formula for resolving conflict but there are general procedures or approaches which might be used either by themselves or in combination. There could be a temporary working agreement between the parties in conflict and this process is called accommodation, it involves reciprocal adjustment and temporary modification of attitudes by the rivalries group in order for them to co-operate. There are different forms of accommodation and this includes truce, displacement, institutionalized release of hostility, super ordination, compromise, third party roles in compromise, segregation and toleration.

Thus, effective management strategies that could help to nip conflict in the bud and to prevent it from escalating if it erupts, as well as to sustain peace to avert future occurrence of conflict and their attendant large scale effects should be developed and sustained by households that seeks peace, growth and development. This is the thrust of this study.

The main objective of the study is to assess the effectiveness of conflict management



strategies used among rural household in Osun state. The specific objectives are to

- i. describe the socioeconomic characteristics of rural household heads in Osun State;
- ii. identify sources of conflict in the rural households;
- iii. examine the effect of conflict on rural households welfare; and
- iv. determine the effectiveness of the conflict management strategies used by rural household heads.

Research Hypothesis

- i. There is no significant relationship between effectiveness of conflict management strategies used by rural household heads and their socioeconomic characteristics.

METHODOLOGY

The study was conducted in Osun State, one of the states in Southwestern Nigeria, the State consist of six administrative zones. Multistage sampling technique was used to select respondents for the study. At first stage, three administrative zones, namely Iwo, Ife and Ilesa were randomly selected from the six administrative zones. At second stage, the most rural Local Government Area (LGA) was purposively selected from each of the selected administrative zones, namely, Ayedaade from Iwo zone, Ife-East from Ife zone and Atakumosa-West from Ilesa. The third stage involved selecting three villages randomly from each selected LGA; finally, proportionate sampling was used in selecting 153 respondents in all the selected villages, that is, Ayedaade LGA (12 from Akiriboto 1, 17 from Akiriboto 2 and 23 from Wakajaye), Atakumosa-West LGA (16 from Iwaro, 19 from Iloba and 15 from Onikoko), and Ife-East LGA (16 from Erefe, 22 from Iyanfoworogi and 13 from Akeredolu). In all, 153 rural household heads were interviewed for the study. Duly validated and pretested structural interview schedule were used to elicit quantitative data and key informant interview (KII) was used for gathering qualitative data from the respondents. Data were summarised with percentages, means and standard deviation, while Chi-square and Pearson Product Moment Correlation (PPMC) were employed to test the hypothesis.

Measurement of variables

Dependent variable: The dependent variable for this study was conceptualized as effectiveness of conflict management strategies used by household heads, using conflict management strategies adapted and modified from

Ekong (2010) which were peaceful reconciliation (identifying and correcting sources of conflicts), third party involvement, compromise, forcing, super-ordination, tolerance, segregation, and smoothing. The respondents were asked to react to each conflict management strategies used. The reaction was against a 4-point scale from Excellent (4 points), Good (3 points), Fair (2 point), and Poor (1 point) as used by Adeloye (2016). The total score per respondent was further classified into three levels of effectiveness as follows: low, moderate and high effectiveness using mean of total effectiveness score plus/minus standard deviation.

The effect of conflict on rural households' welfare was determined by asking the respondents to indicate how often does conflict result to these 8 indicators (separation of household members, divorce, lack of cooperation, disregarding authority, bloodshed, bitterness among household members, lack of peace and disruption of household activities) on a 4-point scale of: Very often (3), Often (2), Rarely (1), and Never (0). The total score per respondent was further classified into two levels of effect as follows: Unfavourable and favourable using the mean as cut off point, score above cut off was regarded as unfavourable since all the indicators were negative while the scores below the cut off was regarded as favourable.

RESULTS AND DISCUSSION

Socioeconomic characteristics of rural household heads in the study area

Results in Table 1 revealed that many (47.7%) of the respondents were at their old age, while the mean age of the respondents was 47.5 with standard deviation of 17.8. This implies that the respondents comprise people of active minds and bodies, which might be versatile in resolving household conflicts. Furthermore, it was revealed that majority (62.1%) and (75.2%) of interviewed household heads were males and practice Christianity, respectively. The table also showed that the households interviewed had a mean size of 6.3 with standard deviation of 3.9. Since only few (24.2%) were not literate; it then implies that majority could read and write. In addition, 92.2% of the respondents were Yorubas since the study area falls in Yoruba land. Majority (78.4%) of them were farmers by occupation while few engaged in petty trading and civil service. This finding was in consonance with earlier reports of Adisa (2001) that rural dwellers in Osun State engaged in more than one occupation as means of livelihood.

**Table 1: Distribution of rural household heads by selected socioeconomic characteristics**

Variables		Frequency	Percentages	
Age (years)	Below 40	53	43.6	Mean= 47.5 Standard dev.=17.8
	41-60	73	47.7	
	61-80	25	16.3	
	Above 80	2	1.3	
Sex	Male	95	62.1	
	Female	58	37.9	
*Occupation	Farming	120	78.4	
	Petty trading	74	48.4	
	Civil servant	45	29.4	
	Artisanship	41	26.8	
Religion affiliation	Christianity	115	75.2	
	Islam	35	24.8	
Ethnicity	Yoruba	141	92.2	
	Igbo	4	2.6	
	Others	8	5.3	
Household size	Below 6	65	43.8	Mean= 6.3 Standard deviation= 3.9
	6- 10	74	48.4	
	11-15	11	7.2	
	Above 15	1	0.7	
Level of educational attainment	Non-literate	37	24.2	
	Primary	32	20.9	
	Secondary	70	45.8	
	Post-secondary	14	9.1	

Source: Field survey, 2014

*Multiple responses

Causes of rural household conflict

Table 2 revealed that out of the causes of rural household conflict, inadequate finance (86.3%) ranked highest, followed by wives' insubordination (77.1%), communication gap (75.2%), and interference from third party (73.2%) in that order, while overburdening of a member

(47.2%) ranked least. This result implies that these (inadequate finance, wives insubordination, communication gap and interference from third party) were the major causes of household conflict in the study area.

Table 2: Distribution of respondents by sources of rural household conflict

Sources of rural household conflicts*	Frequency	Percentages	Rank
Clash of interest	102	66.7	7 th
Inadequate finance	132	86.3	1 st
Difference in personalities	95	62.1	10 th
Lack of cooperation	110	71.9	5 th
Dispute over the use of authority	76	49.7	14 th
Mis-use of limited resources	98	64.1	9 th
Communication gap	115	75.2	3 rd
Overburdening of a member	72	47.1	16 th
Rivalry among wives	82	53.6	13 th
Competition among children	75	49.0	15 th
Interference from third party	112	73.2	4 th
Unfaithfulness/ infidelity	89	58.2	12 th
Delay in child bearing/ Lack of children	106	69.3	6 th
Not giving birth to particular sexed child	90	58.8	11 th
Negligence of duty	102	66.7	7 th
Wives' insubordination	118	77.1	2 nd

Source: Field survey, 2014

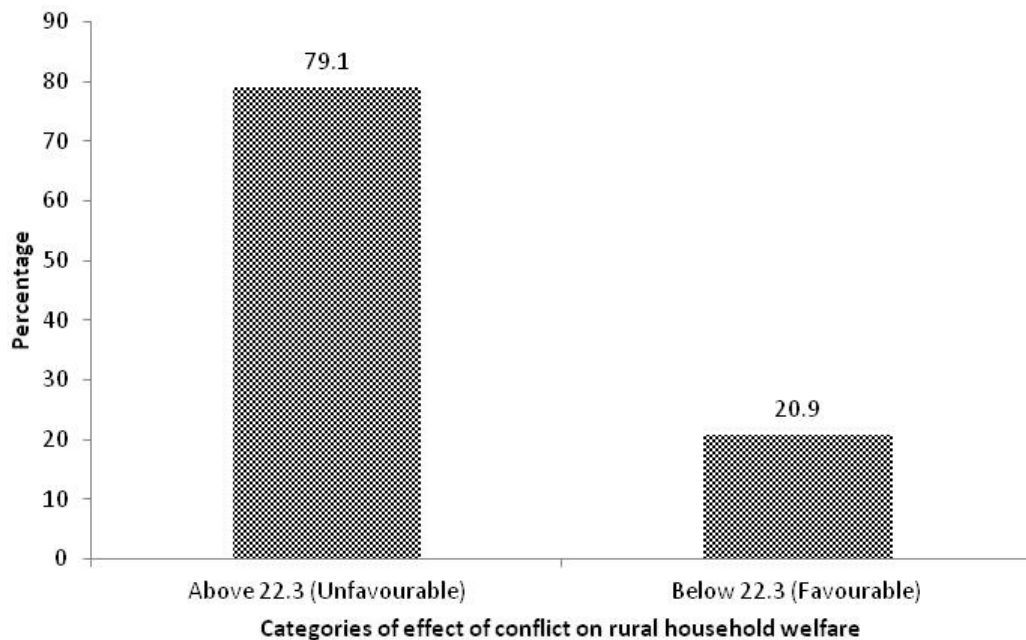
*Multiple responses



Categories of effect of conflict on rural household welfare

Results in Figure 1 show that 79.1 per cent of the respondents categorized the effect conflict had on rural household welfare as unfavourable, while only 20.9 per cent of the respondents categorized the effect of conflict on rural household welfare as favourable. It could therefore be inferred that the unfavourable effect of conflict on rural

household welfare could lead to impairment of rural household economy and stability, and that of the community as a whole. This finding corroborates that of Balthazar (2012) which concluded that there is an inverse relationship between family conflicts and rural economic welfare.



Mean= 22.3

Figure 1: Bar chart showing distribution of categories of effect of conflict on rural household welfare

Source: Field survey, 2014

The results in Table 3 revealed that peaceful reconciliation (1.85) ranked highest in the order of effectiveness among conflict management strategies used, followed by third party involvement (1.81), compromise (1.75), and tolerance (1.73) while forcing (1.65) was ranked lowest.

This finding implies that these (peaceful reconciliation, third party involvement, compromise and tolerance) were effective conflict management strategies recorded in the study area. This finding affirmed that of Alabi (2010) and Ekong (2010) which reported that third party involvement, compromise, tolerance were main conflict management common in Nigerian communities. This was supported by excerpts from the KII thus:

"...i always beg my husband in the midnight whenever conflict occurs between us..."

(KII excerpts with a woman in Iloba community)

"...i always report my wife to her mother and sometimes the pastor whenever conflict occurs..."

(KII excerpts with a man in Iyanfoworogi community)

"...i came to this village to escape conflict from my wife, I need time to think and attend to my farm..."

(KII excerpts with a man in Akeredolu community)

"...whenever conflict occurs in the house I wait for my wife to beg me, because I am the head of the family..."

(KII excerpts with a man in Akiriboto 1 community)

"...i cook my husband's favorite meal and apologize to him whenever I offend him..."

(KII excerpts with a woman in Erefe community)

Source: Field survey, 2014

Table 3: Distribution of respondents by conflict management strategies' effectiveness
n=153

Conflict management strategies	Excellent	Good	Fair	Poor	Mean	Rank
Third party involvement	95 (46.4)	34 (23.2)	14 (19.4)	10 (11.0)	1.81	2 nd
Compromise	67 (72.4)	52 (15.5)	30 (11.5)	4 (0.6)	1.75	3 rd
Forcing	32 (39.3)	34 (10.0)	65 (19.4)	22 (31.3)	1.65	8 th
Super-ordination	46 (58.3)	34 (16.1)	38 (23.2)	35 (2.4)	1.68	6 th
Tolerance	58 (50.0)	35 (13.3)	45 (19.4)	15 (17.3)	1.73	4 th
Segregation	35 (49.1)	45 (13.3)	28 (23.2)	45 (13.6)	1.67	7 th
Smoothing	48 (56.0)	67 (19.9)	26 (16.7)	12 (7.4)	1.70	5 th
Peaceful reconciliation	112 (59.5)	12 (16.7)	10 (13.3)	19 (10.5)	1.85	1 st

Grand mean = 1.76

Standard deviation = 0.15

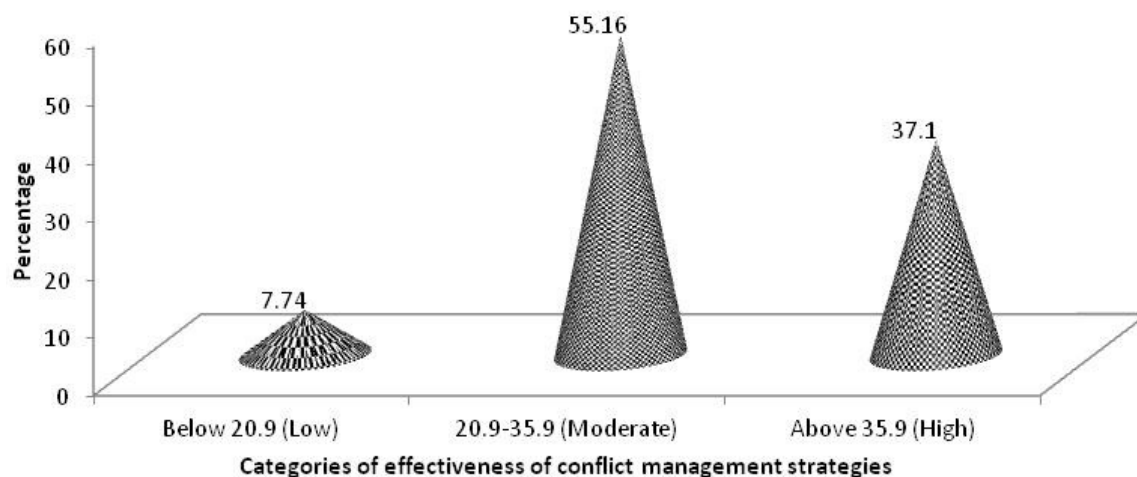
Figures in parentheses are percentages

Source: Field survey, 2014

Categories of conflict management strategies' effectiveness

Results in Figure 2 revealed that majority (92.26%) of the household heads indicated that conflict management strategies used were effective.

This finding corroborates that of Balthazar (2012) which stated that effectiveness conflict management strategies leads household cohesion and stability of it economy.



Mean= 28.4

Standard deviation= 7.5

Figure 2: Cone chart showing distribution of respondents by categories of effectiveness of conflict management strategies

Source: Field survey, 2014

Hypothesis testing

Result in Table 4 revealed that at 0.01 level of significance, occupation ($\chi^2=33.483$); sex ($\chi^2=29.502$); and religion affiliation ($\chi^2=31.612$) of the respondents had significant association with conflict management strategies' effectiveness. Furthermore, at 0.05 level of significance, the respondents' levels of educational attainment ($\chi^2=32.851$) also had significant association with the conflict management strategies' effectiveness.

Whereas ethnicity ($\chi^2=4.370$) had no significant association with the conflict management strategies' effectiveness. Thus, ethnicity of the respondents has nothing to do with conflict management strategies' effectiveness.

**Table 4: Results of Chi-Square analysis of the relationship between socio economic characteristics of respondents and conflict management strategies' effectiveness**

Variables	χ^2 Value	DF	P-Value	Decision
Sex	29.502	2	0.001**	Significant
Occupation	33.483	4	0.001**	Significant
Religion affiliation	31.612	2	0.001**	Significant
Ethnicity	4.370	5	0.635	Not significant
Levels of education	32.851	5	0.003*	Significant

Source: Field survey, 2014

* Significant at 0.05 level of significant DF- Degree of Freedom

** Significant at 0.01 level of significant

Result in Table 5 revealed that at 0.01 level of significance, respondents' age ($r = 0.512$) and household size ($r = -0.483$) had significant relationship with conflict management strategies' effectiveness. While that of age was positive, that

of household size was negative. Thus, increase in respondents' age would increase conflict management strategies' effectiveness and increase in respondents' household size would decrease conflict management strategies' effectiveness.

Table 5: Correlation analysis showing relationship between socioeconomic characteristics of the respondents and conflict management strategies' effectiveness

Variables	Correlation coefficient (r)	Coefficient of determination (r^2)	Decision
Age	0.521	0.271**	Significant
Household size	-0.483	0.233**	Significant

Source: Field survey, 2014

**Significant at the 0.01 level

CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study, it was concluded that inadequate finance, wives' insubordination, communication gap and interference from third party ranked high on the list of causes of rural household conflicts. Also, identifying and correcting sources of conflicts, third party involvement, compromise, and tolerance ranked high among the list of conflict management strategies in terms of effectiveness. It was recommended that rural developers cum extension agents should include effective conflict management strategies in their programme package.

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CONSTRAINTS TO INFORMATION AND COMMUNICATION TECHNOLOGY UTILISATION BY VILLAGE EXTENSION AGENTS IN SOUTH-SOUTH NIGERIA

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ABSTRACT

The study assessed constraints to the use of information and communication technologies (ICT) by village extension agents in South-south Nigeria. The population of the study comprises all village extension agents (VEAs) in South-south Nigeria. A total sample of 300 VEAs was selected using a multistage sampling procedure. A set of questionnaire was used for primary data collection while frequency count, percentage, mean score and standard deviation were used for data analysis. The results show that majority (87.7%) of VEAs had tertiary education, working experience (20 years) and average monthly income of sixty thousand naira. The ICT tools used by VEAs included phone (M=3.77), radio (M=3.70), television (M=3.51), video (M=2.56), computer (M=2.53), personal e-mail (M=2.51) and internet (M=2.50). Constraints to ICT use were lack of internet access in the rural areas (M=3.61), lack of ICT infrastructure (M=3.53), high cost of internet subscription (M=3.47), lack of training on ICT (M=3.42), lack of power supply (M=3.23) and poor income (M=3.14). It was recommended that the identified constraints to ICT utilisation should be tackled by the appropriate stakeholders with adequate provision of ICT infrastructure and improved power supply in order to encourage massive utilisation of ICT by VEAs. Also, effort should be geared towards encouraging ICT usage by VEAs with adequate inclusion of ICT in the pre-service curriculum of prospective VEAs.

Keywords: ICT, Utilisation, Village Extension Agents, Agricultural Technologies, Dissemination

INTRODUCTION

In Nigeria, agriculture has remained the highest employer of labour. Central Bank of Nigeria (2006) describes Nigeria as an agrarian society with about 70 percent of her over 140 million people engaged in agricultural production. The contribution of agriculture to Nigeria's gross domestic product (GDP) has been on the increase in recent years (Agada and Evaneline, 2014). However, agriculture with its positive impact on the Nigeria populace is bedevilled with myriad of problems among which is poor utilisation of technologies (Awhareno, Omoregbe and Ekpebu, 2013).

Mojisola and Mbibi (2007) noted that achieving rural and agricultural development is a function of producing knowledgeable and well informed farming communities. This can be achieved with information and communication technologies (ICT) with precision as most of them have high flexibility and profitability, for example the mobile phone (Gadzama and Akinola, 2013). In the last few years, the concept of information and communication technologies (ICTs) has become a global concern of which agricultural development and rural transformation are given the highest priority. ICT with its vast potentials in every field of human endeavour is the only answer to the threat on agricultural extension services' relevance in today's world. Thus, Richardson (2003) in Omotayo (2005) reiterates the imperative of ICTs in achieving agricultural extension's ultimate goals. If adopted and properly applied, ICTs have the potentials to really transform agricultural extension in developing countries like Nigeria. Its impact could include: fast and prompt response to farmers'

information needs, affordable, reliable, relevant and location-specific information to farmers, extension workers will be globally connected and have up-to-date information, farmers will be connected directly by-passing extension workers, it will become everyday tool of extension workers, it will help extension workers develop new skills, and feedback between extension and clientele will greatly improve.

Given the importance of ICT in facilitating effective and timely information delivery, it has witnessed wide application in nearly all human endeavours (Adebawale, 2009). At the inception of the state-wide ADPs in 1980, the extension agent: farmer (EA: farmer) ratio ranged between 1:2000 and 1:3000. This was expected to drop to between 1:800 and 1:1000 by the project completion date and the withdrawal of World Bank support (Adejo *et al*, 2013). This target was never achieved. A field survey by National Agricultural Extension Research Liaison Service (NAERLS) and Programme Coordinating Unit (PCU) reveals that the EA: farmer ratio was between 1:848 in Ogun state in South-West Ecological zone to 1:1650 in Katsina state in the North-West Ecological zone (Adejo *et al*, 2013). It could be seen therefore that no matter how effective extension delivery through village extension agents will be, it can never be efficient and cost-effective in a developing country like Nigeria, with a population of over 150 million (National Population Commission, 2006), majority of who are involved in agriculture and illiterate. It is clear that ICT is the only technology that can bridge this gap in the extension delivery system.

It is however unfortunate that in spite of the efficiency and effectiveness demonstrated by the use of ICTs, it is fraught by several challenges. Despite huge government investment on ICT in the last ten years, ICT seemed to be underutilised especially in the agricultural sector. It was against this background that the study set out to assess the constraints to the utilisation of ICTs by VEAs in South-south, Nigeria.

1. examine the socioeconomic characteristics of the VEAs,
2. ascertain the level of use of ICT tools by the VEAs in extension services delivery, and
3. determine the constraints to the use of ICT tools by VEAs.

METHODOLOGY

The study was conducted in South-South geopolitical zone of Nigeria. The area comprises six states of Akwa-Ibom, Bayelsa, Cross-River, Delta, Edo and Rivers. The area lies between latitude 4°10' and 7°30' North and longitude 4°30' and 9°45' East. The total land area of the zone is 112,110 square kilometres'. The area has a population of 21,044million people (National Population Commission, 2006). The area, based on the 2006 census has an official growth rate of 2.83 percent per annum (Niger Delta Development Commission, 2008). The area is made up of different ethnic groups (Niger Delta Development Commission, 2008; Wikipedia, 2014). The area has the ecological condition of riverine and upland with abundant resources backed by oil wealth.

The target population for this study were the village extension agents (VEAs) of the states' ADPs of South-South Nigeria. A multistage random selection procedure was adopted in selecting the respondents. The area is made up of six states out of which three - Delta, Rivers and Akwa-Ibom States were randomly selected. The respondents were sampled from all the Agricultural zones in each of the selected States. Using a proportionate sampling of 40%, a total of 300 VEAs were sampled from the 12 Agricultural zones that make up the three selected States.

A set of structured questionnaire was used to collect primary data from the VEAs. Descriptive statistical tools such as frequency table, percentage, mean and standard deviation were used to analyse the data. A discriminating index was set for objectives 2 and 3 at 2.5 for the acceptance level of an item as an ICT tool used or as a constraint by summing the weight of the scales and dividing by the number of scales. Thus mean scores of 2.5 and above were considered as used ICT tool or constraint and vice versa.

RESULTS AND DISCUSSION

Socioeconomic characteristics

Results in Table 1 reveals that majority (87.7%) of the VEAs had tertiary education while 12.3% had secondary education. Education is a valuable asset in the use of innovations. It makes the personality rational and analytical. It also increases vistas of opportunities and could predispose longing for more facilities and better access to existing ICTs. In line with this, Torimiro (1997) observes that higher level of literacy will aid the assessment and use of information.

The result also shows that 44.3% had between 21 – 30 years working experience while 32.7% had between 11 – 20 years working experience. Also, 14.3% had below 10 years working experience while 8.7% had more than 30 years of working experience. The mean number of years of working experience was 20 years with a range of 1 year to 30 years. The result implies that the VEAs had reasonable years of working experience. The VEAs by their reasonable years of working experience are on a better pedestal to access, use and identify constraints to ICT tools.

The Table also shows that majority of the VEAs (33.7%) earned between N61,000 – N80,000 monthly. Also, 23% earned between N41,000 – N60,000 while 22.6% earned above N101,000. The average monthly income was N60,000. Based on the average monthly income, it could be difficult for a VEA to obtain some of the ICT tools on his own.

Level of use of ICTs

Table 2 shows the VEAs level of ICT use. Based on 2.50 discriminating index, seven (7) out of fifteen (15) listed ICT facilities had mean values above the discriminating index (≥ 2.50) and thus were adjudged the ICT facilities the VEAs used. The GSM (phone) had the highest mean value of 3.77 with a standard deviation of 0.72. This was closely followed by radio and television with 3.70 and 3.51 mean values and standard deviation of 0.68 and 0.90 respectively. Video had 2.56 mean score and standard deviation of 1.11 while computer had 2.53 mean value and 1.13 standard deviation. Also, personal e-mail had 2.51 mean score and 1.33 standard deviation while internet had 2.50 mean score and 1.16 standard deviation. The standard deviation value for ten out of fifteen listed ICT facilities were tending to zero. This implies that the values were very small indicating that VEAs did not differ much in their responses. The grand mean was 2.14 indicating that the VEAs' use of ICT tools was low. This shows that there were some ICT tools that were not used or whose uses were limited.

**Table 1: Distribution of Socioeconomic Characteristics of VEAs**

Variable	Frequency	Percent	Mean
Education			
Secondary education	37	12.3	
Tertiary education	263	87.7	
Working Experience			
1 – 10	43	14.3	
11 – 20	98	32.7	
21 – 30	133	44.3	20
31 and above	26	8.7	
Monthly Income (N)			
1,000 – 40,000	14	4.7	
41,000 – 60,000	69	23.0	
61,000 – 80,000	101	33.7	N60,000
81,000 – 100,000	48	16.0	
101,000 and above	68	22.6	
Total	300	100	

Source: Field Survey, 2015

Table 2: Distribution of VEAs by level of ICT use

ICT Facilities	Very Often		Often		Sometimes		Never		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Mean*	SD
Phones (GSM)	266	88.7	16	5.3	1	0.3	17	5.7	3.77*	.72
Radio	237	79.0	47	15.7	5	1.7	11	3.7	3.70*	.68
Television	212	79.0	55	18.3	8	2.7	25	8.3	3.51*	.90
Video	79	70.7	79	26.3	73	24.3	69	23.0	2.56*	1.11
Computer	82	26.3	57	19.0	90	30.0	71	23.7	2.53*	1.13
Personal e-mail	112	27.3	57	19.0	61	20.3	115	38.3	2.51	1.33
Internet	69	37.3	31	10.3	93	31.0	107	35.7	2.50	1.16
Personal website	57	23.0	24	8.0	47	15.7	172	57.3	1.89	1.19
Cinema	28	19.0	19	6.3	78	26.0	175	58.3	1.67	.95
CD-ROM	18	9.3	4	1.3	71	23.7	207	69.0	1.44	.80
Organisational e-mail	3	6.0	8	2.7	57	19.0	232	77.3	1.27	.56
Organisational website	2	1.0	8	2.7	52	17.3	238	79.3	1.25	.53
Digital wallet (E-wallet)	0	0.7	10	3.3	42	14.0	248	82.7	1.21	.48
Geographic information system (GIS)	0	0.0	1	.3	57	19.0	242	80.7	1.20	.41
Blog	0	0.0	0	0.0	22	7.3	278	92.7	1.07	.26

*Significant (mean \geq 2.50) Grand mean = 2.14

Source: Field Survey, 2015

Constraints to the use of ICT facilities by VEAs

Table 3 shows the VEAs' constraints to the use of ICT tools. Based on 2.50 discriminating index, thirteen (13) out of the sixteen (16) listed constraints had mean values above the discriminating index (≥ 2.50) and thus were adjudged serious constraints to ICT facilities use by VEAs.

Lack of internet access in the rural area had the highest mean value of 3.61 with a standard deviation of 0.71. Lack of ICT infrastructure had 3.53 mean score and a standard deviation of 0.81. High cost of internet subscription had a mean value of 3.47 and a standard deviation of 0.76 while lack of training on ICT had 3.42 mean score and 0.88 standard deviation. This was followed by lack of

competence in handling ICT facilities with a mean value of 3.31 and a standard deviation of 0.91. High cost of ICT facilities and accessories had 3.30 mean value and standard deviation of 0.64. Also, lack of power supply had 3.23 mean score and standard deviation of 0.88 while poor income had 3.14 mean value and 1.01 standard deviation. Poor communication network had 3.12 mean score and standard deviation of 0.89. Lack of trained computer personnel had 3.04 and standard deviation of 0.92 while unavailability of spare parts had 2.86 mean score and standard deviation of 0.81. Following this was complexity in using ICT facilities with mean score of 2.85 and standard deviation of 0.87. Lack of awareness of ICT importance had 2.59 mean score and a standard

deviation of 1.19. The standard deviation values for constraints adjudged to be serious to ICT facilities use by VEAs were relatively small. This low standard deviation values implies that VEAs strongly agreed to the adjudged constraints as serious constraints to ICT facilities. Supporting the above findings, Asadu *et al.* (2013) observed that illiteracy among farmers, limited power supply, high cost of modern communication techniques, complexity of use, limited network services, lack of access to modern communication techniques and lack of skill among the extension agents constitute serious constraints to the use of ICT facilities by VEAs in Niger State. These findings also agree with a number of other studies (Arokoyo, 2005;

Omotayo, 2005) which pointed out that despite varieties of information and communication technology (ICT facilities that could be effectively used by extension agents, there are still very serious constraints to their use. Asadu *et al.* (2013) opined that these constraints are more serious in rural areas. The use of GSM (phone), computer and television is common but it is also constrained by limited network coverage, poor connectivity and poor power supply. Adebawale (2009) opined that poverty and low computer literacy constitute major challenges to the use of modern communication techniques in agricultural extension delivery services in Nigeria.

Table 3: Distribution of respondents by constraints to the use of ICT facilities by VEAs

	Extremely Serious		Very Serious		Serious		Not Serious		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Mean*	SD
Lack of internet access in the rural area	216	72.0	56	18.7	22	7.3	6	2.0	3.61*	.71
Lack of ICT infrastructure	200	66.7	76	25.3	6	2.0	18	6.0	3.53*	.81
High cost of internet subscription	173	57.7	110	36.7	1	.3	16	5.3	3.47*	.76
Lack of training on ICT	185	61.7	75	25.0	21	7.0	19	6.3	3.42*	.88
Lack of competence in handling ICT	175	58.3	51	17.0	65	21.7	9	3.0	3.31*	.91
High cost of ICT facilities and accessories	112	37.3	171	57.0	11	3.7	6	2.0	3.30*	.64
Lack of power supply	152	50.7	72	24.0	70	23.3	6	2.0	3.23*	.88
Poor income	158	52.7	47	15.7	75	25.0	20	6.7	3.14*	1.01
Poor communication network	125	41.7	100	33.3	61	20.3	14	4.7	3.12*	.89
Lack of trained computer personnel	106	35.3	128	42.7	39	13.0	27	9.0	3.04*	.92
Unavailability of spare parts	70	23.3	129	43.0	91	30.3	10	3.3	2.86*	.81
Complexity in using ICT facilities	77	25.7	120	40.0	85	28.3	18	6.0	2.85*	.87
Lack of awareness of ICT	90	30.0	81	27.0	45	15.0	84	28.0	2.59*	1.19
Inappropriate content of ICT message	65	21.7	88	29.3	52	17.3	95	31.7	2.41	1.15
Poor benefits in using ICT	58	19.3	70	23.3	37	12.3	135	45.0	2.17	1.20
I don't know where to get ICT facilities	55	18.3	30	10.0	80	26.7	135	45.0	2.02	1.13

*Serious (mean ≥ 2.50)

Source: Field Survey, 2015

CONCLUSION AND RECOMMENDATIONS

ICTs have wonderful potentials to transform the agricultural sector and invariably the rural area through increased effectiveness and efficiency in information dissemination and feedback. The use is limited by several constraints and these deserve urgent attention for plausible solutions to fast-track the drive towards food and nutrition security and by extension poverty alleviation.

The following are hereby recommended by the study;

- The pre-service and in-service training of VEAs should be broadened to incorporate the ICTs tools of importance in extension work,
- Conventional and non-conventional organisations should provide ICTs tools to VEAs to facilitate the use.
- Government should urgently address all identified constraints to ICT usage.



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CROP FARMERS' ADAPTATION STRATEGIES TO MITIGATE CONFLICTS WITH NOMADS IN OYO STATE

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ABSTRACT

Conflicts on the use of resources are not uncommon in human systems. However, when they degenerate to violence, threatening progress, peace and development of the society; it would be necessary to address the problem. This study focused on adaptation strategies employed by crop farmers to manage conflicts with nomads in Oyo state. A multistage sampling procedure was used to select 120 respondents for the study. Data were collected with the use of interview schedule on crop farmers' socioeconomic characteristics, causes of conflicts, effect of conflicts and coping strategies. Data were analysed using descriptive and inferential (Chi-square and PPMC) statistics. Results show that most of the respondents were Yoruba (89.2%), male (86.7%), married (98.3%), had farming (87.5%) as their primary occupation with mean age of 55 years. Mostly identified causes of conflicts were crop damage (weighted mean=194.9), indiscriminate bush burning (188.3) and blockage of water (174.2). Effects of conflicts mostly experienced by farmers were reduction in output and income of farmers (197.4), destruction of crops (193.4), anger/anxiety/emotional exhaustion (180.0). Coping strategies mostly employed were prayer for peace (184.9), early harvesting (181.6) and appease of other party (166.6). More than half (55.8%) of the respondents used low level of coping strategies. Significant relationship existed between coping strategies employed and ethnicity ($\chi^2=11.609$), other forms of education ($\chi^2=19.164$; $p=0.001$) as well as effect of conflicts ($r=0.400$). Adaptation strategies employed by the respondents should be investigated, validated and adopted by appropriate authorities in order to mitigate the regular conflicts among farmers and nomads in Nigeria.

Keywords: Crop farmers, nomads, adaptation strategy, ecosystem, ethnicity.

INTRODUCTION

Conflict in resources use is not uncommon and perhaps not unnatural in human ecosystems as it is a necessity in the evolution and development of human organisations. However, when it degenerates to violent, it leads to destructive clashes which are counterproductive and progress-threatening (Ofoku and Isife, 2009). According to Nyong and Fiki (2005) resource-related conflicts are responsible for over 12 percent declines in per capital food production in sub-Saharan Africa. In a newspaper study of crisis in Nigeria between 1991 and February 2005, Fasona and Omojola (2005) found that conflicts over agricultural land use between farmers and herdsmen accounted for 35 % of all reported crises. Hence, Conflict between arable crop farmers and cattle herdsmen over the use of agricultural land is still pervasive in Nigeria, and portends grave consequences for rural development (Adisa, 2012). The resultant increase in competition for arable land has often times led to serious manifestation of hostilities and social friction among the two user-groups in many parts of Nigeria, even in Oyo state.

The causes of conflicts between arable farmers and the nomads as examined by scholars in their various studies include; cattle stealing, inequitable access to land, diminishing land resources, policy contradictions, crop damage, ethnic rivalry, farm fragmentation and indiscriminate bush burning among others (Adelakun, Adurogbangba and Akinbile, 2015; Ofem and Inyang, 2014 and Adisa, 2011). However, nomads have identified the most severe

constraints to their enterprise to be conflicts from land use and cases of cattle theft (rustling) (Ofem and Inyang, 2014).

In a study carried out in Nigeria's Guinea savannah, Fiki and Lee (2004) indicated that the violent clashes equally resulted into the contamination of water bodies by the cattle and the destruction of arable farmer's stores, barns, residences and household items by the nomads. Consequentially, conflicts between the arable farmers and nomads directly affects food security as many able bodied men (pastoralist and farmers) engaged in food production were been displaced from their places of vocation and debilitates the farmer-pastoralist relationships (Ibrahim, Abdurrahman and Umar, 2015 and Sunday, 2013).

There seems to be insufficient empirical studies focusing on how arable farmers perceived and coped with conflict, though, Zarafshani, Zamani and Gorgievski (2005) examined the coping strategies employed by farmers with emphases on post-draught famine stresses. However, the coping strategies that could be employed by arable farmer during conflict as asserted by Adisa (2012) could be categorised into; problem-oriented, emotion-oriented and social support coping strategies.

Therefore, this paper examined the adaptation strategies employed by crop farmers for the incessant conflicts between them and Nomadic Fulani in the study area. To this end, the study ascertained the socioeconomic characteristics of the respondents, causes and effects of the conflict on crop farmers and their coping strategies during the



conflicts. It was hypothesised that no significant relationship existed between the socioeconomic characteristics of the respondents and level of use of coping strategies; and that there is no significant relationship existing between the effect of conflict on the respondents and the use of coping strategies.

METHODOLOGY

The study was carried out in Saki and Oyo Agricultural zones of Oyo state, Nigeria. Multistage sampling procedure was used to select the respondents for the study. The first stage involved the random selection of 40% of the Local Governments Areas in Saki and Oyo Agricultural zones; giving 3 and 2 LGAs respectively. The second stage involved the random selection of 50% of the wards in the selected LGAs; giving 2 wards per local government amounting to 10 wards in all. The third stage, involved the random selection of 12 arable crop farmers in each of the selected wards. This gave a sample size of 120 respondents for the study. Data collected with the use of interview schedule were: coping or adaptation strategies employed; perceived causes of conflicts; perceived effects of conflicts and socioeconomic characteristics of the respondents. They were analysed using descriptive and inferential statistics such as Chi square and PPMC.

Coping or adaptation strategies employed by crop farmers during and after conflicts were measured by providing them with a set of coping strategy items and they were asked to indicate the extent to which they employed them during and after conflict. The response options were “to large extent”, “to a lesser extent” and “not at all”. They were scored 2, 1 and 0 respectively. The mean was then used to categorise the scores as high or low. Respondents’ perception on the effect of conflict was measured with a set of perception statements on the effect of conflict and they were asked to determine the extent to which they perceived the effect of the conflict. The response options were “to large extent”, “to a lesser extent” and “not at all”. They were scored 2, 1 and 0 respectively. The mean score was then used to categorise the scores as high or low. The respondents’ perceptions of the causes of the conflicts were measured with a set of perception statements on the cause of the conflict and were asked to indicate the extent to which they perceived the causes of the conflicts. The response options were “to large extent”, “to a lesser extent” and “not at all”. They were scored 2, 1 and 0 respectively. The mean score was then used to categorise the scores as high or low. An index of the perception of causes of conflicts, effects of conflicts and the coping strategies employed by the respondents was categorised into; less serious and very serious (causes), mild and severe (effect) and

high and low (coping) categories, using the ‘above and below the mean’ criterion.

RESULTS AND DISCUSSIONS

Socioeconomic characteristics of respondents

The findings in Table 1 show that the mean age and years of formal education of crop farmers were 55.3 and 4.7 years respectively. The mean age implies that majority of the crop farmers are getting old and may not be able to take another job than to just remain in farming business. This disagrees with the findings of Adelakun *et al* (2015) in a similar study where 52.6% of the farmers were between the ages of 30-50 years. The disparity in their findings might be due to the fact that the study area is close to the border, hence, tendencies for youth migration from farming to greener pasture in the neighbouring foreign towns is high. Meanwhile, the mean years of formal education implies that respondents were not substantially educated in the study area and they might likely have limited access to information on coping strategies that could be employed during and after conflicts. This finding disagrees with the results of Usman, Adeboye, Oluyole and Ajijola (2012) who found out that most crop farmers were literate.

The study further reveals that most (87.5%) of the respondents were primarily farmers and have secondary occupations like petty trading (14.2%), handcraft (5.8%) and transportation businesses (5.8%). This is an indication that the respondents depend on farming as their main source of living and that they diversify into other sources of livelihoods. This corroborates the finding of Fayinka (2004) that Nigerian agricultural production is dominated by rural-based small scale arable crop producers; and in tandem with the research findings of Adeniyi and Yekinni, (2015) that crop farmers diversify into other livelihood activities in order to cope with their financial obligations especially during the off season. The diversification might equally be a coping technique against risk that may be associated with crop farming in the study area.

More than two third (86.7%) of the farmers were male and married (98.3%); indicating that arable farming was dominated by married male farmers in the study area. This implies that men that cherish the marriage institution are more engaged in arable farming in the study area; the drudgery in crop farming and women’s reproductive roles might have been responsible for the reduced interest and participation of women in arable farming. Respondents’ marital status is in line with Oladeji and Oyesola’s (2011) assertion that being married is an important status in the rural society and in consonance with the findings of

Olaniyi, Adetumbi and Adereti (2013) that male dominates farming activities.

Furthermore, majority (61%) of the respondents were Muslims, while 45.0% were Christian. This implies that religion has a way of influencing people perception towards peaceful living and to resolve issues amicably rather than

generating it into conflicts. This further implies that the respondents could be identified through faith based organisation in case of conflict intervention programmes. This is in line with the research finding of Adeniyi (2014) that had a similar trend of religion data for the crop farmers in the state.

Table 1: Distribution of respondents by socioeconomic characteristics (n= 120)

Variables		Frequency	Percentage	Mean
Age	29-40	22	18.3	55.25
	41-50	23	19.2	
	51-60	27	22.5	
	61-70	36	30	
	71-80	11	9.3	
	Above 80	1	0.8	
Sex	Male	104	86.7	
	Female	16	13.3	
Years of formal education	None	68	56.7	4.07
	1-6	20	16.6	
	7-12	23	19.2	
	13-15	6	5.0	
	16-18	3	2.5	
Other education	None	24	20.0	
	Adult education	28	23.3	
	Literacy education	22	18.3	
	Numeracy	28	23.3	
	Quran/Arabic	18	15.0	
Primary occupation	Farming	105	87.5	
	Trading	6	5.0	
	Civil service	7	5.8	
	Handcraft	2	1.7	
Secondary occupation	None	11	9.2	
	Farming	78	65.0	
	Petty trader	17	14.2	
	Handcraft	7	5.8	
	Transport	7	5.8	
Marital status	Married	118	98.3	
	Single	2	1.7	
Religion	None	1	0.8	
	Islam	61	50.8	
	Christianity	54	45.0	
	Tradition	4	3.3	
Ethnicity	Yoruba	107	89.2	
	Fulani	1	0.8	
	Cotonou [Benin Republic]	12	10.0	

Perception of respondents on the causes of conflicts

The results according to the weighted scores in Table 2 show that crop damage by animals when they stray into crop farms was ranked first (194.9) among other perceived causes of the conflict. This is followed by indiscriminate bush burning during dry season by herdsmen (188.3) while the least cause of conflicts identified was the harassment of nomads by host youth (45.9). This implies that damage of crops,

indiscriminate bush burning, blockage of water and a host of others are the main causes of conflicts among crop farmers and nomads. The result is in tandem with the research findings of Adelakun *et al.*, (2015) and Olaleye, Odutola, Ojo, Umar and Ndanitsa, (2010) that conflict occurred, when nomadic herdsmen's livestock tampered with crop farmers' sources of livelihood. However, the respondents' level of perception of causes of conflicts (Table 2a) shows that there is a tie between respondents' level of perceived causes of



conflict. Exactly half of the respondents (50%) perceived the causes of conflicts as being very serious. This could be as a result of the negative effects it has on their farming activities been their main source of livelihood. Whereas, those that perceived it as less serious may likely benefited in what their counterpart perceived as reason for conflicts for instance; indiscriminate defecation

which could be a source of organic manure to some arable farmer may be perceived as a mess to others. The result of this finding is in agreement with Ofem, and Inyang, (2014) who posited that viable land has been a very serious cause of conflict between herders and crop farmers' communities in Nigeria.

Table 2: Distribution of respondents by their perception of causes of conflicts between crop farmers and nomadic herdsman (n= 120)

Causes of conflicts	To a large extent	To a lesser extent	Not at all	Weighted score	Rank
Crop damaged	95.8	3.3	0.8	194.9	1 st
Indiscriminate bush burning	90.8	8.3	0.8	188.3	2 nd
Blockage of water	74.2	25.8	0.0	174.2	3 rd
Indiscriminate defecations	80.0	12.5	7.5	172.5	4 th
Encroachment /Over grazing	75.0	16.7	8.3	166.7	5 th
Improper management of cattle	70.8	21.7	7.5	163.3	6 th
Disregard for traditional authority	68.3	25.0	6.7	161.6	7 th
Sexual harassment of women	20.8	45.0	34.2	86.6	8 th
Encroachment of cattle route by the crop farmers	13.3	21.7	65.0	48.3	9 th
Harassment of nomads by host youth	14.2	17.5	68.3	45.9	10 th

Table 2a: Distribution of respondents by their level of perception of causes of conflicts (n=120)

Perception level	Frequency	Percentage
Less serious	60	50.0
Very serious	60	50.0
Total	120	100.0

Perception of respondents to the effect of the conflict on their community

Information available in Table 3 reveals that the most perceived effects of conflicts based on the weighted score was the reduction in output and income of farmers (197.4). This is closely followed by destruction of crops (193.4), anger/anxiety/emotional exhaustion (180) and displacement of farmers (171.6). The least perceived effect was loss of house (106.7). This shows that the effects of conflicts on farmers ranged from physical, economic, to socio-psychological (Adisa, 2012). The finding is substantiated by Ofuoku and Isife (2009) who reported reduction in output and income as well as

loss of lives and properties among others as the effect of conflicts on the arable farmers. However, a larger proportion (65%) of the respondents had high severe level of conflict effects. This implies that the effect of the conflict was much on the respondents and the daunting effects on agricultural production was that many farmers have left farming business for another job as they were displaced, most especially the youths, with great setback on food security. This is in congruent with the assertion of Sunday (2013) on effect of conflicts that conflict is a threat to peace, livelihood, human security and national stability.

Table 3a: Distribution of respondents according to the perceived effect of the conflict on the community (n= 120)

Effect of conflicts	To a large extent	To a lesser extent	Not at all	Weighted score	Rank
Reduction in output and income of farmers	98.3	0.8	0.8	197.4	1 st
Destruction of crops	94.2	5.0	0.8	193.4	2 nd
Anger/Anxiety/Emotional exhaustion	82.5	15.0	2.5	180	3 rd

Effect of conflicts	To a large extent	To a lesser extent	Not at all	Weighted score	Rank
Displacement of farmers	73.3	25.0	1.7	171.6	4 th
Loss of properties	67.5	32.5	0.0	167.5	5 th
Arms proliferation	65.0	33.3	1.7	163.3	6 th
Sleepless night	73.3	15.8	10.8	162.4	7 th
Loss of produce in storage	65.8	19.2	15.0	150.8	8 th
Loss of lives	40.8	49.2	10.0	130.8	9 th
Loss of house	26.7	53.3	20.0	106.7	10 th

Table 3b: Distribution of respondents by their perceived level of effect of conflict

Level of effect	Frequency	Percentage
Mild	42	35.0
Severe	78	65.0
Total	120	100.0

Coping strategies employed by the respondent

The most employed highest coping strategies employed by the crop farmers as revealed by Table 5 were to pray for peace (184.9) followed by early harvesting (181.6), appeased the other party (166.6), borrowed money to survive after insurgence (165) and educate farmers on their interdependent (165). The respondents as well sought help from relations (164.2) and from local community farmers association (159.9). It could be deduced that the respondents employed spiritual, economic and mutual coping strategies during the occurrence of the conflict. This finding is in

tandem with that of Adisa (2012) who find out that farmer prayed for peace, indicating their level of religious attachment. The coping strategies employed by the respondents were for peace to reign in their communities.

However, the respondent's level of use of coping strategies was low (55.8%) as indicated by Table 4a. This implies that coping strategies that were employed by crop farmers was in a lesser extent effective. That is although they used most of these coping strategies when necessary but not as much as expected.

Table 4a: Distribution of respondents on the basis of coping strategies employed (n=120)

Coping strategies	To a large extent	To a lesser extent	Not at all	Weighted score	Rank
Prayed for peace	85.8	13.3	0.8	184.9	1 st
Early harvest	83.3	15.0	1.7	181.6	2 nd
Appeased the other party	73.3	20.0	6.7	166.6	3 rd
Borrowed money to survive after insurgence	70.0	25.0	5.0	165	4 th
Educating farmers on their interdependence with the herdsmen	67.5	30.0	2.5	165	5 th
Sought help from relations	71.7	20.8	7.5	164.2	6 th
Formation of local community farmers association	63.3	33.3	3.3	159.9	7 th
Bought food after insurgence	69.2	20.8	10.0	159.2	8 th
Staying late on the farm	66.7	16.7	16.7	150.1	9 th
Sowed less to minimize losses	67.5	15.0	17.5	150	10 th
Relocate farm either from cattle Route	65.8	16.7	17.5	148.3	11 th
Accept it as fate	53.3	30.0	16.7	136.6	12 th
Took another job	58.3	17.5	24.2	134.1	13 th
Sought help from local leaders	37.5	55.0	7.5	130	14 th
Sold farm	52.5	15.0	32.5	120	15 th
Work harder/cultivating large area of land	34.2	41.7	24.2	110.1	16 th
Tight farm/making fence round	29.2	46.7	24.2	105.1	17 th
Used my old experience	16.7	70.8	12.5	104.2	18 th
Prepared for the worst	23.3	43.3	33.3	89.9	19 th



Coping strategies	To a large extent	To a lesser extent	Not at all	Weighted score	Rank
Sought help from local government	32.5	14.2	53.3	79.2	20 th
Punishment of offender	31.7	8.3	60.0	71.7	21 st
Sought litigation	25.0	16.7	58.3	66.7	22 nd
Compensation of affected farmers by the farmers' association	30.0	6.7	63.3	66.7	23 rd
Take on others/vengeance	11.7	25.8	62.5	49.2	24 th
Pretended it was not bad	11.7	11.7	76.7	35.1	25 th
Used alcohol/drugs like Indian hemp etc.	5.0	14.2	80.8	24.2	26 th

Table 4b: Distribution of respondents based on their level of use of coping strategies

Level of use of coping strategies	Frequency	Percent
Low	67	55.8
High	53	44.2
Total	120	100.0

Test of relationship between socioeconomic characteristics and use of coping strategies

Results of chi-square and PPMC analyses (Table 5a and 5b) show that other form of education ($\chi^2=19.164$; $p=0.001$) and ethnicity ($\chi^2=11.609$; $p=0.003$) were significantly related to the use of coping strategies while other socioeconomic characteristics were not significant to the use of coping strategies. This implies that access to other forms of education by the farmers may have equipped them well enough to know the choice of strategy to manage the effects of the conflicts. Furthermore, the significance of ethnicity may be as a result of diverse ethnicity and hence cultural values, which may confer different abilities and strategies among farmers in the study areas.

However, the sex, primary occupation, marital status and religion do not have direct effect on the level of use of coping strategies by the crop farmers. The insignificance of primary occupation is expected as the effects of conflicts could go beyond enterprises of residents but were to be felt by all residents of the area.

It implies that neither the age nor education qualification is needed to cope during the insurgence of conflicts between the farmers and the herdsmen. This is in contrast with the finding of Adisa (2012) that age was significantly influenced by the use of the coping strategies among the arable farmers which may be as a result of disparity in the mean age of their respondents 44 and 55 years respectively.

Table 5a: Chi-square for test of relationship between socioeconomic characteristics and use of coping strategies

Characteristics	χ^2	Df	p-value	Decision
Sex	0.001	1	0.971	Not significant
Other education	19.164	4	0.001	Significant
Primary occupation	1.685	3	0.640	Not significant
Marital status	1.608	1	0.205	Not significant
Religion	2.383	3	0.497	Not significant
Ethnicity	11.609	2	0.003	Significant

Table 5b: PPMC for test of relationship between selected socioeconomic characteristics and use of coping strategies (n=120)

Variables	r-value	p-value	Decision
Age	0.164	0.073	Not significant
Years of education	0.088	0.341	Not significant

Test of relationship between effect of conflict and the use of coping strategies

Data shown in Table 6 indicates a significant relationship ($r=0.400$, $p=0.000$) between the effect of conflict and the use of coping

strategies ($p = 0.000$). This implies that there is direct relationship between the effect of conflict and the coping strategies employed by the respondents. This further indicates that the level at which the respondents perceived the effect of the

conflict determines the degree of the coping strategies employed, hence, effects of the conflict is a function of the coping strategies employed. This is in tandem with the assertion of Adisa (2012) that, farmers generally tended to use problem-oriented strategies, as they actively sought solutions to the

problems arising from the destructions they encountered. Hence, this is not expected since the respondents were aged and married with responsibilities towards the upkeep of their household.

Table 6: PPMC Correlation analysis between the effect of conflicts and use of coping strategies (n=120)

Variable	r-value	P value
Effects of conflicts vs. use of coping strategies	0.000	0.400

CONCLUSION AND RECOMMENDATION

Based on the findings of this study, it was concluded that the respondents were Yoruba, male, married, predominantly aged farmers. It was also concluded that conflicts occurred between crop farmers and nomadic herdsman as a result of crop damaged and indiscriminate bush burning which interferes with the sources of livelihood of the respondents. However, the effect of conflicts has led to reduction in output and income of the arable farmers due to destruction of their crops. Also, the study concluded that the most frequently employed coping strategies employed by the respondents were; pray for peace and early harvesting, nevertheless, the respondents had low level of coping strategies. Significant relationship existed between the coping strategies employed by the respondents and ethnicity, other forms of education as well as the effect of conflicts. The study recommends that adaptation strategies employed by the respondents should be investigated, validated and adopted by appropriate authorities in order to mitigate the regular conflicts among farmers and nomads in Nigeria.

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COMMUNITY PARTICIPATION AND BENEFICIARIES' PERCEIVED SUSTAINABILITY OF COMMUNITY AND SOCIAL DEVELOPMENT PROJECTS IN IBADAN, OYO STATE, NIGERIA

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ABSTRACT

Development interventions are often targeted at alleviating community challenges and enhancing livelihood sustainability. However, most intervention efforts usually have short-lived impacts and the projects often degenerate into nothingness. However, community participation has been fingered as one major tool that can ensure the sustainability of community development projects. This study therefore examined the effects of community participation on the sustainability of Community and Social Development Project (CSDP) in Ibadan, Oyo State, Nigeria. Multistage sampling procedure was used to select respondents for the study. Three communities each from the urban, peri-urban and rural areas where CSDP had completed projects were purposively selected for the study. A total of 168 respondents were randomly selected in these communities. Quantitative data on respondents' age, sex, marital status, household size, community and social characteristics were collected using interview schedule. Data were analysed using frequency counts, percentages and mean, as well as PPMC and Chi-square. The mean age of respondents was 52.8 ± 14.0 years; most (69.6%) of the respondents were males. More than one third of the respondents had tertiary education (43.5%). More than half (53.0%) of the respondents spent 2-5 hours in community development, (56.6%) participated in the project, (52.4%) were indigenes and (55.4%) were community project management committee (CPMC) members. The mean number of years spent in the community was 17.7 ± 15.2 years. The area in which respondents participated most was sharing of idea ($\bar{x} = 2.39$), while (55.4%) had high level of participation and (66.1%) indicated that the projects had high sustainability. Significant ($p < 0.05$) relationships exist between project sustainability ($r = 0.415$), age ($r = 0.281$), number of years of formal education ($r = 0.154$), number of hours spent in community ($r = 0.469$) and level of community participation in CSDP. Chi-square shows that significant ($p < 0.05$) associations exist between sex ($\chi^2 = 9.721$), type of community participation ($\chi^2 = 26.820$), status in the community ($\chi^2 = 41.985$) and level of community participation. It was observed that males participated more in community development than females. Also, technical sustainability of projects was found to be low. Therefore efforts should be made to encourage youths to participate in community development.

Keywords: Community participation, Project sustainability, CSDP

INTRODUCTION

Community development is any concerted action in a locality taken by any agency and/or the local people themselves with the primary aim of bringing some benefit to the locality. It is also a movement to promote better living for the whole community with the active participation and if possible on the initiative of the community itself (Ekong, 2003) as reflected in the translated version of a Tamal proverb which says, 'if a city or place as a whole makes an effort, the goal is achieved'. The idea of community participation cannot be removed from community development (Ofuoku, 2011). When communities are involved in project initiation and implementation, there is the assurance of sustainability unlike when they have no idea about the project or when it is imposed on them (Olukotun, 2008).

The principle of community participation is an essential impetus restricted not only to the assurance of success of the intervention initiative but also the sustainability of such effort and the acquisition of skills for collective action and maintenance (Musa, 2002). It is also an antidote to psychological estrangement and thus creates a sense of belonging and ownership in the outcome

of the intervention as seen in the Chinese proverb, 'go to the people, love the people, live with the people, learn with the people, link your knowledge with theirs, start with what they have and when you finish your job, the people will say, we did it all by ourselves'. Abiona and Bello (2013) affirms that projects provided solely by the government without involving the people could not be sustained because there was no commitment on the part of the people. Since development interventions are not eternal or indefinite, it is only imperative that members of the benefiting community are integrated into the programme decision making processing, planning and evaluation for the sustenance of the project and thus the accrual of its long term benefits.

Community-driven or bottom-up approach to development is premised on community ownership and responsibility for the planning, implementation and monitoring of development projects (Gillespie, 2004). Thus, the bottom-up approach ensures that everybody in the community is carried along in community development activities and increases the importance the people attach to the development intervention, leading to the multiplier effect of maintenance and



sustainability of such initiative. The bottom-up approach may be likened to teaching a person to catch fish instead of giving him fish. The Community Driven Development (CDD) approach has become a key strategy used by both government and development assistance programmes (World Bank, 2006).

The Community and Social Development Project (CSDP) is a World Bank Assisted Project for poverty reduction intervention to sustainably increase access of the poor to social infrastructure and natural resources. It employs the Community Driven Development (CDD) approach in its service delivery which is a new initiative in poverty reduction strategy that places the poor on the 'driver's seat in decision making for development activities.

The sustainability of any community project, to a large extent depends on the participation of the members (Mahama and Badu-Nyarko, 2014). Sustainability can be defined as the continuation of project benefits beyond the project period, and the continuation of local action stimulated by the project, and the generation of successor services and initiatives as a result of project- built local capacity (Hondale and Vansant, 2001).

Ibadan is a city located in south-western Nigeria in the south-eastern part of Oyo state. More of the CSDP have been implemented in the area through Oyo State Community and Social Development Associations (OYCSDA) and some of them are presently in use. However, some the projects have gone moribund while there are traces of poor maintenance of others.

The USAID and World Bank's post evaluation showed that the majority of development interventions have low levels of sustainability after the completion of the project (Goldsmith and Brinkerhoff, 1992). This defect created the need for governments and donors to finance projects that would help beneficiaries become independent rather than giving them charity which is unsustainable (Bossert, 1990). Project sustainability is a big problem in developing countries including Nigeria, as a result of poor community participation (United Nations Development Programme, 2005).

It is against this background that the study is designed to empirically establish a relationship between community participation and sustainability in CSDP. Specifically, the study addressed the following:

1. describe the socioeconomic characteristics of the CSDP beneficiaries in the study area,
2. identify the areas of participation of community members across the project implementation phases in the study area,

3. ascertain the level of community participation in CSDP in the study area,
4. assess the sustainability of CSDP in the study area.

METHODOLOGY

The study was carried out in Ibadan, Oyo state, Nigeria. Ibadan has 11 Local Government Areas and the OYCSDP has intervened in nine of the Local Government Areas. The population of study includes all community members that are participants/beneficiaries of CSDP in Ibadan, Oyo state.

Multistage sampling method was employed in this study. Firstly, the communities in Ibadan were stratified into urban, rural and peri-urban. Secondly, purposive sampling was used to select nine communities across the strata (3 urban communities, 3 rural communities and 3 peri-urban communities). The sampling frame for the CPMC (Community Project Management Committee) is 17 each from the 9 selected communities. The last stage involved random sampling to select 10 CPMC members from each community and 10 non CPMC members each from the urban, rural and peri-urban communities, making a total of 180 respondents. However, only 168 questionnaires were recovered. Data on respondents' community and social characteristics, areas and level of community participation and level of sustainability of CSDP were analysed.

Respondents' areas and level of community participation in CSDP was measured using a 4-point Likert scale of High (3), Moderate (2), Low (1) and No participation (0). The maximum score obtainable was 69 (sixty-nine) while the minimum score obtainable was 0 (zero). A participation score was obtained and used to categorise participation into high, medium and low participation to indicate the level of community participation. Also, sustainability of Community and Social Development Project (CSDP) was indicated using Yes (1) and No (0). The maximum obtainable score was 26 and the lowest score was 0. Scores of each item was summed up to form a composite sustainability score for each of the respondents. Respondents were categorised into two, using the mean score as the bench mark, such that those whose score falls below the mean score will have low level of sustainability, while those who have scores equal to or greater than the mean score were categorised as having high level of sustainability.

RESULTS AND DISCUSSION

Socioeconomic characteristics

The result of the analysis as presented in Table 1 shows the mean age of community members to be 52.8 ± 14.0 years across respondent

categories. This implies that they are matured; more experienced in life and thus may make valuable decisions for the community as well as being able to actively participate in physical work. The results contradict the findings of Kabue (2011) who observed that young people may be receptive to new ideas and innovations and are more likely to try out new initiatives but it is in tandem with Miseda (2014) who asserted from the findings of Checkoway and Richards-Schuster (2003) that youth participation is undefined, underdeveloped and hence requires further exploration in order to educate and encourage youth to participate in community development projects.

The respondents for the study consisted of (69.6%) male and (30.4%) female as shown in Table 1. The implication of this is that both sexes are involved in community participation of CSDP. This finding is in coherence with Sosanya (2013) who documented that in order to allow gender inclusiveness, each of the participating community in CSDP has at least three women in the CPMC; one occupies a signatory position and at least one woman in each of all the three subcommittees in the CPMC or 30% inclusion of women in CPMC.

In addition, majority of the respondents (92.3%) in the study area were married, (4.8%)

single, (1.8%) divorced and (1.2%) separated. The fact that majority of the respondents across the communities were married is an indication that they are viewed as responsible and mature adults who are ready to contribute to the development of their communities.

Furthermore, the result shows that the mean household size of respondents is 6.6 ± 4.5 persons across all the communities in the study area. This indicates that most of the respondents in the study area have a large household and by implication, more hands will be available for community participation. A large household size could mean over dependency on scarce resources which could stimulate yearning for better conditions of life and thus lead to community participation in development activities.

Table 1 also shows that the mean years of formal education was 11.8 ± 5.3 years. The results suggest that a larger percentage of the respondents had one form of education or the other and this can predispose them to community participation. This assertion is in agreement with Okunlola and Mafimisebi (2013); Adesida and Okunlola (2015) that educational status influences the level of community participation.

Table 1: Distribution of Respondents' Personal characteristics

Variables	Urban (n=58) Percentage	Peri-urban (n=59) Percentage	Rural (n=51) Percentage	Total (n=168) Percentage	Mean
Age					
< 39	1.7	25.4	25.5	17.3	52.8
39-53	20.7	33.9	45.1	32.7	
54-67	44.8	37.3	17.6	33.9	
> 67	32.8	3.4	11.8	16.1	
Sex					
Male	75.9	61.0	72.5	69.6	30.4
Female	24.1	39.0	27.5	30.4	
Marital status					
Single	1.7	5.1	7.8	4.8	92.3
Married	93.1	91.5	92.2	92.3	
Separated	1.7	1.7	0.0	1.2	
Divorced	3.4	1.7	0.0	1.8	
Household size					
< 3	12.1	3.4	0.0	5.4	6.6
3-7	63.8	79.7	72.5	72.0	
8-11	15.5	11.9	17.6	14.9	
> 11	8.6	5.1	9.8	7.7	
Formal education					
Non formal	3.4	0.0	13.7	5.4	11.8
Primary education	22.4	16.9	23.5	20.8	
Secondary education	36.2	20.3	35.3	30.4	
Tertiary education	37.9	62.7	27.5	43.5	

Source: Field survey, 2016

Economic characteristics

In Table 2, the total result shows that the predominant occupations in the study area were



trading (35.1%), civil service (22.0%), retirees (14.3%) and farming (13.7%). This implies that respondents were involved in income generating activities and thus capable of contributing financially to community development activities.

The analysis of results presented in the Table further shows that (68.5%) were not engaged in secondary occupation. This suggests that most of

the respondents rely on their primary occupation as their major source of income.

In Table 2, the estimated mean monthly income was N 58, 594.03±50612.38. This implies that a greater number of respondents in the study area can contribute financially to community development activities.

Table 2: Economic characteristics of respondents

Variables	Urban (n=58)	Peri-urban (n=59)	Rural (n=51)	Total (n=168)	Mean
	Percentage	Percentage	Percentage	Percentage	
Primary occupation					
Farming	1.7	5.1	37.3	13.7	
Craft making	8.6	10.2	2.0	7.1	
Civil service	12.1	35.6	17.6	22.0	
Trading	36.2	33.9	35.3	35.1	
Retiree	32.8	5.1	3.9	14.3	
Clergy	3.4	1.7	0	1.8	
Banking	1.7	0	0	0.6	
Student	0	1.7	0	0.6	
Artisan	3.4	6.8	2.0	4.2	
Teaching	0	0	2.0	0.6	
Secondary occupation					
None	81.0	66.1	56.9	68.5	
Farming	8.6	10.2	13.7	10.7	
Craft making	0	3.4	0	1.2	
Trading	6.9	10.2	21.6	12.5	
Teaching	0	5.1	0	1.8	
Transporting	1.7	1.7	3.9	2.4	
Artisan	1.7	3.4	2.0	2.4	
Clergy	0	0	2.0	0.6	
Estimated monthly income					
< N 8, 000	3.4	8.5	2.0	4.8	58, 594
N 8000 - N 59000	55.2	42.4	72.5	56.0	
N 59001 - N 110000	24.1	37.3	23.5	28.6	
> N 110000	17.2	11.9	2.0	10.7	

Source: Field survey, 2016

Community characteristics of respondents

The results on Table 3 shows that 53.0% of the respondents spent between 2-5 hours in community participation, 20.8% spent between 6-8 hours, 16.7% spent more than 8 hours and 9.5% spent less than 2 hours in community participation. This is an indication that majority of the respondents across the various communities spent appreciable time in community development activities.

In addition, the total results indicates that 56.0% of the respondents had spent between 3-18 years in the community, 24.4% spent between 19-33 years in the community, 13.7% spent more than 33 years and 6.0% had spent less than 3 years in the community.

This result implies that majority of the respondents across the communities have spent an appreciable number of years in their communities and are conversant with the community members and the community itself and thus can identify the needs of the community and give other details about the community.

Furthermore, the number of projects participated in. Overall, 1.2% of the respondents participated in less than 1 project, 42.3% participated in 1-2 projects and 56.5% participated in more than 3 projects. This implies that majority of the respondents across the communities participated in more than 1 projects and are thus familiar with the projects and have an idea about the operation and maintenance of the project facility.



Also, 47.6% of the respondents were non-indigenes while 52.4% were indigenes. This implies that community participation of CSDP covered both indigenes and non-indigenes in its activities.

The analysis of the result presented in Table 3 shows that on the overall, 11.3% of the

respondents were community leaders, 55.4% were CPMC members and 33.3% were non CPMC members. This result suggests that every category in the community was involved in CSDP.

Table 3: Distribution of Respondents' Community participation characteristics

Variables	Urban (n=58) Percentage	Peri-urban (n=59) Percentage	Rural (n=51) Percentage	Total (n=168) %	Mean
Hours spent in participation					
< 2	12.1	6.8	9.8	9.5	5.0
2-5	43.1	44.1	74.5	53.0	
6-8	25.9	22.0	13.7	20.8	
> 8	19.0	27.1	2.0	16.7	
Years spent in community					
< 3	1.7	6.8	9.8	6.0	17.7
3-18	41.4	76.3	49.0	56.0	
19-33	29.3	13.6	31.4	24.4	
> 33	27.6	3.4	9.8	13.7	
Number of projects participated in					
< 1	3.4	0.0	0.0	1.2	2.4
1-2	44.8	27.1	56.9	42.3	
> 3	51.7	72.9	43.1	56.5	
Ethnicity					
Non-indigene	48.3	55.9	37.3	47.6	
Indigene	51.7	44.1	62.7	52.4	
Status in community					
Community leader	10.3	13.6	9.8	11.3	
CPMC	51.7	55.9	58.8	55.4	
Non CPMC	37.9	30.5	31.4	33.3	

Source: Field survey, 2016

Areas of participation by community members across the project implementation phases

There were several areas in which respondents participated in community activities. The areas of participation by community members across the project implementation phases were project identification, prioritisation of needs, sharing of ideas, leadership roles in project, decision making, assuming control, information sharing, volunteering in terms of skills and labour, financial contributions, consultations, mobilisation, monitoring, evaluation, implementation, attending meetings, supply of needed materials and

organisation of fund raising. The analysis of results as shown in Table 4 shows that most of the respondents participated in sharing of ideas (\bar{X} =2.39), project planning (\bar{X} =2.38), attendance at meeting (\bar{X} =2.38) and prioritisation of needs (\bar{X} =2.34). The respondents rated lowest was in the area of supply of needed materials (\bar{X} =1.05). This implies that majority of the respondents did not participate in the supply of needed materials.

Table 4: Distribution of Respondents' Areas of community participation

Areas of participation in project	Urban		Peri-urban		Rural		Total	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Project identification and planning								
Need analysis	2.31	0.922	2.39	0.720	2.23	0.764	2.32	0.805
Project planning	2.38	0.914	2.39	0.810	2.35	0.716	2.38	0.817



Areas of participation in project	Urban Mean	SD	Peri-urban Mean	SD	Rural Mean	SD	Total Mean	SD
Prioritisation of needs	2.40	0.897	2.46	0.837	2.14	0.749	2.34	0.840
Sharing of idea	2.57	0.728	2.47	0.679	2.08	0.796	2.39	0.758
Leadership role in project	2.02	1.304	2.08	1.164	1.71	1.238	1.95	1.239
Decision making								
Selecting projects	2.34	0.965	2.34	0.958	2.04	0.774	2.25	0.914
Deciding project scale (length)	1.69	1.063	1.73	1.031	1.88	0.765	1.76	0.968
Deciding project scale (capacity)	1.67	1.049	1.71	0.984	1.86	0.749	1.74	0.941
Deciding project design	1.43	1.244	1.20	1.126	1.78	0.783	1.46	1.099
Deciding the time frame for project construction	1.55	1.142	1.54	0.971	1.71	0.855	1.60	0.998
Deciding project location	2.28	1.056	2.12	0.930	2.10	0.671	2.17	0.907
Assume control	1.95	1.206	2.05	0.972	1.92	0.744	1.98	0.997
Information sharing	2.24	1.081	2.42	0.792	2.04	0.747	2.24	0.899
Volunteering in terms of skills and labour	2.05	1.176	2.29	0.911	1.92	0.744	2.10	0.974
Financial contribution	2.69	0.754	1.98	1.137	2.02	0.787	2.24	0.968
Consultation	2.09	1.189	2.05	0.972	2.00	0.825	2.05	1.008
Mobilisation	2.16	1.121	2.37	0.828	2.22	0.783	2.25	0.927
Monitoring	2.10	1.209	2.39	0.766	2.35	0.688	2.28	0.928
Evaluation	2.05	1.220	2.34	0.822	2.35	0.688	2.24	0.951
Implementation	2.12	1.156	2.34	0.883	2.41	0.638	2.29	0.930
Attendance at meeting	2.38	0.970	2.41	0.873	2.35	0.744	2.38	0.867
Supply of needed materials	0.66	1.101	0.86	1.152	1.73	1.266	1.05	1.249
Organisation of fund raising	1.98	1.221	2.00	1.067	1.71	1.119	1.90	1.139

Source: Field survey, 2016

Level of community participation of CSDP

Table 5 shows that more of the respondents (55.4%) had a high level of participation in CSDP, (26.8%) participated moderately while (17.9%) had low participation. The implication of this is that there is likely to be sustainability of the project since they would see

the project as 'our own' instead of 'their own'. As Abiona (2009) puts it, participation yields greater interest in sustainability. The respondents in the urban area (60.0%), peri-urban area (55.9%) and rural area (49.0%) had high level of participation in CSDP.

Table 5: Level of community participation in CSDP

Levels	Scores range	Urban Percentage	Peri-urban Percentage	Rural Percentage	Total Percentage
Low	≤31.90	31.0	16.9	3.9	17.9
Medium	≥32.0≤47.30	8.6	27.1	47.1	26.8
High	≥47.31	60.3	55.9	49.0	55.4

Source: Field survey, 2016

Mean=47.3, SD=15.3

Sustainability of CSDP

Economic sustainability of CSDP -

Table 6 shows the economic sustainability of CSDP. In total, majority (68.5%) of the respondents indicated that the projects had high economic sustainability. Furthermore, majority of the respondents in the urban (76.3%), peri-urban (54.2%) and rural (72.5%) areas indicated that the projects had high economic sustainability.

Technical sustainability - The technical sustainability as indicated by respondents is shown in Table 6. In total, (47%) of the respondents indicated that the projects had high technical

sustainability. In the urban, peri-urban and rural areas, 34.5%, 62.7% and 44.1% of the respondents indicated that the CSDPs had high technical sustainability in the study area respectively.

Social sustainability of CSDP - The result from the survey as shown in Table 6 shows that in total, more than half of the respondents (51.2%) indicated that the projects had high social sustainability. In the urban communities, (43.1%) of the respondents indicated that the projects had high sustainability while (45.1%) of the respondents indicated that the projects had high social sustainability in the rural communities.



Environmental sustainability - The result of Table 6 in total shows that majority (81.5%) of the respondents indicated that the projects were environmentally sustainable. In the urban (81.0%), peri-urban (88.1%) and rural (74.5%) communities, majority of the respondents

indicated that the projects were environmentally sustainable. This implies that the projects do not pose a threat to the environment. This result is in tandem with Ojerinde (2014) that CSDP considers the environmental appropriateness of projects.

Table 6 Economic sustainability of CSDP

Category	Scores range	Urban Percentage	Peri-urban Percentage	Rural Percentage	Total Percentage
Low	≤3.48	20.7	45.8	27.5	31.5
High	≥3.49	79.3	54.2	72.5	68.5
Mean=3.49, SD±0.869					
Technical sustainability of CSDP					
Low	≤9.03	65.5	37.3	56.9	53
High	≥9.04	34.5	62.7	43.1	47
Mean=9.04, SD±1.301					
Social sustainability of CSDP					
Low	≤10.28	56.9	35.6	54.9	48.8
High	≥10.29	43.1	64.4	45.1	51.2
Mean=10.29, SD±0.885					
Environmental sustainability of CSDP					
Low	≤0.81	19.0	11.9	25.5	18.5
High	≥0.82	81.0	88.1	74.5	81.5
Mean=0.82, SD±0.389					

Source: Field survey, 2016

Results from the survey as shown in Table 7 reveal that majority (66.1%) of the respondents indicated that Community and Social Development Projects had high level of sustainability. Also in the urban (70.7%), peri-urban (57.6%) and rural areas (70.6%), majority of the respondents indicated that the projects had high sustainability. This implies

that the project facility has long life span probably because of their level of participation in CSDP. This result meets the criteria for Annual Report on Results and Impact of IFAD operations (ARRI) (2015), that sustainability must pass the economic, technical, social and environmental aspects.

Table 7: Level of Sustainability of CSDP

Category	Scores range	Urban Percentage	Peri-urban Percentage	Rural Percentage	Total Percentage
Low	≤23.63	29.3	42.4	29.4	33.9
High	≥23.64	70.7	57.6	70.6	66.1

Source: Field survey, 2016

Mean=23.64, SD=2.275

Test of hypotheses

Relationship between level of community participation and sustainability of CSDP

Results from Table 8 shows that there is a significant relationship between the level of community participation and the sustainability of CSDP ($r=0.415$; $p<0.05$). The null hypothesis is rejected. This implies that the higher the level of community participation, the higher the

sustainability of projects. This result corroborates the findings of Cheetham (2002), Akoroda (2012), Abiona (2009), Steve and Olufemi (2011), Olaleye (2010) and Olukosi (2002) that a positive relationship exists between participation and sustainability and that the higher the level of community participation, the higher the sustainability of projects.

Table 8: Relationship between level of participation and sustainability

Variable	r	P	Decision
Level of participation	0.415	0.000	S

Source: Field survey, 2016



Relationship between selected socioeconomic characteristics and community participation

Results from Table 9 shows that significant relationships exist between age ($r=0.281$), number of years of formal education ($r=0.154$), number of hours spent in community participation ($r=0.469$) and community participation. The null hypothesis is rejected. This implies that the higher the age, the higher the level

of community participation. This finding is in agreement with the assertion of Miseda (2014) that youth participation is undefined, underdeveloped and hence requires further exploration in order to educate and encourage youth to participate in community development projects.

Table 9: Relationship between selected socioeconomic characteristics and level of community participation

Variable	r	p	Decision
Age	0.281	0.005	S
Household size	0.123	0.114	NS
Number of years of formal education	0.154	0.047	S
Number of hours spent in community participation	0.469	0.000	S
Number of years spent in the community	0.095	0.220	NS
Estimated monthly income	0.012	0.878	NS

Source: Field survey, 2016

Relationship between selected variables and community participation

Table 10 shows the relationship between sex, religion, ethnicity, type of community of the respondents and status in the community with level of community participation. The table indicates that was a significant relationship between sex ($\chi^2=9.721$, $p<0.05$), type of community ($\chi^2=26.820$, $p<0.05$) and status in the community ($\chi^2=41.985$, $p<0.05$) with level of community participation. The

null hypothesis is rejected. This implies that level of community participation is a function of sex as more males participated in community development than their female counterpart in the study area. The result also shows that ethnicity ($\chi^2=0.444$, $p<0.05$) is not significantly related to level of community participation. The implication of this is that participation in community development is not inhibited by ethnicity.

Table 10: Relationship between selected socioeconomic characteristics and level of community participation

Variable	χ^2	df	P	Decision
Sex	9.721	2	0.008	S
Ethnicity	0.444	2	0.801	NS
Type of community	26.820	4	0.000	S
Status in the community	41.985	4	0.000	S

Source: Field survey, 2016

CONCLUSION AND RECOMMENDATIONS

The study concluded that there was minimum youth participation in community development. It was observed that males participated more in community development than females. Also, technical sustainability of projects was found to be low.

Based on the findings of the study, the following recommendations are made to improve the effect of community participation on sustainability of CSDP:

- Efforts should be made to encourage youth in community development
- Efforts should be made to encourage women to participate more in community development
- More training in operation and maintenance of projects should be conducted in order to increase the technical sustainability of projects.

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INVOLVEMENT IN NON-FARM ACTIVITIES AND OCCURRENCE OF DOMESTIC CONFLICTS AMONG RURAL FARMERS IN EDO STATE, NIGERIA

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ABSTRACT

As part of effort to promote rural dwellers' wellbeing, several studies had been conducted to examine the causes and resolution of domestic conflicts among farmers but less attention is paid to their involvement in non-farm activities as a strategy to mitigate domestic conflicts, particularly in Edo State, Nigeria. The study therefore assessed male and female rural farmers' involvement in non-farm activities in Edo State with a view to unveiling the effects on occurrence of domestic conflicts. Specifically, it analysed the benefits derived in non-farm activities as well as establishing relationship between their involvement in non-farm activities and frequency of occurrence of domestic conflicts among male and female farmers. Multi-stage sampling procedure was used to select 130 respondents (65 males and 65 females) in the same household using interview schedule. Data on socioeconomic characteristics, non-farm activities performed and frequency of occurrence of domestic conflicts were described with the use of mean, standard deviation, frequency and percentages while Pearsons' Product Moment Correlation was used to determine the relationship that exists between benefits derived due to their involvement in non-farm activities and frequency of occurrence of domestic conflicts. Results show that 63.1% and 66.2% of male and female were between the ages of 20 and 40 years while only 9.2% of male and 38.5% of female having no formal education. Non farm activities such as wood carving ($\bar{x}=2.94\pm0.57$), building/construction ($\bar{x}=2.92\pm0.48$) and Carpentry/ furniture works ($\bar{x}=2.83\pm0.83$) were the major non-farm activities with high involvement among male while petty trading ($\bar{x}=2.99\pm0.83$), hairdressing ($\bar{x}=3.24\pm0.94$) and tailoring ($\bar{x}=2.73\pm0.88$) recorded high involvement level among their female counterparts. Income generation ($\bar{x}=3.29\pm0.64$) and creation of self employment ($\bar{x}=3.24\pm0.27$) were among the benefits derived for their involvement. A negative and significant correlation existed between farmers' involvement in non-farm activities and frequency of occurrence of domestic conflicts ($r = -0.51$; $p \leq 0.01$). It was concluded that involvement in non farm activities among rural farmers is central to resolving domestic conflicts. It is therefore, recommended that farmers in the rural areas should be encouraged to involve in non-farm activities by social and development workers as this will be a strategy in building peace within a community.

Keywords: Non-farm activities, domestic conflicts, rural farmers

INTRODUCTION

In Nigeria, agriculture has always been the mainstay of the rural economy because it attracts more than 70% of the populace (Idachaba, 2004, Omorogbe, Jelena and Fatima, 2014). However, despite this enormous contribution of agriculture to rural economy and its importance in the employment generation, rural areas have over the years experienced decline in capacity building and worsening poverty situation (Aigbokan, 2008). Thus, poverty has been on the increase since 1980, rising from 28.1% to 65.6% in 1996 (NBS, 2006). This went down to 54.4% in 2004, but increased to about 69% in 2010 and went as high as 72% in 2016 (NBS, 2016). Despite the numerous poverty-reduction interventions and strategies implemented and adopted in Nigeria, the incidence of poverty in rural areas still remains high (United Nation Development Programme UNDP, 2008). The reason might be attributed to the wrong strategies and approaches to rural poverty reduction which are usually centred on production of crops and livestock without consideration for a holistic

approach which embraces not only agriculture but also non-farm enterprises among farmers.

Rene (2010) reported that poverty was measured by the quality of life by the Action Economic Reforms (AER) in Philippine due to the complexity in the usual measurement of poverty. The Quality of Life Index, as developed by Action for Economic Reforms (AER), is a derivative of the UNDP's Capability Poverty Measure (CPM) that was proposed by Professor Amartya Sen and popularized by the Human Development Report. The CPM, however, has "remained mostly a conceptual scale, and very little progress has been made in operationalising it" (Boltvinik, 2003). The QLI, therefore, may be seen as an attempt to operationalise a pure capability-based measure, as conceptualized by Professor Sen. The index is considered a pure capability-based measure since all the component indicators in the composite index are based on *outcomes* and not simply the *means* to achieve such development goals. Income and other *means* indicators are excluded in the variable mix that generates the index. Thus, it was used to proxy poverty status among farmers for this study.



In an attempt to alleviate poverty in the developing countries of the world, efforts have been directed towards promoting rural well-being and this requires an integrated plan that goes beyond mere agricultural development (Barrett, Reardon and Webb, 2006). Statistics show that as much as 1.4 billion people out of 6.5 billion around the world in 2005 lived on less than US\$1.25 a day (United Nation Development Programme, 2008). In 2016, National Bureau of Statistics reported that in Nigeria, about 64.2% of Nigerians are living below this poverty line and thus classified as extremely poor (NBS, 2015). In Nigeria, a key element for rural development efforts is that agriculture has been viewed as a basis for rural development, an approach which has neglected the contributions of other sectors most especially the non-farm activities in improving the quality of life of rural dwellers, and subsequently hindered the scope for a multi-sectoral and integrated approach to rural development programming (Awoyemi, 2011).

Non-farm activities in rural areas seem to offer a promising solution to poverty problems by creating local employment opportunities and generating new sources of income as it had been adjudged to have significant contributions to the growth of rural economies by reducing rural poverty (Lanjouw and Lanjouw 2001; De Janvry *et al.*, 2005; Démurger *et al.*, 2010). Involvement in non farm activities among farmers therefore could be a viable strategy to poverty reduction and consequently have some impact on domestic conflict. Although, Ikejiaku (2012) opined that there are disagreements about the specific interaction between poverty and conflict, but both impact negatively on development with a clear evidence that conflict impacts more on development than poverty. Similarly, Kruegar and Maleckova. (2004) remarked that violence is explainable by economic or non-economic factors, or their combinations rest on the character or type of violence. Moreso, Sambanis (2004) asserted that political violence and other crises are hampered by endogeneity and selections of key variables such as economic, political and other social related ones. UNICEF (2000) categorized violence against women into physical violence, sexual violence, coercion and control, economic control and material deprivation, the power and control wheel and general neglect. These indicators were adopted for the domestic violence for this study. Makama (2013) and Jephias (2013) posited that the patriarchy nature of most African countries had given rooms for gender based violence, resulting to gender inequality in access and control over productive resources.

There have been several studies between poverty and conflicts. However, most of these studies were done objectively without specifically

looking at domestic conflicts among farmers and their involvement in non-farm activities as a means of income diversification for better quality of life. For instance, scholars have used different terms: indirect (Goodhand and Atkinson, 2001), two way (Okafor, 2004) complex (Onyeiwu, 2004), or bifurcated (Sambanis, 2004) in Ikejiaku (2012) to explain the poverty-conflict relationship. This suggests that different views about poverty and conflict exists in the academic literatures but little or none is known of the relationship between domestic conflicts resulting from poverty and farmers involvement in non farm activities as a strategy to cushion the effects of domestic conflicts within the household. Hence, this study identified non-farm activities carried out by farmers on gender basis, examined the benefits derived from their involvement in non farm activities, analysed their quality of life (to proxy poverty status) and determined the influence of their quality of life on the frequency of occurrence of domestic conflicts with a view to documenting relationship between their quality of life and domestic conflicts in Edo State.

METHODOLOGY

The study was carried out in Edo State, Nigeria. The State was created in 1991 from the defunct Bendel State which comprised many states in the current South-South and South-East. It has a total of eighteen (18) Local Government Areas and is divided into three Agricultural Development Programme (ADP) zones, namely: Edo South, Edo Central and Edo North. The State lies within the geographical coordinates of Longitudes $05^{\circ} 04'$ and $06^{\circ} 43'$ East of the Greenwich Meridian and Latitudes $05^{\circ} 44'$ and $07^{\circ} 34'$ North of the Equator. The State is characterized by a tropical climate that ranges from humid to sub-humid at different times of the year with rainy and dry seasons as the two distinct seasons. The average temperature fluctuates from a minimum of 24°C to a maximum of 33°C with mangrove, freshwater swamp and savannah as the three distinct vegetation types found in the state.

The State covered a total land area of about 19794 square kilometers and bounded in the north and northeast by Kogi State, west by Ondo State, in the south and southeast by Delta State with a population of about 3 million based on the 2006 Population Census figure. This consists of 1,640,461 males and 1,577,871 females. The state is made up of Edo, Esan, Owan and Akoko Edo as the prominent ethnic groups consisting of both Christianity dominating the South and part of Central Agricultural Zone and Islam dominating the Northern zone. The major occupations of Edo people outside the public sector employment are trading, farming (including livestock production),

fishing, metal and wood work, carving and other related artisanal endeavors.

Multi-stage sampling procedure was used as framework to select 130 respondents who are members of households- a husband and his wife for the study. First, purposive sampling technique was used to select Edo North and Edo Central ADP zones based on the level of rurality and intensity of farming. At the second stage, snowball sampling technique was used to select 3 rural communities in each of the two ADP zones sampled, to have a total of 6 communities. At the third and final stage, 22 respondents who are practising farmers (11 males and 11 females in 11 households) were purposively selected using snowball sampling from each of the six (6) communities under investigation. Thus, a total of 132 respondents comprising 66 males and 66 females were sampled for the study using interview schedule. However, only two of the interview schedule were not properly filled. Therefore, a total of 130 (65 households) were used for the study.

Respondents were asked to indicate their level of involvement in Non-farm activities from a list of non-farm activities provided on a 4 point scale of highly involved (4), partly involved (3), less involved (2) and not involved (1). The weighted mean score was calculated thus: $1+2+3+4=10/4=2.5$. This was used as a criterion for judgement. A list of domestic violence (categorised into physical violence, sexual violence, coercion and control, economic control and material deprivation, the power and control wheel, and general neglect based on the UNICEF (2000)) was given for farmers to indicate the frequency of experiencing such on a 4 point scale of very regular (4), regular (3), occasionally (2) and never experienced (1). For instance under physical violence variables like being given permanent injuries by spouse, being slapped, and being pushed were used to operationalise it while raping, beaten because of sex, strangled because of sex were used to operationalised sexual violence. Also, quality of life was captured using a 3 point scale of high (3), moderate (2) and low (1) categorized under housing, health, education, infrastructures and incomes as indicators. Test and re-test was used to validate this instrument and a Correlation Coefficient of 0.72 was obtained using Ose Local Government in Ondo State due to its proximity to Edo State. Pearson's Product Moment Correlation (PPMC) was used to determine the relationship that exists between quality of life and frequency of occurrence of domestic conflicts among farmers while Linear Regression was used to analyse the influence of involvement in non-

farm activities and frequency of occurrence of domestic conflicts among respondents.

RESULTS AND DISCUSSION

Socioeconomic characteristics

It was observed in Table 1 that the mean age of the farmers was 46.6 ± 14.7 years and 38.4 ± 6.5 years for male and female farmers, respectively with majority (63.1%) of male and (66.2%) of female falling within the age bracket of 20 and 40 years, respectively. The mean ages of male and female farmers presented above coupled with the fact that majority were found between the ages of 20 and 40 years indicate that they were young and still in their youthful ages as farmers. Youthfulness is characterized by innovation prones, risk taking, and being knowledge driven based on the assertions of Torimiro, Kolawole and Okorie (2007), Ekong (2003) and Angba (2003). This implies that farmers in the study area could still be regarded as youth. The Children and Youth-in-Agriculture Programme (CYIAP-Network, 2006) took cognizance of the circumstances of poverty, unemployment and deprivations that are prevalent in Nigeria to categorise youth as people within the age group of 19 and 40 years.

This shows that both male and female farmers could be very active in their farming activities and still have what it takes to involve in other non farm activities for better quality of life. In addition, majority (75.4%) of male and (86.2%) of female were married with Christianity 53.8% and 66.2% being the dominant religion among male and female farmers. Furthermore, about 32.3% of male and only 3.5% of females had post secondary education with about 39.5% of female and only 9.2% of male had no formal education. This could be due to the fact that in most rural communities in Nigeria, preference is given to male education compared to their female counterparts as opined by Akinbi and Akinbi (2015) that there is a gender differential between male and female education in Nigeria. Moreso, male had a slightly higher farm size of 4.2 ± 1.92 hectares as against 2.9 ± 0.92 hectares for the females. This findings further buttressed the earlier assertions of Adekola, Adereti, Koledoye, and Owombo. (2013) that gender differential existed between male and female farmers in land access in Ondo State. The higher farm size among males could be attributed to cultural issues associated with land holding in most rural communities across Nigeria as reported by Bioye, Abdul, and Joseph (2006) that the spiritual and political significance of land in Nigeria makes it easily accessible by the males.

**Table 1: Socioeconomic characteristics of farmers**

Variable	Male		Mean±Std. Dev	Female		Mean±Std. Dev
	F	%		F	%	
Age in years	< 20 yrs	3	4.6	6	9.2	
	20-40 yrs	41	63.1	43	66.2	38.4±6.5
	41-60 yrs	15	23.1	13	20.0	
	> 61	6	9.2	3	4.6	
Marital status	Single	12	18.5	6	9.2	
	Married	49	75.4	56	86.2	
	Others	4	6.1	3	4.6	
Religion	Christianity	35	53.8	43	66.2	
	Islam	23	35.4	19	29.2	
	Others	7	10.8	3	4.6	
Education	Non-formal	6	9.2	25	39.5	
	Primary	21	32.3	17	26.2	
	Secondary	17	26.2	20	30.8	
	Post secondary	21	32.3	3	3.5	
Farm size in (Ha)			4.2±1.92			2.9±0.92
Farming experience (yrs)			38±11.7			35±9.73

Source: Field survey, 2016.

Involvement in non-farm activities

Evidence in Table 2 show that wood carving ($\bar{X}=2.94\pm0.57$), agro-industrial work ($\bar{X}=2.26\pm0.80$), cab driving ($\bar{X}=2.73\pm0.91$), carpentry/furniture works ($\bar{X}=2.83\pm0.83$), and building/construction ($\bar{X}=2.92\pm0.48$) were the non-farm activities that recorded high level of involvement among the male farmers while trading ($\bar{X}=2.99\pm0.83$), food vending ($\bar{X}=2.57\pm0.41$), hairdressing/ barbing ($\bar{X}=3.24\pm0.94$) and dressmaking/fashion designing ($\bar{X}=2.73\pm0.88$) were those with high level of involvement among the female farmers. The findings show that farmers

were not involved in so many of the non farm activities, although, male involved in tedious non farm activities that requires a lot of energy such as wood carving, construction works and cab driving whereas women were found mainly in non farm activities that are less tedious. Such activities are hairdressing, food vending and trading. All these are gender specific works in Nigeria. The findings conform with the study of Madaki (2014) that reported high involvement of men in manufacturing and transportation works as compared to their female counterparts.

Table 2: Respondents distribution by their involvement in non farm activities

Non-Farm activities	Male		Female	
	Mean	Std. Dev	Mean	Std. Dev
Wood carving	2.94*	0.57	2.37	0.92
Agro-industrial work	2.68*	0.80	2.09	0.26
Trading	2.14	0.69	2.99*	0.83
Cab driving	2.73*	0.91	1.33	0.43
Quarrying	2.28	0.83	2.05	0.77
Food vending	2.22	0.36	2.57*	0.41
Photography	1.92	0.39	1.43	0.39
Butchery	1.58	0.99	1.44	0.35
Carpentry/ furniture works	2.83*	0.83	1.40	0.92
Hairdressing/ Barbing	2.28	0.83	3.24*	0.94
Dressmaking/fashion Designing	2.04	0.55	2.73*	0.88
Building/Construction	2.92*	0.48	1.54	0.62
Bakery	2.41	0.86	2.13	0.84
Traditional Healing	1.60	0.87	1.46	0.70
Lotto work	2.46	0.70	2.18	0.18
Transport services	1.68	0.88	1.73	0.14
Teaching	1.73	0.14	1.16	0.74
Office Works	2.16	0.74	0.83	0.19

Source: Field survey, 2016.

*Mean ≥ 2.5 = High involvement

In contrast, Abdulai and CroleRees (2001) reported that non farm activities contributed significantly to

Benefits derived from non-farm activities

Results in Figure 1 show that income generation ($\bar{X}=3.29\pm0.64$), creation of self employment ($\bar{X}=3.24\pm0.27$), ability to acquire properties/items for better livelihood ($\bar{X}=2.55\pm0.92$), creating a healthy family ($\bar{X}=2.63\pm0.58$) and others ($\bar{X}=2.78\pm0.88$) were the identified benefits the respondents derived from their involvement in non-farm activities in the study area. These benefits are all related to living a better life as Zahra *et al.*(2016) submitted that women with better livelihood opportunities experience less violence during pregnancy and Rene (2010) unveiled that women who are engaged in economic activities may have little exposure to domestic violence. This becomes applicable to

income diversification among rural farmers in Southern Mali.

farmers who involve in non-farm activities alongside their normal farming engagement as this is expected to bring in addition income for better family living. Also, the number of man hours committed to non-farm activities after their normal farm operation could also reduce constant interaction and nagging that may result to domestic conflicts among couples in rural areas where basic amenities such as electricity, cinema houses and other relaxation centres are seriously lacking.

This can be used to proxy household poverty status. This is an indication that involvement in non farm activities among farmers could contribute to farmers quality of life and could technically prevent domestic conflicts within households.

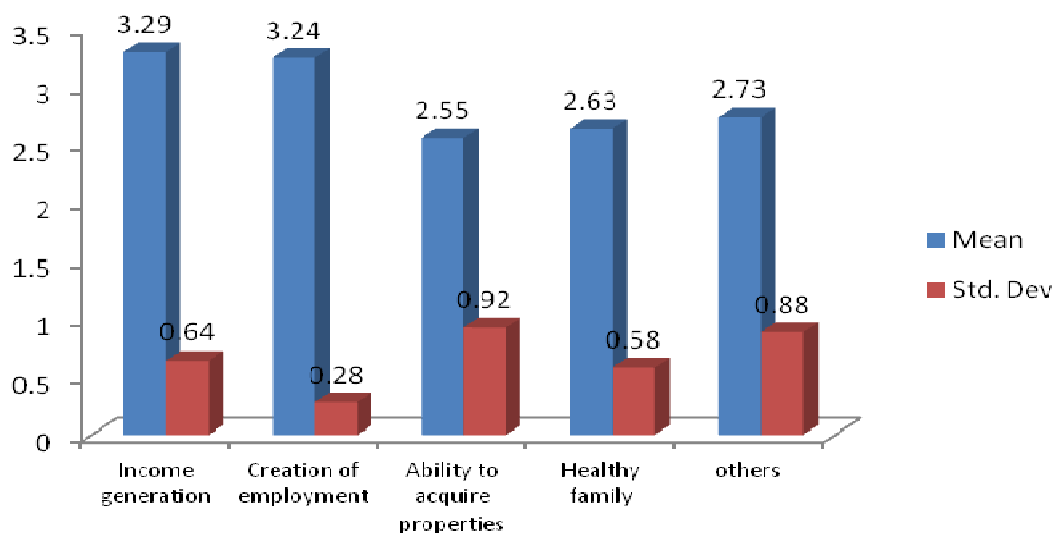


Figure 1: Distribution of respondents by their benefits derived from their involvement in non-farm activities
Source: Field survey, 2016.

Frequency of occurrence of domestic violence among respondents

Evidence in Table 3 show that domestic violence such as physical violence ($\bar{X}=2.51\pm0.84$), coercion and control ($\bar{X}=3.79\pm0.03$), economic control and material deprivation ($\bar{X}=2.68\pm0.61$) and power and control wheel ($\bar{X}=3.57\pm0.15$) were those that frequently occurred in the study area. The frequent occurrence of these violence, most especially the physical and economic and power control among respondents maybe viewed from the patriarchy nature of most Nigerian communities. This assertion corroborated the findings of Makama

(2013) that the patriarchy structure of Nigeria contributed to the wide gender inequality that dominates every sphere of life of the rural people while, Jephias (2013) also observed that women faced unequal opportunities and control of resources in Zimbabwe due to the patriarchy system of operation. As long as men are in charge of power and decision making process in many rural households as reported by Ikejiaku (20120, domestic violence may not cease to exist especially, those resulting from the economic and welfare of members of rural households.

**Table 3: Respondents distribution based on the frequency of domestic violence experienced**

Form of domestic violence	Mean	Std. Dev
Physical violence	2.51*	0.84
Sexual violence	1.95	0.99
Coercion and control	3.79*	0.03
Economic control and material deprivation	2.68*	0.61
The power and control wheel	3.57*	0.15
Neglect	2.15	0.57

Source: Field survey, 2016.

*Mean ≥ 2.5 = High frequency of experience

Relationship between benefits derived from non-farm activities and frequency of occurrence of domestic conflicts

Results in Table 4 show that benefit derived from nonfarm activities such as housing ($r = -0.32$; $p \leq 0.01$), health status ($r = -0.286$; $p \leq 0.01$), education status ($r = -0.199$; $p \leq 0.05$), and income ($r = -0.426$; $p \leq 0.01$) had inverse relationship with the frequency of occurrence of domestic conflicts among farmers in the study area. Also, benefit derived from non-farm activities total score was obtained. It was observed that negative correlation

existed between benefit derived from non-farm activities by rural farmers ($r = -0.51$; $p \leq 0.01$) and frequency of occurrence of domestic conflicts. This implies that a farmer with a high benefit derived from non-farm activities experiences less domestic conflicts based on the findings of this study. This finding corroborates the report of Dalal and Lindqvist (2012) that women with low quality of life experience more domestic violence in India than those with low poverty status (high quality of life).

Table 4: Results of Pearson's Product Moment Correlation showing the significant relationship between benefits derived from involvement in nonfarm activities and frequency of occurrence of domestic conflicts

Benefits of nonfarm activities	Correlation Coeff (r)	P-value	Decision
Housing	-0.322**	0.01	S
Health status	-0.286**	0.01	S
Education status	-0.199*	0.05	S
Infrastructures	-0.078	0.49	NS
Income	-0.426**	0.01	S
Total benefits derived scores	-0.510**	0.01	S

Source: Field survey, 2016.

*. Correlation is significant at the 0.05 level (2-tailed)

**. Correlation is significant at the 0.01 level (2-tailed)

Influence of involvement in non-farm activities on frequency of occurrence of domestic conflicts

Evidence in Table 5 reveals that involvement in non-farm activities ($t = -2.49$) has an inverse influence on the frequency of occurrence of domestic conflicts among rural farmers at 0.05 level of significance. This implies that involvement in non-farm activities would bring about a reduction in the rate at which domestic conflicts occur within a rural household. This has been established based on the above findings that such a farmer will experience less domestic conflicts. Longman (2012) opined that in Iran, it was a policy for farmers to diversify into non-farm activities considering the limited capability of agricultural sector in the country. The findings therefore found that involvement in non-farm activities among

inhabitants of West Azarbaijan Province of Iran has been a sustainable means of living. However, Stanley and Naasegnibe (2012) reported that in Ghana, non-farm activities in the areas were seasonal with low return activities owing to certain socio-demographic factors influencing their involvement. With the sustainability of non-farm activities and the established influence it has on domestic conflicts according to the results of this finding, it would be a sustainable approach to solving most of the domestic conflicts among farmers in Edo State. Apart from the extra income it could generate, it will also engage the farmers, giving them self employment opportunity thereby having less time for domestic argument that could lead to violence especially between a husband and the wife.

Table 5: Linear Regression analysis showing the influence of farmers' involvement in non-farm activities on the frequency of occurrence of domestic conflicts

Model	Standardized Coefficients Beta	t-value	p-value
(Constant)		6.636**	0.01
Involvement in Non-farm	2.09	-2.487*	0.028

Source: Field survey, 2016.

R= 0.52, R square = 0.2704

**Significant at 0.01 level of significance

*Significant at 0.05 level of significance

CONCLUSION AND RECOMMENDATIONS

The study established that farmers in Edo state engaged in non-farm activities that are gender specific with male involving in a more physical energy consuming activities such as construction works while females were engaged in less physical energy depended ones like trading and hairdressing. Although, very few of the non-farm activities recorded high involvement among them but their involvement had an influence of reducing the occurrence of domestic conflicts in the study area. Also, total benefit derived from involvement in non-farm activities was a strong correlate of occurrence of domestic conflicts among farmers. It is therefore concluded that encouraging farmers to involve in non-farm activities will not only give them extra income but also reduces the menace of domestic conflicts which has claimed the lives of many rural dwellers in Nigeria. The study recommends that social workers and extension practitioners should advocate the need for farmers to diversify their income through their involvement in non-farm activities. Also, the home economics aspect of agricultural extension should be re-initiated and encouraged by the extension stakeholders to organise and train farmers in the different non-farm activities such as tailoring and hairdressing for better quality of life with a view to reducing domestic conflicts in rural areas of Edo State, Nigeria.

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LIVELIHOOD DIVERSIFICATION AMONGST PASTORALISTS AND CONFLICT WITH ARABLE CROP FARMERS: EMPIRICAL EVIDENCE FROM KWARA STATE, NIGERIA

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ABSTRACT

The study identified causes of conflicts, settlement pattern of pastoral farmers and analyzed the influence of livelihood diversification on conflicts between pastoralists and indigenous crop farmers. Using multistage sampling procedure to select 280 respondents, data were collected by means of structured interview schedule and analyzed by frequency distribution, Pearson Correlation and one-way ANOVA. Results show that high pressure on land ($WMS = 4.87$) and unfavourable land tenure system (4.56) mainly caused the conflicts. Crop and pastoral farmers had an average farm size of 2.9ha and 1.7ha , respectively. Majority (75.5%) of pastoralists were engaged in crop production, while only 12.1% of crop farmers were involved in livestock rearing. Also, 57.9% and 32.9% amongst crop farmers and 14.2% and 15.0% amongst pastoral farmers were involved in trading and commercial (vehicular) transport business, respectively. Furthermore, 16.4% and 7.9% of the pastoralists lived in mud and block-walled houses with corrugated iron sheets, respectively. Transformational approach was identified as most acceptable solution of conflict resolution by both crop and pastoral farmers. There was a significant difference between farm size ($F=9.33$) and educational level ($F=8.93$) of crop and pastoral farmers. There was also a significant relationship between cause of conflicts and pastoralists' livelihood diversification ($r=0.74$) and number of years' of pastoralists in settlement ($r=0.29$). The study concluded that increasing involvement of the pastoralists in crop production, involvement in other employment opportunities and erection of permanent building structure ignited unhealthy rivalry between the two groups.

Keywords: Permanent housing, crop production, farm size, livelihood diversification, educational attainment.

INTRODUCTION

Nigerian agriculture remains a key driver of the economy despite the abundance of oil in the country. Agriculture employs about 70% of the active population and contributes 24.4% of the nation's Gross Domestic Product (GDP). Yet, large proportions of the farmers who mainly live in rural areas are poor people (Edache, 2006). Sanusi (2011) reported that about 70% (a proportion equivalent to almost 20% of Sub-Saharan Africa) of Nigerian total population lives below the poverty line. Although an average farmer in a rural set up in Nigeria engages in crop cultivation and livestock rearing, pastoral farmers are mainly known for livestock rearing. They engage in seasonal migration of herds and family in search of fertile pastures for their livestock.

However, transhumance nature of pastoral farmers characterized by seasonal movement of livestock from one region to another, in recent times, is now taking new dimension - pastoralists now more often assume sedentary lifestyle. They acquire land in their new locations, settle down, engage extensively in arable farming while tenaciously still keep tending their livestock herds. The consequences of livelihood diversification among pastoralists is threatening to local residents, who are mainly arable crop farmers, thereby reigniting long-standing violent conflicts between these two groups in many rural communities in Nigeria.

Tamuno (1991) reported that these conflicts are due to internal boundary disputes, rival interest of nomads and sedentary farmers as

well as agitation for improved prices for agricultural commodities and improved standard of living by groups of peasants in some Local Government Areas. Also, vying for land ownership could be another major cause of conflict. Land is not only a matter of power and wealth, but is loaded with meaning. It is *sine qua non* to life; it is a bridge between livelihood and beyond, as people spend useful parts of their living on land till transition to grave for external preservation inside the land (Yahaya, 2005). Hence, the way by which people perceive land culturally may be instrumental to how disputes between crop farmers and pastoralists as well as land resource explorers are handled. Arable and pastoral farmers tend to differ from each other both regarding principles and practices of land use. For instance, many disputes often occur around water courses where farmers grow vegetables in dry season and herders water their cattle. If crop damage occurs and this is frequently the case, conflict occurs. Vegetable farmers claim right to grow vegetables around the water courses and herdsmen should stop destroying their crops. The herders, on the other hand, perceive this act as sabotage, indicating that their cattle need to be watered anyhow. The phenomenon of climate change, inevitably altering local and regional weather conditions around the world and resulting in extreme climatic conditions, also exacerbate the conflict situation. The ever growing pressure on land in the past recent years has been described by many experts and onlookers as a clear manifestation of the impact of climate change across Nigeria (Heinrich Boll Foundation,



2000). The effect of climate change is evident in the incessant and prolonged drought in the drier regions of the world, flood, hurricanes, increased frequency of fire outbreak, poverty, malnutrition, increased water need and reduced supply, adverse effects on grazing land and pasture quality. Thus the cultivable land for crop and livestock (cattle, sheep and goat) production is consistently decreasing, thereby worsening conflict situation linked with decreasing land resources as a result of climate change.

There is increasing number of conflicts in many parts of Kwara State and the country at large. For instance, The Guardian (2012) reported that 11 Tiv farmers were killed in a clash between herdsmen and Tiv farmers while about 5,000 residents fled the area and left behind their belongings in Nasarawa State, North Central geopolitical zone of the country. Furthermore, Nigerian Tribune (2012) reported that 13 farming communities located around the bank of River Benue in Gwer West Local Government Area of Benue State were dislodged with over 30 farmers feared dead. The same Newspaper, in another edition reported that a Fulani herdsman was found killed in Eggon, Doma Local Government Area of Nasarawa State by gunmen suspected to be Tiv farmers. The killing was said to be a reprisal attack against avenging the death of two Tiv farmers killed previously.

Several attempts made to resolve these conflicts by the governmental (an example of which is the enactment of the Grazing Amendment (2004) Law by Kwara State Government) have only temporarily succeeded in calming of frayed nerves of parties involved in the conflict; they do not provide sustainable resolutions, hence recurrence of the conflict situations often and often. Empirically investigating the changing settlement pattern amongst pastoral farmers and the influence of their changing livelihood strategies on conflict emergence with arable farmers is germane to proffering long-lasting, sustainable solutions to this perpetually recurring menace. This is apt at this material time because Nigerian agriculture is being challenged to contribute to sustainable growth, and provide quality and affordable food for her citizens. The foregoing thus necessitated this study.

The main of the objective of the study was to investigate the effect of livelihood diversification among pastoralists on the emergence of conflict with arable farmers. The specific objectives were to:

1. describe socioeconomic characteristics of both pastoralists and arable crop farmers;
2. identify the livelihood strategies of both pastoralists and arable crop farmers;
3. examine the influence of changing livelihood strategies amongst pastoral

farmers on conflict between them and arable crop farmers;

4. examine the effect of changing settlement pattern amongst pastoral farmers on conflict between them and arable crop farmers;
5. identify sustainable prevention strategies to manage conflict situation between pastoralist and arable crop farmers.

Null hypotheses were formulated for the study as follows:

H₀₁: There is no significant difference between selected socioeconomic characteristics of arable farmers and pastoralists

H₀₂: There is no significant relationship between pastoralists' livelihood diversification and cause of conflict with arable crop farmers

H₀₃: There is no significant relationship between pastoral farmers' number of years in settlement and cause of conflict with arable crop farmers

METHODOLOGY

The study was carried out in Kwara state of Nigeria which is located within the North Latitude 11° 2' and 11° 45'. It is sandwiched between longitudes 2° 45' and 6° 40' East of Greenish meridian. The state has a land area of 32,500 square kilometres (that is 3,250,000 hectares) with a temperature range of between 30°C and 35°C. The vegetation in the northern parts of the State is mainly savannah grass land while to the southern part is wooded Guinea Savannah. The rainfall pattern both in quantity (900-1500mm) and distribution (6-7months) and vegetation types favour production of cattle, goat, sheep and arable crops. The favourable climatic conditions are responsible for the exodus of Fulani from the northern parts of the country where adverse effects of climate change are mostly felt. The population of Kwara state is 2.3 million people (NPC, 2006). Kwara state is naturally endowed for livestock production. Livestock production is the major means of livelihood of many inhabitants of the State especially the Hausa/Fulani while crop production is the major farming enterprise of the major tribes (Yoruba, Nupe and Baruba) in the State.

The target population for the study consisted of the indigenous crop farmers and the pastoralists in the sixteen Local Government Areas (LGAs) of Kwara state. There is a preponderance of crop farmers and pastoralists in all the 16 LGAs in the state. The study used a multistage sampling procedure. Stage one involved a random selection of seven Local Government Areas (i.e. 43.75% of the LGAs in the state). These were Asa, Moro, Isin, Ifelodun, Kaiama, Edu, and Baruteen LGAs. The Second stage involved a random selection of five villages' and five pastoralists' settlements (*Gaa*) in

each LGA. The Extension Agents in each LGA have the lists of practicing farmers and also assisted in the compilation the lists of the pastoralists, to the extent possible, within their areas of jurisdiction. Twenty (20) farmers and 20 pastoralists were randomly selected from the selected villages and *Gaas* in each LGA. Thus, to select a total of 140 crop farmers and 140 pastoralists, giving a total of 280 respondents. Data collected by means of structured interview schedule were summarized using frequency counts, percentages and charts, while Pearson Product Moment Correlation analysis and one-way ANOVA were used to test the hypotheses.

Measurement of variables

Livelihood strategy was measured by requesting respondents to check which occupational activities they engaged in from a list provided and were scored one point for each activity. They were also asked to indicate specific crop enterprises they cultivated and also scored accordingly. Reasons for livelihood diversification and causes of conflict were operationalized by evaluating respondents' opinions about certain statements as appropriate for each case on a 5 point Likert scale. Weighted mean score was then obtained for each statement. Other variables, including frequency of out-migration amongst pastoralists and types of building in their settlement were measured at nominal level.

RESULTS AND DISCUSSION

Socioeconomic characteristics

Results in Table 1 show that mean age of crop farmers and the pastoralists were 55.5 and 49.5 years, respectively. This indicates that youth involvement in crop production was relatively low. The pastoralists who typically required covering long distances on daily basis to graze their cattle were equally growing old. Ageing has an adverse effect on agricultural productivity in general in Nigeria. The UN Economic Commission for Africa predicts that the size of the elderly population is expected to jump from 16.6 million to 28.6 million persons over the period from 1995 - 2015 (Ismaila, 2010). The average age of the farmers and the pastoralists confirmed this prediction and underscores the need to encourage youth to actively get involved in crop and livestock production.

Majority (94.3%) of the crop farmers and pastoralists (91.3%) were male, as shown in Table 1. Although males are predominantly involved in arable crop farming and livestock production as reflected in the obtained results, the roles of women are equally important especially in produce/product processing and marketing. The results also indicated that 86.43% of the crop farmers and 92.9% of the pastoralists were married. The large

proportion of married individuals amongst both categories of respondents is not unexpected given their high mean age value. The respondents' wives may contribute to the labour requirements on the farms as most of the farm operations are labour intensive (Ismaila *et al.*, 2010). The implication of these findings is that the damage caused by conflict occurrence would be equally felt by both males and females, and their families.

Furthermore, results in Table 1 revealed that about half (47.9 %) of the crop farmers and majority (75.8 %) of the pastoralists had no formal education. Also, while 10.0% and 4.3% of the crop farmers had secondary and tertiary education, respectively, only very few (0.71%) of the pastoralists had secondary school education. The results indicate that arable crop farmers were far more educated than their pastoralist counterparts. This might have implication on conflict occurrence because education may tend to improve civility of an individual and enhance their resolve to settling disagreement without resorting to use of arms. More than half (55.7 %) of the crop farmers had 1-3 children attending primary school. Furthermore, majority (73.6 %) of the farmers had 1-3 children in tertiary institutions. Less than half (28.0%) and 10.0% of the pastoralists had between 1-3 children attending primary and tertiary educational institutions, respectively. The children will be in a better position by virtue of their level of educational attainment to assist their parents to access relevant information for agricultural and livestock production and decision making. This agreed with the findings of Nweke (1982) that education provides a favourable atmosphere for awareness of innovations.

The average farm size of the pastoralists and crop farmers were 1.7 ha and 2.9ha, respectively. Although, crop farmers had larger farm size, mean value obtained for pastoralists too is appreciably more over the national average farm size of 0.57 ha as reported by Ingawa (2005). It may not be out of place to assume that increasing involvement of the pastoralists in land cultivation for crop production invariably necessitating acquisition of more land could aggravate unhealthy rivalry between the two groups over land use. This agreed with Tamuno (1991) who reported that the incidence of conflict in Nigeria was due to rival interests of nomads and sedentary farmers. The crop farmers and the pastoralists had spent an average of 40.1 and 39.7 years in crop production respectively. Involvement of the Fulani pastoralists in crop production and the tendency to live a sedentary life could be worrisome to the native farmers who may be entertaining the fear that the Fulanis are taking over their land, a situation that may degenerate into crisis. The average herd size was 39 cattle. It could



be inferred that the necessity for the pastoralists to be on the move in search of pasture and water especially in the dry season might be the basis for keeping small herd sizes in order to avoid excessive

overheads particularly on feeding animals during the dry period.

Table 1: Socioeconomic characteristics of arable crop farmers and pastoralists

Variable	Farmers		Pastoralist	
	F	%	F	%
Age				
20-40	33	23.6	35	25.0
41-60	43	30.7	72	51.4
61-80	51	36.4	31	22.1
Above 81	13	9.3	2	1.4
Mean	55.45		49.9	
Sex				
Male	132	94.3	137	97.9
Female	8	5.7	3	2.11
Marital status				
Single	11	7.9	10	7.1
Divorced	1	0.7	0	0.0
Widowed	7	5.0	0	0.0
Married	121	86.4	130	92.9
Educational level				
No formal education	67	47.9	106	75.7
Adult education	21	15.0	3	2.3
Quranic education	13	9.3	24	17.1
Primary Education	19	13.5	6	4.3
Secondary Education	14	10	1	0.7
Tertiary Education	6	4.3	0	0.0
Farm size in Ha				
<1	28	20.0	44	31.4
1-3	60	42.9	91	65.0
4-6	52	37.1	5	3.57
Average	2.9		1.7	
Years spent in crop production				
1-20	19	13.6	18	12.9
21-40	46	32.9	55	39.3
41-60	60	42.9	48	34.3
61-80	15	10.7	19	13.6
Average	40.1		39.8	

Source: Field survey (2013)

Livelihood strategies of crop farmers and pastoralists

Results in Table 2 summarize the enterprises undertaken by the respondents as their means of livelihood. The entire crop farmers (100%) were engaged in arable crop farming, while 12.1% amongst them were also engaged in livestock production. Also, while 57.9% and 32.9% amongst them were involved in trading and commercial transportation business, respectively; 12.9%, 22.9% and 23.6% were employed as farm labour, security guards and transportation business (Okada), respectively. In the same vein, while all pastoral farmers were engaged in livestock rearing, results also indicated that majority (75.5%) of them were as well involved in crop farming. Also,

14.2%, 15.0% and 9.2% of the pastoralists engaged in trading, commercial transportation and farm labour respectively. It could be inferred from the above that both pastoral and crop farmers engaged in various activities as a means of livelihood. This is in conformity with the findings of Yusuf and Adisa (2012) who reported that, in order to make ends meet, rural inhabitants often engage in a combination or mix of livelihood activities as strategy for survival, with agriculture as primary occupation. The results also reflect the preponderance of pastoralists engaging in crop farming, with over 70.0% of them in this category. This implies that pastoralists would need more land for their farming activities, thus explaining the rivalry likely to ensue between them and the

indigenous crop farmers due to competition for farmland. This, agreeing with Tamuno (1991), might as well have implication for occurrence of conflict if the lands are not properly acquired from crop farmers who are the original native land owners.

Enterprises of the pastoralists and the crop farmers

Results in Table 2 further show that 52.9% and 58.6% of crop farmers cultivated maize and Guinea corn, respectively. However, majority (77.1 %) of them grew cassava. A small proportion (10.0%) of this group planted cashew. However, 97.1% and 90.0% of the pastoralists planted Guinea corn and maize respectively. In addition, about half

(45.7 %) of them planted yam while more than half (57.9 %) planted cassava. Furthermore 10.0% of the pastoralists also planted cashew, suggesting that the pastoralists' involvement in tree crop production is on the increase. The planting of tree crop (cashew) is an indication that the pastoralists were opting out of pastoralism for sedentary life. It is obvious that the pastoralists are venturing into arable and tree crop farming to feed their family and to generate income. It is not out of place to assume that crop farmers might foresee a future strong competition between them and pastoralists on the use of available land for farming, which may be advanced as part of constant disagreement between the two groups over use of land.

Table 2: Livelihood strategies of crop and pastoral farmers

Variable	Farmers		Pastoralist	
	F	%	F	%
Livelihood strategies				
Crop production	140	100.0	106	75.5
Livestock production	17	12.1	140	100.0
Trading	81	57.9	20	14.2
Commercial transportation	46	32.9	21	15.0
Farm labour	18	12.9	13	9.2
Security guard	32	22.2	11	7.9
Okada riding	33	23.6	19	13.6
Crop enterprise of respondents				
Rice	52	37.1	0	0.0
Maize	74	52.9	126	90.0
Yam	67	47.9	64	45.7
Guinea corn	82	58.6	136	97.1
Cassava	108	77.1	81	57.9
Melon	55	39.3	110	78.6
Cowpea	4	2.9	27	10.3
Cashew	14	10.0	14	10.0

Source: Field survey (2013)

Pastoral farmers' reasons for livelihood diversification

Results in Table 3 show that the most prominent reason pastoralists diversified their livelihood activities by venturing into other enterprises was because of diminishing land for cattle grazing. This recorded maximum weighted mean score of 5. Followed this include 'poor quality of existing pasture' (WMS = 4.6), and 'insufficiency of income from cattle rearing to meet family requirements' (WMS = 4.39). These necessitated their venturing into arable and tree crop production for food and income. It could be inferred that the planting of tree crops by the pastoralists might be suggestive to their counterparts that the pastoralists intend to stay permanently on their land. This might be partly responsible for the constant hostilities between the two groups.

Changing settlement pattern among pastoralists

Results in Table 4 show that few (31.4%) of the pastoralists migrated on annual basis for the feeding and watering of their cattle while fewer proportions (12.1% and 7.8%) migrated bi-annually and every three years, respectively. However, larger proportion (40.7%) of the pastoralists lived permanently in their location within proximity to crop farmers' residential areas. Results further show that close to half (43.6 %) of the pastoralists were located or settled within 6-10 kilometers radius to the nearest town or village. It is not out of place to assume that crops of farmers whose farms are located nearby would be predisposed to consumption by herders' cattle, particularly when pasture is in scarce supply.

**Table 3: Pastoralists reasons for livelihood diversification**

Variable	SA	A	U	D	SD	WMS
Land for cattle grazing diminishing	140 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5
Pasture quality becoming low	115 (82.1)	14 (10.0)	4 (2.9)	4 (2.9)	3 (2.4)	4.6
Income from cattle herding not adequate to meet family's needs	91 (65.0)	33 (23.6)	2 (1.4)	8 (5.7)	6 (4.3)	4.3

Source: Field survey (2013)

The pastoralists ranked inadequate water (WMS = 3.9), inadequate pasture (3.6) and pressure on land for other use (3.6) as the three prominent reasons for migration. Communal dispute on land (3.5) and attack from thieves (3.3) ranked 4th and 5th, respectively, while unfriendliness of natives/local residents (2.83) ranked lowest. It is obvious that the continuous diminishing of land for

farming and the pastoralists' decision to stay permanently in their location could be responsible for the frequent clash between the farmers and pastoralists over land use. This agreed with the findings of Brenjo (2007) and Al-Naim (2004) whose studies identified water availability as main causes of conflict between sedentary Arabs and nomads.

Table 4a: Frequency of migration amongst pastoralists

Frequency of migration	Frequency	Percentage
Annually	44	31.4
Bi-annually	17	12.1
Every three years	11	7.8
Permanently migrated	57	40.7
No response	11	7.8

Table 4b: Reason of migration amongst pastoralists

Reasons for migration	SA	A	U	D	SD	WMS
Inadequate water for cattle	65 (46.4)	32 (22.9)	17 (12.1)	15 (10.7)	11 (7.9)	3.91
Inadequate pasture availability	33 (23.6)	65 (46.4)	10 (7.1)	18 (12.1)	14 (10.0)	3.61
Pressure on land for other purposes	87 (62.2)	43 (30.7)	5 (3.6)	2 (1.4)	3 (2.1)	3.60
Attack from thieves	33 (23.6)	72 (51.4)	11 (7.8)	16 (11.4)	10 (7.1)	3.33
Natives are friendly	64 (45.7)	3 (2.1)	4 (2.9)	25 (17.9)	2 (1.4)	2.83

Source: Field survey (2013)

Types of building occupied by pastoralists' in their settlement

Results show that about 49.3%, 26.4%, 16.4% and 7.9% of the pastoralists lived in a thatched building, mud walled with thatched houses, mud house and block house with corrugated iron sheets, respectively. The erection of permanent structure as reflected in construction of block houses by the pastoralists is suggestive that they have opted for a sedentary life. This also influenced their livelihood strategy and hence their participation in crop production and other enterprises. It may be inferred that pastoralists with tendency to live a sedentary life were those with permanent building structure (mud or block walled houses) and may be less disposed to conflict tendencies while those with thatched building have nothing at stake and could easily run away with

their cattle whenever farms were destroyed by their animals.

These results reflect changing settlement pattern amongst pastoralists who now opt for sedentary life aiming for guaranteed access to social amenities and other requisite resources. In pursuance of this course, they diversified into arable and tree crop production, trading and transportation business, as earlier reported.

Identification of sustainable prevention strategies to managing conflict amongst arable and pastoral farmers

Transformational/mutual negotiation approach ranked most acceptable method (4.2) to managing conflict situation by pastoralists. Ranked 2nd and 3rd were use of police force (2.1), resolution by court (2.0). Ranked lowest was settling conflict through Kwara State Grazing Reserve

(Amendment) Act of 2004, which ranked 1.8. The inherent advantages of the transformation approach led to its preference by the pastoralists. Similarly, Transformation/mutual negotiation approach to conflict resolution was ranked highest (4.2) by crop farmers. However, the crop farmers seemed to have more confidence in Kwara State Grazing Reserve (Amendment) Act (2004) as it ranked second with WMS of 2.6. Use of Police Force (2.0) and settlement by court resolution (1.9) ranked 3rd and 4th, respectively. The results obviously imply both farmers and the pastoralists preferred and accepted transformational approach which involved mutual negotiation for conflict resolution. The approach must possess inherent characteristics which make it more acceptable to both groups.

Results of hypotheses testing

For hypothesis one, results of one-way ANOVA reveal significant difference between farm size ($F = 9.33$; $p < 0.01$) of crop and pastoral farmers and their educational level ($F = 8.93$; $p < 0.01$). With crop farmers having higher mean value, difference in farm size between the two groups indicates that they significantly cultivate large farm acreage than their pastoralist counterpart. This submission notwithstanding, mean value of 1.7 ha

recorded by pastoral farmers was high and far above national minimum farm acreage of 0.57 ha reported by Ingawa (2005). This, as earlier posited, could ignite conflict between the two groups. As for difference in educational level, higher mean value in deference to crop farmers indicates they are the more educated of the two groups. This, as earlier posited, might have implication on conflict occurrence and resolution. Therefore, measures to enhance educational level of pastoral farmers would not only be sustainably helpful in conflict resolution, but could also avert conflict emergence altogether.

With respect to hypothesis two, results of Pearson Product Moment Correlation (PPMC) reveal a very strong significant relationship between pastoral farmers' livelihood diversification ($r = 0.74$; $p < 0.00$) and causes of conflict, given high r -value. This indicates that the more pastoral farmers increasingly diversify their livelihood strategies from mainstream livestock herding, the higher the tendency for conflict to arise. This submission affirms our earlier proposition suggesting link between livelihood diversification among pastoralist and conflict occurrence with crop farmers.

Table 5: Results of one-way ANOVA showing difference between mean of selected variable

Variable	Categories	Mean	F-value	p-value	Decision
Farm size	Pastoralist	1.7	9.33	0.003	Significant
	Crop farmer	2.9			
Educational Level	Pastoralist	2.4	8.931	0.003	Significant
	Crop farmer	3.7			
Years spent in farming	Pastoralist	38.9	1.136	0.288	Not significant
	Crop farmer	36.1			

Source: Field survey (2013)

For hypothesis three, results of PPMC reveal significant relationship between pastoral farmers' number of years in settlement and cause of conflict ($r = 0.29$; $p < 0.01$), albeit weak, given the low r -value obtained. The result nonetheless, lends

credence to the fact that continuous stay of pastoralist, therefore consequently assuming sedentary life style, could ignite conflict between the two groups.

Table 6: Results of correlation analysis showing relation between selected variables and cause of conflict

Variable	r-value	p-value	Decision
Pastoralist Livelihood Diversification	0.74	0.000	Significant
Number of years in settlement	0.278	0.000	Significant

Source: Field survey (2013)

CONCLUSION AND RECOMMENDATIONS

Based on major findings of the study, the following conclusions could be drawn:

1. Crop farmers and the pastoralists were old individuals, aged 50 years and above on the average, indicating low youth involvement in agriculture amongst both groups. Arable crop

farmers and their children were more educated than their pastoralist counterparts. Crop farmers had larger farm size than their pastoralist counterpart; however, pastoralists' average farm size was appreciably high far more above national average.



2. Both pastoral and crop farmers engaged in various activities as a means of livelihood, with preponderance of pastoralists engaging in crop farming, cultivating both arable and tree crops. Conversely, far less indigenous crop farmers engaged in livestock herding.
3. Pastoralist livelihood diversifications were prominently due to diminishing land for cattle grazing, poor quality of existing pasture, and insufficiency of income from cattle rearing to meet family needs.
4. Pastoral farmers assumed more sedentary lifestyle as reflected in active engagement in arable and tree crop production, erection of permanent residential structure, infrequent out migration, and settling within closer proximity to indigenous crop farmers' residence.
5. Tendencies for conflict arising had correlation with increasing livelihood diversification among pastoralists. Long number of year of settlement of pastoralists around and within crop farmers' vicinity similarly had correlation with conflict occurring.
6. Both the indigenous farmers and the pastoralists preferred and accepted transformational approach which involved mutual negotiation for conflict resolution.

Sequel to the findings and conclusions drawn, the following recommendations were proffered:

1. Measures to enhance educational level of pastoral farmers should be pursued through universities adult literacy education programmes. Also, attendance in schools by the children of pastoralists should be monitored and pursued by the state and local governments.
2. Benefits of extension services should be extended to the pastoralists in the area of animal husbandry practices so that pastoralists can improve the range land and conserve forage for dry season. This will go a long way to eliminating long distance travelling to graze cattle and the destruction of crop farmers' farms.
3. Herders should be exposed to existing grazing routes and the punishment attached to violation of the routes. Also, the existing Grazing Reserves should be developed. This is to ensure that the pastoralists are confined within the reserves and that farmers should stop farming along grazing routes.
4. Mutual negotiation should be adopted for settling conflict when the need arises as the respondents have no confidence in the Court and police. Also, government should create awareness on the Kwara State Grazing Reserve (Amendment) Law, 2004. The content of the

law will be supportive to mutual negotiation/Transformation approach if implemented.

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MANAGERIAL INFORMATION NEEDS OF MEMBERS OF NATIONAL COTTON ASSOCIATION OF NIGERIA IN OGUN STATE, NIGERIA

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ABSTRACT

This study investigated managerial information needs of members of National Cotton Association of Nigeria (NACOTTAN) in Ogun state. The study was carried out in three selected zones with NACOTTAN presence namely; Ijaka-oke, Imala and Iwoye-ketu. A sample size of 88 respondents was used for the study. Data was collected through questionnaires and was analysed using descriptive statistics. Results reveal that the mean age of respondents was 50.5 years, while 51.2% of the respondents were above 50 years and 32.3% had no formal education. The major constraints affecting the association were insincerity of executives on accountability (\bar{X} = 3.73), unstable market price of cotton (\bar{X} = 3.66) and low level of technology (\bar{X} = 3.50). Farmers' educational status was significantly associated with managerial information needs ($\chi^2=13.14$, $p=0.04$) while, significant difference existed in respondents' managerial information needs across selected zones ($F=11.78$, $P=0.01$). Study concluded that NACOTTAN members had high managerial information needs. Therefore the association members need to improve on their activities, for the association's managerial information needs to be met.

Keywords: National Cotton Association of Nigeria, Managerial information needs,

INTRODUCTION

Farmers' organisation refers to a collective entity of farmers in a village or in contiguous villages who have come together with common goals for economic benefits related to agricultural activities (Couturier, *et al.* 2006). Farmer organisations are used as a tool to promote rural development and to ensure food security in a way that complements state development strategies and market approaches (Nou, 2006).

The main reason behind the establishment of farmers' organisations is to provide effective and collective support services to smallholders, thus surmounting the major obstacles to productivity improvement, and to enhance self-help and collective power to regulate markets. This implies that in theory farmers' organisations should be able to strengthen farmers' bargaining power with external buyers and reduce transaction costs, potentially leading to increased incomes and food security and hence sustained agricultural growth and poverty alleviation (Barham and Chitemi 2008; Bachke 2010).

FOs have diverse services and functions including access to production facilities and equipment, technical information and advice, inputs (seeds, fertilisers, feed, pesticides), markets (transport, trading, market information), financial means, provision of social services (health insurance, literacy) and natural resource management (Chirwa *et al.*, 2005).

Farmers' organisation can help by buying crop produce from farmers at a reasonable price and then selling it to private traders, or sometimes FOs can facilitate private traders to come to communities by encouraging members to grow

more produce to sell in bulk (Rweyemamu, 2003; Barham *et al.*, 2008).

One important aspect contributing to an organisation's success and sustainability is the trust between members and the management committee (Hansen *et al.* 2002). However, trust takes time and effort to build, and is easily broken (Pomeroy *et al.* 2001; Pretty 2003). Farmers' trust grows as they achieve successful collaboration with leaders. Trust requires good communication and open dialogue between leaders and members to clarify the needs and expectations of farmers. Furthermore, trust is built when leaders share decision making with members, respect concerns, needs and knowledge, and are transparent in their management (Tewari and Khanna 2005). Trust among Farmers' organisations members was also found to be a factor in improving collective marketing performance (Barham and Chitemi, 2008).

Information is a critical resource in the operation and management of organisations. Timely availability of relevant information is vital for effective performance of managerial functions such as planning, organising, leading, and control. An information system in an organisation is like the nervous system in the human body: it is the link that connects all the organisation's components together and provides for better operation and survival in a competitive environment. Indeed, today's organisations run on information. Therefore, Devadson and Lingam (1996) stated that, information needs represent gaps in the current knowledge of the user. In day to day work; lack of self-sufficiency constitutes an information need. Information needs are thus a factor that may drive cotton farmers to seek information to fill the gaps in their information and knowledge. Farmers'

organisations require different types of information for day to day agricultural activities. Moreover, the level of information needs may differ between people, or a group of people, depending on a range of factors, such as age, level of education, socioeconomic status, range of information sources available, level of awareness, and ease of use of information (Kaniki, 2003). The selection of an information source depends on a number of factors; including level of income, farm size, age, geographical location, level of education (Riesenberg, and Gor, 1999). Information opens windows of giving out experiences, best practices, sources of financial aids and new markets.

Before the era of liberalization, cooperatives thrived as the main farmers' organisations in Africa. However, most cooperatives could not compete in open-market economies and are today weak, dormant or dead (World Bank, 1995). With the decline of cooperatives and other farmers' organisations, many farmers lack a collective voice. They cannot access affordable production inputs such as finance, technology, land and are locked out of markets. As a result, a large number of small-scale farmers live in poverty and cannot influence policies that affect their livelihoods. Other challenges facing farmers' organisations are the difficulty of registering with local authorities, poor relations with some support agencies, weak institutional capacity and low capacity of members, low participation by women farmers, and poor accounting and general management skills. The greater the challenges facing farmers' organisations, the greater the need for external support from government and development agencies, as experienced in many developing countries. Without external support many farmers' organisations are unlikely to survive, limiting their potential impact on livelihood improvement and food security (Bingen *et al.* 2003; Chirwa *et al.* 2005). Farmers' organisations in Nigeria are also faced with many challenges ranging from inadequate information on access to market, lack of trust between leaders and member of organisations, inadequate access to production inputs, financial assistance and so on. NACOTTAN is also faced with some of these challenges; hence it become necessary to ascertain managerial information needs of NACOTTAN to overcome these challenges.

This study in this light investigated the managerial information needs of National Cotton Association (NACOTTAN) members in Ogun State, Nigeria.

The general objective of this study was to investigate the Managerial Information Needs of National Cotton Association of Nigeria (NACOTTAN) members in Ogun State, Nigeria.

The specific objectives of this study were as follows:

1. To describe the personal characteristics of National Cotton Association of Nigeria (NACOTTAN) members in Ogun State;
2. To ascertain information needs of National Cotton Association of Nigeria (NACOTTAN) members in Ogun state; and
3. To determine the constraints affecting the organisation managements (national cotton association of Nigeria (NACOTTAN) in Ogun state

The hypotheses of this study were stated in null form as follows:

H₀₁: There is no significant association between respondents' personal characteristics and their managerial information needs.

H₀₂: There is no significant difference in respondents' managerial information needs across selected zones

METHODOLOGY

This study was conducted in Ogun State Nigeria. The population of the State is 3,751,140 (2006 Census). However, among the occupation of the people in the study area is Farming, mostly produce crops like cassava, cowpea, maize, millet, yam etc and also produce cash crop like cotton, cocoa, coconut, oil palm. The vegetation of the state is derived savannah with annual rainfall of between 1,000 to 1,250 m. The wet season of the area begins in February or early March and stops around mid-October. Dry season begins in November and lasts for about 3 to months.

The population of the study was all members of National Cotton Association of Nigeria (NACOTTAN), Ogun state.

Data for the study was obtained using multistage sampling procedure to select farmers from National Cotton Association of Nigeria (NACOTTAN) in Ogun state. Out of the four Local Governments Areas where NACOTTAN is registered in the State, three Local Governments Areas were selected using simple random sampling technique. These are Imeko-Afon, Yewa North and Abeokuta North. These Local Government have four, two and five zones, respectively. Out of these three Local Governments Areas, 20% of the zone in each Local Government was sampled. These are Ijaka-Oke from Yewa North having 50 members, Imala from Abeokuta North having 50 members and Iwoye-Ketu from Imeko-Afon having 70 members. Proportionate sampling was used to obtain the sample size for the study, 50% of respondents were sampled from the list of farmers in Ijaka-oke and Imala zones while 54% were sampled from Iwoye- ketu zone making a total of 88 respondents. The managerial information needs was measured using five Likert type rating scale of



not at all = 1, very low = 2, low = 3, high = 4 and very high = 5. The scores for managerial information need of members in the association ranges between 1 and 5. Hence the higher the mean score the higher the extent to which the association requires information in the management technique.

The study data was analyzed using Pearsons Product Moment Correlation (PPMC) and Chi square.

RESULTS AND DISCUSSION

Respondents' personal characteristics

Table 1 shows the personal characteristics of the respondents. It shows that 51.2% of the respondents were above 50 years while very few (18.1%) were between ages 21 and 40 years. The mean age of respondents was 50.5 years. This implies that NACOTTAN members or cotton farmers are getting older and there is need for replacement by younger ones in the association or organisation. The youths need to be encouraged to be members of the association in order for the management of the association to be effective and also for the cotton production to be sustained in the state. Adeogun *et al.* (2010) opine that, the younger farmers would most likely be willing to spend more time to obtain information on improved technologies compared to the old farmers.

The Table also shows that 89.8% were male and 10.2% were female. This connotes that males are about eight times the population of female in the association. The higher percentage of male to female could be as a result of having more male in cotton production than female because cotton production requires intensive capital and hard labour. This is in line with Adebayo *et al.* (2002) who reported that male are actively involved in farming activities than female.

On the educational level of the respondents, 33.0% had no education, 35.2% attended primary school, (23.9%) attended secondary school while (8.0%) attained tertiary education level. This shows that the educational level of the respondents was low. This might affect the management of the association because well-educated farmers can easily access information on organisational management from different sources, and can be able to create knowledge out of those sources. Dule and Aina, (1990) opined that the level of education affects information accessibility, comprehension and adoption of new agricultural innovations and practices.

Table 1 Frequency distribution showing the personal characteristics of respondents (n=88)

	Variables	Frequencies	Percentages
Age (Years)	21-30	1	1.1
	31-40	15	17.0
	41-50	27	30.7
	51-60	32	36.4
	61-70	10	11.4
	71-80	8	3.4
Sex	Male	79	89.2
	Female	9	10.2
Educational level	None	29	33.0
	Primary	31	35.2
	Secondary	21	23.9
	Tertiary	7	8.0
Marital Status	Married	74	84.1
	Widowed	10	11.4
	Divorced	4	4.5
Years Registered	2005-2010	65	71.6
	2011-2015	23	28.4
Regularity of Attendance in Meetings	Regularly	68	77.3
	Occasionally	20	22.7

Source: Field survey, 2015

Many (84.0%) of the association's members were married. 11.4% were widowed and 4.5% were divorced. This implies that majority of the respondents are in marital association. This is similar to the result obtained by Adeogun *et al.*

(2010) who reported that majority of cocoa farmers were married in Nigeria.

In addition, 71.6% of the respondents registered within 2006 – 2010 and 28.4% were registered within 2011 to 2015. This means that majority of the respondents interviewed had

registered with the association since its beginning in Ogun state in 2006. This also implies that majority of respondents have been in the association for long and are therefore conversant with the problems relating with the management of the association.

Finally, the Table shows how regularly the respondents attended meeting. Majority (77.3%) of attended meeting regularly while 22.7% did not attend meeting regularly Those that said they do not attend meeting regularly might not be pleased with the management styles of the association executive members. The non-attendance of meeting by sizable number of the association members could impact on the managerial information needs of the association members.

Respondents' Managerial Information Needs

The managerial information needs of the association were captured in Table 3. The Table showed the various areas and extent to which the association requires information in the management techniques.

The findings from Table 2 reveal that NACOTTAN members need high level of managerial information in all the areas investigated as all the mean values were greater than 4.00. The Table however shows that NACOTTAN members need higher level of information in the area of effective information dissemination from executives to members ($\bar{X} = 4.40$), sales and negotiation in collective marketing by group members ($\bar{X} = 4.36$) and awareness of innovation on management practice ($\bar{X} = 4.30$). This implies that NACOTTAN needs managerial information in all areas investigated and most especially on dissemination of information from executives to

members, sales and negotiation in collective marketing by group members and awareness of innovation on organisation management practices. Other areas of interest are act of farming record keeping, payment of monthly due by members, act of obeying the association's bye laws, and members' attendance of meeting and ability to learn from extension agents. Bingen *et al.* (2003) opine that without external support many farmers organisations are unlikely to survive and can limit their potential impact on livelihood improvement and food security. Prompt and regular payment of monthly due can serve as credit which can be loan to members to improve their farm productivity.

Also regular attendance of meetings will enable members to get updates on relevant information that will be needed to improve their productivity. Sales and negotiation in collective marketing by group members can help to generate income; this income can then be put back into the organisation by spending it on data generation, business planning, and administration (Shankariah and Shingi, 1997). Record keeping, both at farming and organisational level can aid effective monitoring and development of organisation. Effective dissemination of information from executive to members makes the organisation more governable and promotes unity which will make members to contribute meaningfully to decision making process and also promote collective marketing ability of its members. Finally, the findings in Table 2 shows that NACOTTAN members managerial needs in very high since all the managerial information needs sentences had their mean value higher than 4 and the mean value range for managerial information is 1-5.

Table 2: Frequency Distribution Showing Respondents' Managerial Information Needs Levels (n=88)

Managerial information needs	\bar{X}	S.D
Effective and timely information dissemination from executives to members	4.40	0.58
Sales and negotiation in collective marketing by group member	4.36	0.55
Awareness of innovation on management practices	4.30	0.55
Information on computer literacy to assist in data gathering and processing	4.27	0.67
Information required in association registration	4.25	0.55
Information on how to develop clear organisational goals and strategies	4.25	0.44
Participatory decision making process	4.25	0.57
Documentation of Relevant data to make decision by executives	4.23	0.47
Sources of farm inputs	4.19	0.48
Members ability to contribute on decision making process	4.19	0.60
Members attendance of meeting	4.18	0.56
Ability to learn from extension service	4.18	0.69
Act of farming Record Keeping	4.15	0.80
Little or no information flow from executive members to floor members on administrative issues	4.15	0.67
Abiding to association's bye laws	4.11	0.62



Payment of monthly due	4.08	0.49
Knowledge of record keeping to maintain a viable farmers' organisation	4.07	0.70

Source: Field survey, 2015

Constraints affecting Farmers' Organisational members

Table 3 shows the constraints facing respondents in the association (NACOTTAN) at different level of severity. From the mean values in Table 3, the severity of constraints of the association was shown, majority of the respondents revealed that there is very high level of insincerity of executives on accountability ($\bar{X} = 3.73$), unstable market price of cotton ($\bar{X} = 3.66$), low level of technology ($\bar{X} = 3.50$).

The mean values of all other constraints measured were above 3.00 ($\bar{X} = 3.00$) which implies that these constraints are severe except for conflict management among members ($\bar{X} = 2.91$) that has mean value less than 3.00, thus having the least severity of all constraints identified in the

association. This is in line with the work of Chirwa *et al.* (2005) who identified lack of basic literacy and business skills; and low accountability coupled with a tendency for the misuse of farmers' organisations resources by their leaders as challenges facing farmers' organisation. Other challenges identified by Chea (2010) were the difficulty of registering with local authorities, poor relations with some support agencies, weak institutional capacity and low capacity of members, and poor accounting and general management skills (Chea, 2010).

The findings above show that the association still has a long way to go in its way of doing things, for the association to mitigate the identified challenges that could make meeting managerial information needs a difficult task.

Table 3: Frequency distribution showing constraints facing respondents in the association (n=88)

Constraints	\bar{X}	SD
High level of insincerity of executives on accountability.	3.73	0.47
Unstable market price of cotton	3.66	0.52
Low level of technology	3.50	0.63
Non-involvement of members on decision making by the executives	3.44	0.56
Poor working relationship with some support agencies	3.41	0.56
Excess market supply and spoilage	3.33	0.47
Skills in relations to the executives performance	3.31	0.53
Lack of basic literacy and business skills.	3.27	0.54
Inadequate access to financial sources	3.27	0.56
Record keeping and proper administrative strategies.	3.17	0.44
Members reluctance to attend association meetings	3.08	0.68
Poor harmonious relationship among members.	3.05	0.76
Members unwillingness or failure to pay dues	3.01	0.65
Conflict management among members	2.91	0.62

Source: Field survey, 2015.

Testing of Hypotheses

Relationship between personal characteristics and managerial information needs.

Chi-square analysis showing the association between the personal characteristics of NACOTTAN members and their information needs.

Table 4 reveals that only the educational status ($\chi^2 = 13.14$, $p = 0.04$) was significantly

associated with the managerial information needs of NACOTTAN members in the study areas.

This implies that education levels will most likely influence members' information needs. This could imply that the more educated ones will require less information; this could also be attributed to their exposure, since more educated people are likely to be more exposed than the low literacy ones.

Table 4: Association between respondents' personal characteristics and managerial information needs

Personal Characteristics	versus	managerial information needs	χ^2 - Value	df	p-value	Decision
Age			21.07	5	0.78	NS
Sex			0.00	1	0.63	NS
Education			13.41	3	0.04	S
Marital status			4.57	2	0.10	NS

Personal Characteristics versus managerial information needs	χ^2 - Value	df	p-value	Decision
Occupation	2.83	2	0.24	NS
Experience	12.54	13	0.49	NS

Source: Field survey, 2015.

P-value is significant at 0.05 levels

Relationship between personal characteristics of respondents and identified constraints

The result as presented in Table 5 shows that the relationship between ages, years of experience and constraints facing the organisation members. The significant of the relationship was determined at 0.05 levels. The PPMC analysis shows that only respondents' age ($r = 0.21$, $p = 0.02$) was significantly related with the constraints facing NACOTTAN members in the zones sampled. This could imply that younger members are able to access opportunities that help them mitigate some of the identified constraints.

Table 5: Relationship between respondents' personal characteristics and identified constraints

Variables	r-value	p-value	Decision
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Table 6: Test of differences in managerial information needs across selected zones

Variables	F	p-value	Decision
Information need	11.78	0.02	S

Source: Field survey, 2015.

P-value is significant at 0.05 levels

CONCLUSION AND RECOMMENDATIONS

Based on this study, it can be concluded that NACOTTAN members were old with majority having low educational level. It can also be seen that they need high level of information on management of the organisation. Therefore the association members still have lot to do to ensure smooth running of the organisation, most especially in the area of sourcing managerial information to move the organisation forward.

The study however recommended the following:

- 1) The executives should ensure effective and timely information dissemination to member on issues relating to inflow and outflow of capital or inputs given to them by the government or support agencies.
- 2) Agencies providing assistance to FOs should concentrate on skill development of members in areas relating to sales and negotiation in collective marketing by group member. Arrangement can be put in place to buy their produce in bulk from them to boost their livelihood.
- 3) Training to improve members' awareness of innovations on management practices can be organised for FOs members

Age	0.15	0.02	S
Years of experience	0.07	0.78	NS

Source: Field survey, 2015.

P-value is significant at 0.05 levels

Difference in respondents' managerial information needs across selected LGAs.

There was a significant difference existed among the selected zones (Imala, Iwoye- ketu and Ijaka-oke) with respect to their managerial information needs. This implies that the area in which the zones needs information are different. This may be due to the fact that members in one zone attends meeting regularly and they are able to get relevant information that can be useful than others.

- 4) Capacity building on computer literacy to assist in data gathering, data processing and record keeping should be organised by government and non-governmental agencies to improve the FO performances.
- 5) The executive should also be democratic by allow the members to participate on decision making of the association.
- 6) The youths need encouragement to be members of the association in order for the management of the association to be effective and also for the cotton production to be sustained in the state.

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PARTICIPATION OF COMMUNITY LEADERS IN CONFLICT RESOLUTION AMONG CROP FARMERS AND FULANI HERDSMEN IN OYO STATE, NIGERIA

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ABSTRACT

The study investigated the participation of community leaders in conflict resolution and management among farmers and herdsman in Oyo state, Nigeria. Stratified and random sampling technique was used to select 180 community leaders from 25 communities in Oire Local Government Area of Oyo State. Data were collected through the use of structured interview schedule and Focus Group Discussions. The data collected were summarised and analysed using descriptive statistics (frequency, mean, standard deviation) and Pearson Product Moment Correlation respectively. Results show that competition over water (93.8%), land (94.4%), lack of grazing zones (77.2%), and aggressive nature of the parties involved (77.2%) were main causes of conflicts among respondents. Conflict resolution measures mainly adopted by the community leaders include dialogue with parties involved (84.4%), use of village committees (76.7%), negotiating settlement (67.2%), entering agreement and ensuring such agreement is implemented (71.1%) and use of law enforcement agencies (84.4%). Level of participation of community leaders in conflict resolution was however moderate. Major constraints to effective participation of community leaders in conflict resolution include lack of institutional support from government (mean=3.0), inadequate finance (mean=3.0), language barrier (mean=3.0) and evasive nature of the herdsman (mean=3.0). Years of schooling ($r=0.223$; $p\leq 0.05$) was found to be positively and significantly correlated with participation in conflict resolution. The study recommended the need for local leaders and the government to work together and take more proactive measure in reducing the current level of conflict in the conflict prone areas. It also suggested the need to broaden local leaders' knowledge base through provision of training in conflict handling.

Keywords: Local leaders, conflict resolution, participation, capacity building

INTRODUCTION

Conflict between Fulani herdsman and crop farmers in the country has become a topical issue that is being discussed on national dailies in recent time. This is because the country is at a critical period of economic recession and food insecurity, which necessitates the clamouring for diversification of the economy from over dependence on oil to agricultural production for its survival, as it had been in the past. However, recurrent conflict which has become rampant in virtually all the states of the federation with constant reports on clashes between crop farmers and Fulani herdsman poses a major setback. This situation, among other factors, is greatly contributing to the sector's inability to provide enough food for its ever-increasing population as farmers are quitting farming for the fear of being killed and the destruction of their farms and crops during such conflicts. It is also detrimental to social co-existence (Adisa and Adekunle, 2010; Fasona *et al*, 2013).

The resultant food crisis and insecurity is evident in the heavy presence of scavengers during ceremonial parties by both young and old to scout for food in a bid to fight hunger (Ojo, 2009). In the same vein, FAO (2003) remarks that Nigeria is currently struggling with the problem of food security and sustainable agriculture which is evident in its inability to feed its citizenry on a land mass that is about 80% arable. Also, high

importation of food into the country is another indicator of food insecurity and the situation if not checked portends a great danger to sustainable development. Deliberate and conscious efforts must be put in place at resolving the incessant conflict, so that socio economic activities can prosper in the affected areas.

Various conflicts that ensued between Fulani herdsman and farmers arose from the destruction of farmlands by herds of cattle. More often than not, conflicts according to Opakleke (2016), arise from opposing needs from both sides. Uhembe (2015) reported that crop farmers accused the pastoralists of destruction of their crops and contamination of community water points. In return, the pastoralists accuse the crop farmers of denying them access to grazing areas and occasionally rustling their cattle. The Fulani herdsman livelihood strategies had resulted in conflicts over the destruction of crops (Tenuche and Ifatimehin, 2009).

Adisa and Adekunle (2010) opined that conflict is detrimental to rural livelihoods, food security, and social co-existence. It also inhibits the process of wellbeing and development of people and the entire community. Where such conflict occurs, some people have to take charge of resolving it for peace to reign so as to guarantee the well-being of people and improvement of their communities. The prevailing situation over conflict and arson that arises as a result of the aggressive



and annihilating nature of the herders poses a great challenge to the farming community. The importance of providing resolution to farmers and herders conflicts in the country has been recognised because of the declining effect it has on food production. Usually when two parties are in conflict, there is the need for third party interference to cushion or resolve the differences responsible for their actions. Otherwise there may be no peace and this in turn will affect development of the people and community in such areas. This is why community leaders must intensify their effort in resolving conflict in their domain so as to ensure peace and development. Amidst the conscious effort that has been put in place, is the intervention of community leaders to resolve such conflict in areas where it occurs. Studies have shown that the resolution of such conflicts can be seen as an integral part of the function of community leaders (Ofuoku, 2009). Conflict resolution can be defined as the process of resolving a dispute or conflict by meeting at least some of each side's needs and addressing their interest. Community leaders can be effective in controlling the activities of nomadic pastoralist in their environment provided they are actively involved (Tonah, 2006). Activities of the community leaders and the recognition given to them by members of and settlers in the communities give them the opportunity to exercise control in decision making activities that promotes development and reduces conflicts in their community.

Conflict has become an age long affair and it has caused many deaths and destruction of farmland from different parts of the country, resulting into farmers quitting agricultural production in a bid to save their lives. It is currently a national affair that has received and is still receiving attention from all ramifications. Despite concerted efforts being given to it by all the stakeholders involved, the crises still persist all over the country as if nothing has been done to stop it. Community leaders are regarded as having the attributes to resolve crisis as they receive the bulk of the cases dealing with violence which might be political, occupational, domestic or antisocial behaviour. Yet it appears that they lack the power and knowledge to prevent and adequately respond to violence (Rukuni, *et al.* 2015). Against this backdrop, there is need to investigate and document participation of community leaders in conflict resolution among crop farmers and Fulani herdsmen.

This study examined the participation of community leaders in conflicts resolution among crop farmers and Fulani herdsmen in Oyo State, Nigeria. The specific objectives were to:

- i. examine the socioeconomic characteristics of community leaders in the study area;

- ii. identify the causes of conflict between crop farmers and Fulani herdsmen in the study area;
- iii. identify the measures taken by community leaders in conflict resolution between crop farmers and Fulani herdsmen
- iv. determine the participation of community leaders in conflict resolution between crop farmers and Fulani herdsmen; and
- v. identify the constraints to effective participation of community leaders' in conflicts resolution between crop farmers and Fulani herdsmen.

METHODOLOGY

The study was carried out in Oyo State, Nigeria. The State is located on the latitude 7,460N and longitude 3,560E in the southern part of Nigeria. The State covers an area of 28, 454 square kilometres. According to NPC (2006), Oyo state had a population of 5,591,585 people. The state shares borders with the Republic of Benin in the West, Kwara state in the north, Osun State in the east and Ogun state in the south. The climate of the state is tropical with distinct wet and dry seasons.

The study was carried out in Orire Local Government Area (LGA) of Oyo State, Nigeria. Farming is the major occupation of the people in the area. The selection of Orire LGA was due to the recurrent clashes between the Fulani herdsmen and crop farmers. Twenty-five communities were selected from the list of villages in the LGA using simple random sampling technique. From each of the selected communities, stratified sampling was used to isolate the community leaders from the rest of the population. Eight respondents were selected from each of the communities using simple random sampling technique. The total sample size was 200. However, only 180 were certified as containing enough information for analysis.

Data collected was collated and analysed using descriptive and inferential statistics. Simple frequency counts, percentages and mean were used to summarize the data while Pearson's Product Moment Correlation analysis was used to test the relationship between selected community leaders attributes and their participation in conflict resolution.

A participation index was used as dependent variable and was measured on a scale of 1-5 by requesting respondents to indicate their participation in thirteen conflict resolution strategies. This was measured on a 5 point Likert - type scale of 'never', 'little,' 'moderate', 'high' and 'very high' and scores of 1, 2, 3, 4, 5 were assigned respectively. Constraints to participation in conflict resolution were measured by requesting respondents to indicate the constraints experienced from a list of possible constraints and the severity was measured as major (3), minor (2) and not a

constraint (1). Weighted mean score was obtained for each of the constraint items which was used to rank the constraints in order of importance.

RESULTS AND DISCUSSION

Table 1 shows that more than half of the respondents (52.8 %) fell within the age range of 41-60 years. This implies that most of the respondents were active. Age is an important factor in leadership which could positively influence their participation in conflict resolution activities. Larger proportions of the respondents (80.6%) were male, while the remaining (19.4%) were female. The study signified that males are more involved in agricultural and peace making issues in the study area. Also, majority (80.6%) of the respondents were married (80.6%) with mean household size of 7 persons. The study thus suggested a general inclination towards relatively large households. This implies that conscious effort has to be put in place to ensure relative peace so that people can go about their daily activities and be able to cater for their large family size with adequate security.

However, 37.8% of the respondents had no formal education, while 29.0% only spent 1-6 years in school. Only 17.8% had spent more than 12 years in school. The implication is that educational attainment in the area of study is fairly low. Education however is likely to play a more positive role in conflict resolution since there tend to be less conflict with higher education (Makado *et al*, 2015). Village chiefs (47.2%) dominated those that made up the community leaders in the study area, followed by youth leaders (17.8%). Others that constituted the community leaders are Imams (6.1%), pastors (12.2%) and opinion leaders (16.7%). This is an indication that village chiefs, youths, and religious leaders all play pivotal roles in ensuring peace and development in their domain. Majority (74.4%) of the local leaders indicated that conflict occurred between 1-3 times in the last two years in their communities among crop farmers and herdsmen.

Table 1: Socioeconomic characteristics of respondents

Variables		Frequency	Percentage
Age	21-30	12	6.6
	31-40	37	20.6
	41-50	54	30.0
	51-60	41	22.8
	61 and above	36	20.0
Sex	Male	145	80.6
	Female	35	19.4
Marital status	Single	3	1.7
	Married	145	80.6
	Divorce	3	1.7
	Widow	29	16.1
Household size	1-3	25	13.9
	4-6	67	37.2
	7-9	40	22.2
	10 and above	48	26.7
Years of schooling	1-6	53	29.4
	7-12	27	16.0
	12 and above	32	17.8
	No formal education	68	37.8
Position of the leaders in their communities	Youth leader	32	17.8
	Opinion leader	30	16.7
	Village chief	85	47.2
	Imam	11	06.1
	Pastor	22	12.2
Number of times conflict occurred in the last 2 years	1-3	134	74.4
	4-6	46	25.6

Causes of conflict among crop farmers and Fulani herdsmen

The data in Table 2 shows that competition for land (93.8%), competition for water (94.4%) and destruction of farmland and crop damage (93.8%) were the main causes of conflict

between the crop farmers and Fulani herdsmen. Other causes of conflict identified by local leaders include lack of grazing zone (77.2%) and aggressive nature of parties involved (76.1%). It is evident from the findings that the major causes of conflict are struggle by the crop farmers and the



Fulani herdsmen over scarce resources in order to guarantee survival. Local leaders opined that the Fulani herdsmen were in the habit of moving away from locations of insufficient pasture and water to more favourable locations and this leads to overgrazing of fallow land, destruction of crops by cattle as well as pollution of water source. This supports the position of Gefu and Gills (1990), Tonah (2006) and Ofuoku (2009) who stated that the most frequent causes of conflicts between farmers and herders is the destruction of crops in

farming seasons and pre-harvest periods. According to views expressed during Focus Group Discussions:

'Herdsmen often disregard the local authority and go as far as killing and sexually harassing the women and youths on the fields' - A farmer from Onidoko.

'They are notorious and aggressive and can go to any extent to get what they want especially water and pasture for their animals' - A farmer from Tewure.

Table 2: Distribution of Respondents on causes of conflict among crop farmers and Fulani herdsmen

Causes*	Frequency	Percentage
Competition for water	169	93.8
Competition for land	170	94.4
Lack of grazing zone	139	77.2
Aggressive nature of parties involved	139	77.2
Destruction of farmland and damaging of crops	169	93.8

*Multiple responses

Source: Field survey, 2016

Measures adopted by community leaders in conflict resolution

Table 3 reveals that most of the community leaders adopted dialogue facilitation (84.4%), use of law enforcement agency (84.4%), use of village committee (76.7%), negotiating settlement (67.2%), fostering agreement (71.1%) as measures for conflict resolution among the conflicting parties.

Table 3: Distribution of respondents on measures adopted in conflict resolution

Adopted measures	Frequency	Percentage
Facilitation of dialogue	152	84.4
Use of village committee	138	76.7
Negotiating settlement	121	67.2
Fostering agreement	128	71.1
Use of law enforcement agency	152	84.4

*Multiple responses

*Source: Field survey, 2016

Table 4 shows the participation of community leaders in conflict resolution. Majority indicated that they participated in actions involving calling on government for intervention especially for a clear-cut policy on the issue and invitation of the parties involved to meetings separately (mean=5.0). The use of government in management of conflict supports findings of Adekunle and Adisa (2010) where farmers and herdsmen expressed their readiness to cooperate with government in managing conflict. Also, there was high participation of leaders in enquiry making on resolving the crisis from both sides (mean=4.98), joint meetings of the two parties (mean=4.98), involvement of law enforcement agents (4.98) and meeting with the leaders of the Fulani (mean=4.95). This is further illustrated by a comment during one of the FDGs

'The community leader tries to mediate between the two parties which is not effective most of the time as it only brings peace for a short period. The herdsmen retreat for some time and later come back' - A farmer from Oniyo.

There was however little participation of leaders in decisions regarding provision of palliative measures to aggrieved parties (mean=2.03). Local leaders also never participated in making move to create grazing zones (mean=1.00) and use of indigenous knowledge to resolve conflict (mean=1.00). The study revealed that majority (84.40%) of the respondents participated in conflict resolution strategies on a moderate level as 84.4% were in the moderate range of participation. There might be certain factors restraining their full participation in conflict resolution.

Table 4: Results of Participation index of community leaders' participation in conflict resolution

Participation in decisions on conflict resolution measures	Mean	Rank
Enquiry on causes and how to resolve the crisis from both sides.	4.98	2
Invitation of the two parties to meeting separately	5.00	1
Joint meeting of the two parties involved to facilitate dialogue	4.98	2
Creation of grazing zones in areas of conflict.	1.00	9
Involvement of law enforcement agents	4.98	2
Negotiate a settlement/Palliative measures to aggrieved parties	2.03	5
Sanction of defaulters	1.23	8
Provision of protective measures	1.41	6
Calling on government for a clear-cut policy on the issue	5.00	1
Formation of joint monitoring group.	1.33	7
Identification of Fulani herdsmen leaders	4.95	3
Outright ban of Fulani herdsmen	3.68	4
Use of indigenous knowledge to deal with the situation	1.00	9

Never participated = 1.00-1.99,
 Little participation=2.00-2.99,
 Moderate participation = 3.00-3.99,
 High participation = 4.00-4.99,
 Very high participation =5.00-5.99

Table 5: Distribution of respondents by level of participation

Level of Participation	Frequency	Percentage
Low (1-39.80)	3	1.60
Moderate (39.81-43.40)	152	84.40
High (43.40 and above)	25	14.00

Constraints to conflict resolution

The data in Table 6 indicates the constraints to effective local leaders' participation in conflict resolution among crop and Fulani herdsmen. The constraints were ranked according to their severity. Lack of institutional support by government, inadequate finance, evasive nature of the Fulani and language barrier constituted the main constraints to effective participation of the

respondents in the study area. Other constraints faced by the respondents were lack of adequate commitment and accountability, low level of respect for community leaders, lack of protective measure to counter hostile parties and declining influence of traditional rulers. The minor constraint was however lack of cooperation among crop farmers.

Table 6: Constraints to conflict resolution

Constraints*	Mean	Rank
Lack of institutional support by government	3.00	1
Lack of commitment and poor accountability on the part of community leaders	2.60	2
Inadequate finance	3.00	1
Evasive nature of the Fulani	3.00	1
Low level of respect for community leaders	2.60	2
Language barrier	3.00	1
Lack of protective measure to counter hostile parties	2.53	3
Declining influence of traditional rulers	2.40	4
Lack of cooperation among crop farmers	1.00	5

*Multiple responses

Field survey, 2016

Relationship between personal attributes and participation of community leaders

The results in Table 7 show that there was a significant relationship between years of

schooling and participation of community leaders in conflict resolution ($r=0.223$). Age also had negative but not significant relationship with participation ($r=-0.128$). The implication is that the higher the years of schooling, the higher the



willingness of local leaders to take charge of issues that affect their community for development and wellbeing of the locality. Education had significant positive relationship with level of participation of community leaders. Implicitly, the more educated a community leader is the higher the level of his

participation in conflict resolution in his community as education has a lot of influence on the alertness of people to rise up and find solutions to challenges in their community.

Table 7: Relationship between personal attributes of local leaders and their participation

Variable	r-value	p-value	Decision
Age	-0.128	0.08	NS
Household size	0.113	0.079	NS
Years of schooling	0.223*	0.018	S

*Significant at 0.05 level of significance

Source: Field survey, 2016

CONCLUSION AND RECOMMENDATIONS

The study has shown the relevance and participation of local leaders in farmers-herders conflict resolution. It also revealed that level of participation of community leaders in the study area was moderate. Major constraints to effective participation of community leaders include lack of institutional supports by government, lack of commitment and accountability, inadequate finance, invasive nature of Fulani herdsmen and injustice from law enforcement agency. Education and number of training local leaders attended on conflict handling have been found to have positive and significant relationship with their level of participation. Based on findings of this study, it is therefore concluded that much still need to be done in the area of study so as to ensure active and effective participation of community leaders in conflict resolution. Hence, the study recommends the need for local leaders and the government to work together and take more proactive measures in reducing the current level of conflict in the conflict prone areas. There is need for government at various levels (federal, state and local) to address the issue of adequate provision of grazing reserves to accommodate the interest of herdsmen who are always on the move to secure food and water for their herds.

Also, there is need to empower the leaders to be able to face the constraints to their participation. Since most local leaders get to position of leadership through hereditary and appointment, there is need to broaden their knowledge base through provision of training in conflict handling.

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PERCEIVED EFFECT OF MALARIA ON THE SUSTAINABLE AGRICULTURAL PRODUCTIVITY OF REGISTERED RURAL FARMERS IN OSUN STATE

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ABSTRACT

Malaria is a life-threatening disease caused by parasites (*Plasmodium protozoan*) transmitted through the bites of infected female Anopheles mosquitoes. The study examined the perceived effect of malaria on the sustainable agricultural productivity amongst rural farmers in Osun State. It also examined the relationship that exists between the respondents' knowledge levels on malaria and their perceived effect of malaria on agricultural productivity. A multi-stage sampling procedure was used to randomly select 129 registered farmers, and the data were analyzed frequency counts and percentages, while Chi-square and Pearson Product Moment Correlation (PPMC) were used to test the hypotheses. The results show that the majority of the respondents have a mean household size of 8.8 members. Land clearing and weeding are the major agricultural practices that open up breeding space for mosquitoes. Farmers' knowledge level on malaria is high. They have a favourable perception of the effect of malaria on sustainable agricultural productivity. A positive and significant relationship exists between knowledge levels of the farmers on malaria and perceived effect of malaria on sustainable agricultural productivity ($r = 0.308$; $p < 0.01$). Hence, malaria is being perceived as detrimental to health and is an unwanted source of disruption to sustainable agricultural productivity. The rural farmers should therefore aim at identifying and selecting culturally appropriate mosquito control techniques; as well as initiate actions aimed at controlling mosquito abundance in the spirit of self-reliance and self-determination.

Keywords: Malaria, perception, sustainability, agricultural productivity, Plasmodium

INTRODUCTION

Malaria is one of the most important public health problems in the world. It is the leading cause of death and disease in many developing countries (Centres for Disease Control and prevention CDC, 2016). Malaria is a life-threatening disease caused by parasites (*Plasmodium protozoan*) that are transmitted to people through the bites of infected female Anopheles mosquitoes, called 'malaria vectors'. Malaria is a mosquito-borne infectious disease of humans caused by eukaryotic protists of the genus *Plasmodium*. It is widespread in the tropical and subtropical regions because of the significant amount of rainfall, consistent high temperature, and high humidity, along with the stagnant waters in which their larvae mature, and this provides the mosquitoes the needed environment for continuous breeding (Prothero, 1999).

The global impact of malaria on human health, productivity, and general well-being is profound, and Africa has been particularly hard hit. According to the World Malaria Report 2015, there were 214 million cases of malaria globally in 2015 and over 438 000 malaria deaths (WHO, 2017). African governments spend more than 1% of their gross domestic product (GDP) to combat malaria and the estimated annual direct and indirect costs attributable to malaria in sub-Saharan Africa are in excess of US\$12 billion (Gallup and Sachs, 2001). Every year, there are more than 225 million cases of malaria, killing around 781,000 people each year, hence, 2.23% of death worldwide (WHO, 2010). In 2006, more than 90% of deaths from malaria occurred in the continent, where 45 of the

53 countries are endemic for the disease (WHO, 2008). Children under the age of 5 years and women (particularly pregnant women) in Africa are most vulnerable to malaria attacks. The potential impact of malaria for women engaged in agriculture, especially food production, can be substantial. This may be because women perform nearly all the tasks associated with subsistence food production in Africa. They account for about 70% of agricultural workers and 60%–80% of those producing food crops for household consumption and sale, and they also raise and market livestock (Todaro, 2010).

According to Lopez, *et al.*, (2001), malaria has major and multifaceted linkages with agriculture, both in a rural and peri-urban context. Agricultural environments provide conditions well suited for anopheline breeding, with clear, temporary water bodies coinciding with the time of crop cultivation, and human and animal hosts at flying distance. Clearing of land for agriculture opens up breeding habitats for heliophilic vectors, also, "informal" smallholder farming systems located near natural water sources, such as streams and rivers, open up vector breeding opportunities. In addition, agriculture generates income and, thus, influences living conditions, which can negatively affect the transmission and severity of disease. Malaria, in turn, impedes human workforce output and agricultural production, especially at times that agricultural activities peak (i.e. the time of irrigation or after rains). As pointed out by Hawks and Ruel, (2006), in agricultural communities, poor health reduces income; efficiency and productivity, further decreasing people's ability to address health

problems inhibit economic development. Malaria affects agricultural systems by affecting the health of the farm principal operators. It results in loss of work days or decreases workers capacity, decrease innovation ability and ability to explore diverse farming practices and by such makes farmers to capitalize on farm specific knowledge. Recent studies estimated the economic cost (both direct and opportunity cost) of a farmer becoming sick once to be N29, 225 as the farmer loses on the average 22 working days when incapacitated by one sickness or the other per time (Ugwu, 2006 and Ashagidigbi, 2004). Malaria seems to be the leading cases of workdays lost due to illness. Since the majority of the continent's population is rural, the effects of the disease on agriculture, health, and development are widespread. Poor, rural farmers may thus, have to pay quite a high cost for preventive measures and treatment of malaria infection. Therefore, this study aims at providing solutions to the following research questions:

1. What are the agricultural practices carried out by the respondents that pre-dispose them to malaria attack?
2. What are the respondents' knowledge levels on malaria?
3. How do the rural farmers perceive the effects of malaria on agricultural productivity?
4. Is there a significant relationship between the respondents' knowledge levels on malaria and their perceived effect of malaria on agricultural productivity?

METHODOLOGY

The study area is Osun State in the Southwestern geo-political zone of Nigeria. It was carved out of Oyo State in 27th August, 1991 with its capital located at Osogbo. The state is made up of 30 (LGAs) and one area council. It lies within latitudes 7.0 and 8.1N and longitudes 4.2 and 6.1E. Osun State has tropical vegetation that is made up of Rain forest in the south and a Guinea Savannah towards the south as well. The climate coupled with the fertile soil favours the cultivation of wide range of food and cash crops such as cassava, cocoa, and coffee as well as the growth of valuable trees.

Multistage sampling procedure was used to select the respondents for the study. Osun state is divided into three senatorial districts: Osun Central, Osun West and Osun East. One LGA each from the three senatorial districts of the state was randomly selected for the study. The selected (LGAs) were Boluwaduro in Osun Central Senatorial District, Egbedore in Osun West Senatorial District, and Atakumosa West in Osun East Senatorial District.

Boluwaduro LGA has 228 registered farmers, Egbedore LGA 122 registered farmers and Atakumosa LGA 130 registered farmers. Thirty percent of the registered farmers in each of the three LGAs were selected using systematic random sampling, resulting to a total of 144 respondents as the sample size. However, only 129 questionnaires were returned which represents 89.6% of the total respondents and were analyzed accordingly. Structured and systematically drawn questionnaires as well as interview schedules were used as instruments for data collection.

RESULTS AND DISCUSSION

Personal characteristics of respondents

The result in Table 1 shows that majority (58.9%) of the respondents' falls within the age range of 31-60 years. This implies that majority of the respondents are active economically, and are able to participate more in carrying out agricultural productive activities. The study also revealed that more men (64.3%) engage in on-farm agricultural activities than women (35.7%). This suggests that women are more involved in off-farm activities than their men counterparts. This agrees with FAO (2001) that women are more involved in off-farm activities than men, especially in the area of transportation of farm produce, fire wood fetching and processing of farm produce, feeding of household members and reproductive functions. The study also shows that majority of the respondents (32.6%) has secondary education and are therefore able to read and write. This can be said to have been the factor that influenced the respondents' average knowledge level about malaria, its prevention and treatment, which corroborates Fasoranti, (2006); Oladeebo, (2006); and Oluwatosin 2011; that farmers that are more educated are more likely to adopt progressive farming practices and new technologies that thus increase their overall efficiency. Majority (47.2%) of the farmers are involved in medium scale crop farming, ranging between 5 and 8 acres, which corroborates Ravallion *et al.*, (2007), that most of the farms are small holdings and Africa has approximately 33 million small farms (less than 2 hectares per farm), representing 80% of all farms in the region. Most of the farmlands are fragmented, that is, the farmlands are located at different places. The result also shows that majority (31.8%) of the rural farmers have a household size ranging between 4 and 6 members, which implies that an average farmer have a mean household size of 6 members that can assist in carrying out farming activities.

**Table 1: Personal characteristics of respondents**

Variables		Frequency	Percentages
Age (years)	<20-30	38	29.5
	31-60	76	58.9
	61-80	15	11.6
			Mean = 41.5
Sex	Male	83	64.3
	Female	46	34.7
Level of education	No formal education	35	27.1
	Primary education	33	25.6
	Secondary education	42	32.6
	Post-secondary education	19	14.7
			Mean = 3.0
Farm size	<4 acres	50	38.8
	5-8 acres	61	47.2
	9-12 acres	14	10.9
	>12 acres	4	3.1
			Mean = 8.8
Household size (Members)	1 – 3	12	9.3
	4-6	41	31.8
	7-9	39	30.2
	10-12	18	14.0
	Above 12	19	14.1

Source: Field Survey, 2012

Agricultural practices that predispose them to malaria

Table 2 shows the agricultural practices carried out by the respondents that predispose them to malaria attack. According to Lopez, *et al.*, (2001), malaria has major and multifaceted linkages with agriculture, both in a rural and peri-urban context. Agricultural environments provide conditions well suited for anopheles breeding, with clear, temporary water bodies coinciding with the time of crop cultivation, and human and animal hosts at flying distance. Clearing of land for agriculture opens up breeding habitats for heliophilic vectors, whereas "informal" smallholder farming systems located near natural water sources, such as streams and rivers, open up vector breeding opportunities and exposes farmers to malaria attack. Also, 60.5% of the respondents indicated that land clearing is a major activity that opens up breeding habitats for mosquitoes, 57.4% and 50.4%

says planting and ridging are activities that creates a breeding place for mosquitoes respectively; while 59.7% and 30.2% indicated weeding and sorting. Also, thirty-one percent and 50.4% of the respondents revealed that storage and harvesting may provide a suitable avenue for mosquito breeding respectively while 38% and 34.9% see fish farming and irrigation practices as agricultural practices that favors the breeding of mosquitoes and opens up the farmers to malaria infection. This study agree with the study conducted in the farming district of South Arcot, India, that mosquito breeding in the district was promoted by some agricultural practices (Vennila, 2002). Mouchet (1997) also said that the generally use of small and large dams for agricultural purposes is known to favour the breeding of mosquitoes in sub-Saharan Africa. Hence, some of this agricultural activities predisposes the rural farmers to mosquito bites and thus to malaria attack.

Table 2: The agricultural practices that predispose farmers to malaria

Agricultural practices	Frequency	Percentages
Land clearing	78	60.5
Planting	74	57.4
Ridging	65	50.4
Weeding	77	59.7
Irrigation	45	34.9
Harvesting	65	50.4
Sorting	39	30.2
Storage	40	31.0
Fish farming	49	38.0

Source: Field Survey, 2012

Respondents' knowledge on malaria

Table 3 shows respondents' knowledge about malaria. The Table reveals that on a general note, that their knowledge about malaria, its causes, method of treatment as well as the means of preventing its occurrence is high. This shows that 98.4% of the respondents agreed that mosquito causes malaria and 97.7% agreed that stagnant water serves as a suitable breeding site for mosquitoes. This confirms Prothero (1999) assertion that, malaria is widespread in tropical and subtropical regions because of the significant amount of rainfall, consistent high temperature, and high humidity, along with the stagnant waters in which their larvae mature, and this provide the mosquitoes the needed environment for continuous breeding. The table also revealed that 89.9% of the respondent agreed that children below the ages of 5years and pregnant are more likely to have malaria. This confirms a related survey by Net Mark (2001) in five districts of Uganda; it was noted that 82.5 percent of the respondents perceived that pregnant women were more vulnerable to malaria, while 97 percent were of the opinion that children below age 5 were more vulnerable to malaria. The respondents (95.3%) also indicated that high temperature, fever and

chills are symptoms of malaria respectively. Also, 93.8% and 90.7% of the respondents' agreed that malaria can be prevented by clearing the bushes around the houses, and by spraying insecticides respectively; while 90.7% agreed that insecticide treated nets (ITN) can be used to prevent malaria. Furthermore, 82.2% of the respondents agreed that some people are more susceptible to malaria attacks than others while 81.4% agreed that malaria can reduce agricultural productivity.

In addition, the respondents disagreed to the following negatively worded statements: Dirty environment does not aid mosquito breeding and predisposition to malaria (85.3%); stagnant water around the house cannot increase occurrence of malaria (85.3%); Malaria is not preventable (84.5%); No drugs can prevent malaria (93.0%); Door/window screen with nets cannot be used to prevent malaria (86.8%); Information on malaria prevention and control are not available to be accessed from media, health centres, etc.(73.6%); Malaria cannot kill (83.7%); Mosquitoes can cause other diseases like HIV/AIDS (73.6%);and 77.5% disagreed that Malaria cannot affect their agricultural productivity.

Table 3: Rural farmers' knowledge about malaria

Knowledge statements	Frequency	Percentage
Mosquito causes malaria	127	98.4
Stagnant water serve as a suitable breeding site for mosquitoes	126	97.7
Fever implies malaria infection	121	93.8
Dirty environment does not aid mosquito breeding and predisposition to malaria	110	85.3
Stagnant water around the house cannot increase occurrence of malaria	110	85.3
Children below the ages of 5years and pregnant women are more likely to have malaria	116	89.9
High temperature, fever and chills are symptoms of malaria	123	95.3
Malaria is not preventable	109	84.5
Malaria can be prevented by spraying insecticides	117	90.7
Malaria can be prevented by clearing the bushes around the houses	121	93.8
No drugs can prevent malaria	120	93.0
Door/window screen with nets cannot be used to prevent malaria	112	86.8
Insecticide treated bed net (ITN) can be used to prevent malaria	117	90.7
Information on malaria prevention and control are not available to be accessed from media, health centres, etc	95	73.6
Malaria cannot kill	108	83.7
Malaria can reduce agricultural productivity	105	81.4
Malaria can be transmitted	76	58.9
Some people are more susceptible to malaria attacks than others	106	82.2
The use of anti-malaria drugs does not have side effects	72	55.8
Malaria cannot affect agricultural productivity	100	77.5
Mosquitoes can cause other diseases like HIV/AIDS	95	73.6

Source: Field Survey, 2012

Some of the respondents' have misconception about some aspects of malaria. For instance, 93.8%

agreed that fever implies malaria, whereas, fever may be caused by other factors such as stress,



injuries, boils, etc. This agrees with Fawole and Onadeko (2001) that in most malaria endemic communities, especially in South-western Nigeria, fever is the most frequently mentioned sign or symptom of malaria. Also, 58.9% agreed that Malaria can be transmitted like HIV/AIDS through blood transfusion, through unprotected sexual relations, etc. This is not possible because

Respondents' perceived effect of malaria on agricultural productivity

The result of the analysis of respondents' perceived effect of malaria on agricultural productivity is shown in Table 4. Majority of the rural farmers strongly agreed that the profit margin of an healthy farmer will be more than that of a farmer infected with malaria during the farming period (69.8%); malaria could reduce agricultural productivity (62.0%); cutting of the bushes around the house reduces malaria and increases productivity (60.5%); malaria if not well treated can re-occur and reduce income (58.9%); malaria reduces the number of workdays on the farm (55.0%); constant visitation to the hospital for malaria treatment reduces agricultural productivity (54.3%); the yield of a farmer with an infected family member will be greatly reduced (54.3%); malaria can lead to the death of a loved one and hence eventually reduce productivity (53.5%); and that dwindling health status reduces productivity (50.4%). Similarly, 43.4% and 46.5% agreed that the cost of preventing malaria reduces farm profit and that malaria may lead to loss of personal assets respectively.

Furthermore, 51.9% strongly disagreed that large acres of land can be cultivated when a farmer is infected with malaria; 48.1% and 43.4% also strongly disagreed that malaria does not affect production and that the resources spent in treating malaria does not affect productivity respectively; while 41.9% strongly disagreed that malaria could increase the quality of a farmers' output.

according to Prothero (1999), Malaria is a life-threatening disease caused by parasites (*Plasmodium protozoan*) that are transmitted to people through the bites of infected female Anopheles mosquitoes, called 'malaria vectors'. Furthermore, some the respondents (55.8%) agreed that the use of anti-malaria drugs does not have side effects.

This agrees with the fact that malaria's effects on smallholders can be spiral. Taken ill at planting season, a farmer may not be able to cultivate as much land and engage in intensive farming practices. They may then plant less labour-intensive crops and change cropping patterns, perhaps raising crops with a lower return, and fewer of them. New techniques may be ignored because they require time and energy to learn, and the farmer may reduce inputs that require more energy or more money than the household has. The same may result if the farmer must take time off to care for his/her ill family members or if illness strikes at harvest time. Less land under cultivation, less effective methods, and a smaller harvest generate less income to pay for prevention and treatment. Farm households may also withdraw savings, sell productive assets, or borrow money to pay for treatments. Fewer improvements may be made to farms, further decreasing their productivity even when illness is not an issue.

Minority (9.3% and 5.4%) of the respondents respectively strongly agreed that malaria infection during on-farming season does not necessarily increase the cost of production; the resource spent in treating malaria does not affect productivity; and 3.1% also strongly agreed that malaria does not affect production, which disagrees with a recent United Nations report that observed that "a brief period of illness that delays planting or coincides with the harvest may result in catastrophic economic effects" (UN Millennium Project 2005).

Table 4: Respondents' perceived effect of malaria on agricultural productivity

Statements	SA	A	U	D	SD
Malaria could reduce agricultural productivity	62.0	30.2	4.7	3.1	0.0
Malaria infection during on-farming season does not necessarily increase the cost of production	9.3	24.0	9.3	30.2	27.1
The profit margin of an healthy farmer will be more than that of a farmer infected with malaria during the farming period	69.8	23.3	3.9	3.1	0.0
The yield of a farmer with an infected family member will be greatly reduced	54.3	31.0	7.0	5.4	2.3
Malaria can lead to hiring of more farm- hands	45.7	38.0	7.0	6.2	3.1
Malaria reduces the number of workdays on the farm	55.0	35.7	7.0	0.8	1.6
Cost of preventing malaria reduces farm profit	38.0	43.4	7.0	9.3	2.3
Malaria may lead to loss of personal assets	25.6	46.5	16.3	19.3	2.3
Malaria if not well treated can re-occur and reduce income	58.9	34.1	5.4	0.8	0.8

Statements	SA	A	U	D	SD
Constant visitation to the hospital for malaria treatment reduces agricultural productivity	54.3	27.9	8.5	7.0	2.3
Cutting of the bushes around the house reduces malaria and increases productivity	60.5	29.5	7.0	3.1	0.0
Malaria does not affect production	3.1	5.4	10.1	33.3	48.1
The resources spent in treating malaria does not affect productivity	5.4	7.0	8.5	35.7	43.4
Availability of money can help to prevent malaria incidence	48.1	33.3	10.1	5.4	3.1
Agricultural practices such as mulching, irrigation, sorting, etc. can increase mosquito breeding and reduce productivity	43.4	34.1	9.3	8.5	4.7
Dwindling health status reduces productivity	50.4	34.1	8.5	5.4	1.6
Malaria increases labour quality	12.4	5.4	9.3	31.0	41.9
Large acres of land can be cultivated when a farmer is infected with malaria	3.9	3.1	7.8	33.3	51.9
New farming techniques can be adopted by a farmer and his family when infected with malaria	4.7	20.9	14.7	23.3	36.4
Malaria could increase the quality of a farmers' output	6.2	8.5	7.0	36.4	41.9
Malaria can lead to the death of a loved one and hence eventually reduce productivity	53.5	27.9	7.8	4.7	6.2

Source: Field Survey, 2012.

Level of perception of the effect of malaria on their agricultural productivity

Table 5 revealed that majority (51.2%) of the respondents has favourable perception of the effect of malaria on their agricultural productivity, while 48.8% of them have unfavourable perception of the effect of malaria on their agricultural productivity. The result, even though revealed there

are more respondents that had favourable perception (i.e. they perceive that malaria attack has a detrimental effect on agricultural productivity) than others, it still suggests there is the need to intensify actions to improve how farmers perceive the effects of malaria on their agricultural productivity.

Table 5: Respondents level of perception of the effect of malaria on their agricultural productivity

Category of perception	Frequency	Percentage	Minimum	Maximum	Mean
Low / Unfavourable perception	63	48.8	62	105	87.16
High/Favourable perception	66	51.2			

Source: Field Survey, 2012

Relationship between respondents' knowledge levels on malaria and their perceived effect of malaria on agricultural productivity

The results of the Pearson correlation coefficient Respondents level of perception of the effect of malaria on their agricultural productivity. The respondents' knowledge levels on malaria is positively and significantly related to their perceived effect of malaria on agricultural productivity ($r = 0.308$; $p < 0.01$), therefore, the null hypothesis is rejected. This means that, the higher the respondents' knowledge about the causes, symptoms, methods of preventing and treating of malaria, as well as the resources they may lose if proper attention is not given to malaria infection, the higher their favourable perception of how

malaria will have on their agricultural productivity. The knowledge may be as a result of the high educational status of the respondents, their previous experiences when infected with malaria parasite, coupled with the experiences of their household members and their friends. This agreed with the baseline survey in five districts of Uganda carried out by Net Mark (2001) that the general awareness of malaria is high in most malaria-endemic areas of the world, it indicated 99 percent level of awareness among the people. A study by Kilian (2002) on knowledge of and behaviour toward malaria in three districts in Western Uganda also indicated significant level of knowledge about malaria.



Table 6: Pearson Product Moment Correlation analysis of the relationship between respondents' knowledge of malaria and their perceived effect of malaria on agricultural productivity

Variable	r-value	p-value	Remark	Decision
Knowledge	0.308	0.000	Significant	Reject Ho

Source: Field Survey, 2012

CONCLUSION AND RECOMMENDATION

This study concludes that the rural farmers in Osun state have favourable perception about the effect of malaria on their agricultural productivity, i.e. they perceive malaria as being detrimental to their health and as an unwanted source of disruption to their agricultural productivity. The knowledge level of malaria, its causes, symptoms, prevention and treatment is seen to be high as the respondent are aware of the regular symptoms they face when sick and are therefore able to combat it on time both through medical and/or herbal means. A lot of agricultural practices carried out by the rural farmers promote mosquito breeding; therefore, the rural farmers should aim at identifying and selecting culturally appropriate mosquito control techniques; and also try to initiate actions aimed at controlling mosquito abundance in the spirit of self-reliance and self-determination.

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PERCEPTION OF HUMAN TRAFFICKING VICTIMS ABOUT CHANGES IN THEIR HOUSEHOLDS' SOCIOECONOMIC STATUS IN SOUTHWESTERN NIGERIA

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ABSTRACT

Human trafficking has been described as “modern day slavery” whereby people are coerced or deceived through promises of good jobs and career opportunities to move out of their communities to ‘work’ outside the country or in cities. This study was carried out to investigate the socioeconomic implications of human trafficking on the wellbeing of affected households. Multi stage sampling technique was used to select 250 out of 926 victims of trafficking identified working as domestic servants, plantation workers, food vendors, shop keepers and other forms of menial jobs in the study area. More than half (55.2%) of the respondents were females and mostly single (82.8%). Majority (90.8%) of the respondents earned a monthly income of less than ₦5000 before trafficking, which is an indication of their low level of income and poverty situation. Average family size of respondents was seven, 42.8% of them had only primary education while 31.2% went through adult literacy programmes. More than half (52.0%) of the respondents had low perception of their contribution to household socioeconomic status. There was a significant relationship between respondents’ frequency of contact with households and change in household wellbeing ($r = 0.520$, $p = 0.000$). The result also shows a significant difference between Oyo, Ogun and Lagos states in perception of victims on change in the households’ socioeconomic status ($F=3.00$, $P<0.05$). The study concluded that perception of trafficking victims about change in their households’ socioeconomic status is low as a result of less frequent contact with households during the trafficking period.

Keywords: Human trafficking, socioeconomic status, trafficked victims

INTRODUCTION

According to the United Nations Palermo Protocol (2003); trafficking in human beings mean “the recruitment, transportation, transfer, harbouring or receipt of persons by means of the threat or use of force or other forms of coercion, abduction, deception, abuse of power a position of vulnerability and the giving or receiving of payments to achieve the consent of a person having control over another person for the purpose of exploitation”. It is important to note that a major difference between smuggling of persons and trafficking in human beings is that the latter includes an element of coercion, deception and exploitation.

Human trafficking is presently one of the biggest problems afflicting virtually every state and region in the world. Its magnitude and dimensions have continued to pose tremendous moral, social and economic challenges to the civil society. This is more so in third world countries where the impact of this illegal underling is most visible and most felt.

Nigeria is equally highly vulnerable to the activities of human traffickers. Like in all other states and regions, the statistics on the number of Nigerians involved, mostly as victims, vary widely. Nigeria is a source, transit and destination country for women and children trafficking for the purposes of forced labour and commercial sexual exploitation. Within Nigeria, women and girls are primarily trafficked for domestic servitude and sexual exploitation while boys are trafficking for

forced begging by religious teachers as well as forced labour in street vending, agriculture, mining, stone quarries and domestic servitude (USDS, 2008).

Various things motivate people in their decisions to move from their place of origin. Some people migrate so that they can provide better social, economic and educational opportunities for themselves or their families. Others move to escape from their families expectations particularly after arguments and conflicts, which may result in permanent separation (Thomas, 2004). Other individuals move for short periods to achieve individual goals such as saving money to build a house or start a business. Most rural migrants in Nigeria can be labelled as target migrants (Ekong, 2003). They move to other areas outside their native territories to make enough money to meet specific target after which they return home.

This study becomes important based on the fact that despite national and international efforts geared towards eradicating trafficking in persons, the scourge is still on the increase. The study is therefore designed to assess trafficked victims’ perception of their contribution to the improvement of their household socioeconomic status in a bid to understand continuous involvement of people in human trafficking.

The general objective of the study is to assess trafficked victims’ perception of change in their household socioeconomic status. The specific objectives are to:

- 1) identify the socioeconomic characteristics of trafficked victims in the study area,
- 2) determine the frequency of contact between victims and their households,
- 3) determine the perception of victims about the changes in the socioeconomic status of their households.

The following hypotheses were tested:

1. There is no significant relationship between trafficking victims' frequency of contact with households and change in their household wellbeing.
2. There is no significant difference in the perception of trafficking victims about change in their households' socioeconomic status across the three states.

METHODOLOGY

The study area for this research is all states in southwest Nigeria. These are; Oyo, Osun, Ogun, Ondo, Ekiti, and Lagos States. The southwest zone lies between latitudes 5°N and 9°N with an area of 114,271 square kilometres. The 2006 census put the population of the zone at 21,974,678 (National Population Commission, 2006).

Southwest Nigeria is predominantly an agrarian area with rainforest and derived savanna vegetation. Agriculture is the major source of livelihoods of the inhabitants of the zone. Common tree crops in the area include cocoa, oil palm and cashew while arable crops such as yam, cassava, maize and rice also thrive well in the zone.

The population for the study includes the victims of human trafficking identified in the study area working as house helps, shop keepers, labourers at construction sites and other menial jobs.

Multistage sampling technique was used to select 250 respondents for the study. The first stage is random selection of three states; Oyo, Ogun and Lagos out of the six states in southwestern Nigeria. The second stage is Snowball sampling technique to obtain a list of trafficked people working as house helps, shop keepers and labourers in Oyo, Ogun and Lagos states. The third stage is the random selection of 250 victims out of the nine hundred and twenty- six victims identified in the study area. Data for the study were obtained through the use of structured questionnaire and analysed using frequency counts, percentages, means, Pearson Product Moment Correlation (PPMC) and ANOVA methods.

RESULTS AND DISCUSSIONS

Socioeconomic characteristics of human trafficking victims:

Table 1 reveal that majority (67.2%) of the respondents were between ages 11-20years , 17.6%

were between ages 21-25years, 10.0% were between ages 5-10years while (0.8% were 31years and above. Mean age of respondents was 17years which is an indication that majority of the trafficked victims are young children. This result shows that victims of human trafficking are young people in their productive years that should be actively involved in agricultural and community development activities in their various communities. Thus human trafficking leads to depletion of farm labour which can result in low agricultural production. This has a negative implication on farming as children that are supposed to help their parents have been trafficked from their farming communities.

The frequency distribution of trafficked victims by their sex as shown in Table 1 indicated that more than half of the respondents (55.2%) were female. This finding corroborates the statement by USDS (2006) that women constitute a large percentage of trafficked victims. Bohl, (2010) in a study in Nepal found that majority of trafficked persons were female who are in great demand in Indian brothels and circuses. According to US Department of State, recent estimates revealed that 80 percent of trafficked victims worldwide are female and 50 percent are children (USDS, 2004).

Frequency distribution of trafficked victims marital status as shown in Table 1 reveals that majority of the respondents were single (82.8%) which is an indication of their age and youthfulness. This is further corroborated by the assertion that gender and age appear significant in determining who participates in what type of regime of migration, or at what juncture migration becomes trafficking and for which types of work (IOM, 2010).

Table 1 further shows the distribution of respondents' educational status at the point of being trafficked. Over forty percent of the victims (42.8%) had only primary education while 31.2% had adult literacy. Insufficient and or inaccessible educational opportunities expose people to the risk of being trafficked. According to Rima Salah (2001), the motive for moving children from the protective envelope of the family is often the search for education rather than the search for work.

Table 1 also shows the income distribution of victims of trafficking. Majority (90.8%) of the respondents indicated an average monthly income of less than ₦5,000 which is an indication of their low level of income and poverty situation. Mean monthly income of respondents was ₦2,762.00. In a vast majority of trafficking cases, the victims are from_vulnerable population. Traffickers prey on those they deemed easier targets; those with little or no financial means who might easily be lured by promises of food, money and shelter (Abdulkadir, 2011).

**Table 1: Socioeconomic characteristics of trafficking victims (n=250)**

Variable	Frequency	Percent	Mean
Age before trafficking			
5-10 years	25	10.0	17 years
11-15 years	91	36.4	
16-20 years	77	30.8	
21-25 years	44	17.6	
26-30 years	11	4.4	
> 31 years	2	0.8	
Sex			
Male	112	44.8	
Female	138	55.2	
Marital status			
Single	207	82.8	
Married	43	17.2	
Educational status			
No formal education	5	2.0	
Adult literacy	78	31.2	
Primary education	107	42.8	
Secondary education	38	15.2	
Koranic school	22	8.8	
Income before trafficking (₦)			
Less than 5,000	227	90.8	₦2,762
≥5,000-10,000	18	7.2	
Above 10,000	5	2.0	

Source: Field survey 2014

Family characteristics of trafficked victims:

Table 2 describes the family characteristics of victims of human trafficking. More than half (55.2%) of the respondents have extended family background which is common in Nigeria and other African countries. It is believed that the education and upbringing of a child is the responsibility of the extended family. In farming

communities, extended family members assist in clearing large farms and harvesting. It is not uncommon for children to grow up in the family of relatives, or third persons, if these persons are living in better circumstances and can thus provide the child with better educational and work opportunities (Veil 1998; Verbeet, 2000).

Table 2: Family characteristics of trafficked victims (n=250)

Characteristics	Frequency	Percentage
Family type of victims		
Nuclear	112	44.8
Extended	138	55.2
Marriage type of parents		
Monogamy	107	42.8
Polygamy	129	51.6
Single parent	14	5.6
Position of victim in the family		
First born	90	36.0
Last born	44	17.6
Others	116	46.4
No of siblings		Mean = 7.0
1-5	120	48.0
6-10	101	40.4
11 and above	29	11.6
Parental status		
Both parents are alive	192	76.8
Father dead	39	15.6
Mother dead	14	5.6
Both parents are dead	5	2.0

Source: Field survey 2014

Results in Table 2 show that more than half (51.6%) of victims' parents are polygamous. This is a common feature of African families, large families (wives and children) are expected to work on the farm to feed the family and increase production for more income. Majority of trafficked children come from polygamous, large and poorly educated families where the children have limited (if any) opportunities for training and education. Children are often withdrawn from school and forced to help support the family. Parents, who may not even be able to feed their children, are often willing to give them to traffickers who promise to provide the child with a job, an education or training (ILO, 2001; UNICEF, 2002).

Table 2 also presents number of siblings in respondents' households, which is an indication of their family size. Mean household size of the respondents was seven. It can be observed that quite a number of the respondents are from large families. Over forty percent (40.4%) of the

respondents had about 6-10 siblings. Due to bigger family size and lack of care and protection, abject poverty sometimes forces parents to release their children to traffickers (Sukhwinder, 2013).

Trafficked victims' frequency of contact with households

Results in table 3 indicate that the major common means of contact with victims' households were weekly phone calls (Mean=1.44), yearly visits (Mean=1.12) and co-workers (Mean=0.81). This is an indication that victims of trafficking do not have regular contact with their households and some may not even have any contact at all throughout their stay in the trafficking destination. This could affect their level of contribution to household welfare except for situations where their wages go directly to the parents. It will also have implications on their perception of changes in their household socioeconomic status.

Table 3: Distribution of trafficking victims' contact and means of contact with households (n=250)

Contact	Yes	No	Weekly	Monthly	Once in a year	Mean
Visits	152 (60.8)	98(39.3)	31 (20.4)	59 (38.8)	62 (40.8)	1.12
Phone calls	140 (56.0)	110 (44.0)	85 (60.7)	49 (35.0)	6 (4.3)	1.44
Letter writing	38 (15.2)	212 (84.8)	6 (15.8)	17 (44.7)	15 (39.5)	0.27
Oral messages	59 (23.6)	191 (76.4)	5 (8.5)	13 (22.0)	41 (69.5)	0.33
Friends	86 (34.4)	164 (65.6)	11 (12.8)	46 (53.5)	29 (33.7)	0.67
Relatives	124 (49.6)	126 (50.4)	7 (5.7)	22 (17.7)	95 (76.6)	0.64
Co-workers	89 (35.6)	161 (64.4)	31 (34.8)	51 (57.3)	7 (7.9)	0.81

Source: Field survey 2014 Percentages in parenthesis

Overall mean=0.754

Victims' Average Income during Trafficking Period

The average income of victims during the trafficking period is as presented in Table 4. Almost half (46.8%) of the respondents indicated an average monthly income of between ₦5,000-₦7,000. Also, 4.8% received between ₦10,000-₦12,000 while 5.6% were paid above ₦12, 000. This result indicates that the respondents had better income than when they were in their respective communities. The initial income of majority

(90.8%) was less than ₦5,000 while only 2% of them earned above ₦10,000 as reported in Table 1. This is an indication that the respondents' average income may be higher when compared with working in farms in their respective communities. This confirms that people who involved in trafficking are expecting a better life than what is available for them at home. The increased income status of the victims will enable them to contribute to the improvement of their households' socioeconomic status.

Table 4: Trafficking victims monthly income (n=250)

Monthly income during trafficking period (₦)	Frequency	Percentage (₦)
Below 5,000	99	39.6
>5,000-7,000	117	46.8
>7,000-10,000	8	3.2
>10,000 -12,000	12	4.8
Above 12,000	14	5.6

Source: Field survey 2014

Who keeps trafficking victims' wages?

As seen in Figure 1, 39.2% said their wages were collected by the mistress, 31.6% indicated that the contractor collects their wages

while 29.2% of respondents indicated that their wages are being collected by their parents. Since majority (70.8%) of victims' wages were collected and kept by either the mistress or the contractor, it

indicates that their wages may not get to their households as expected. In cases where the household get the victims' wages, some of the

money might have been deducted by the contractors/mistresses. This will have an impact on their level of contribution to household wellbeing.

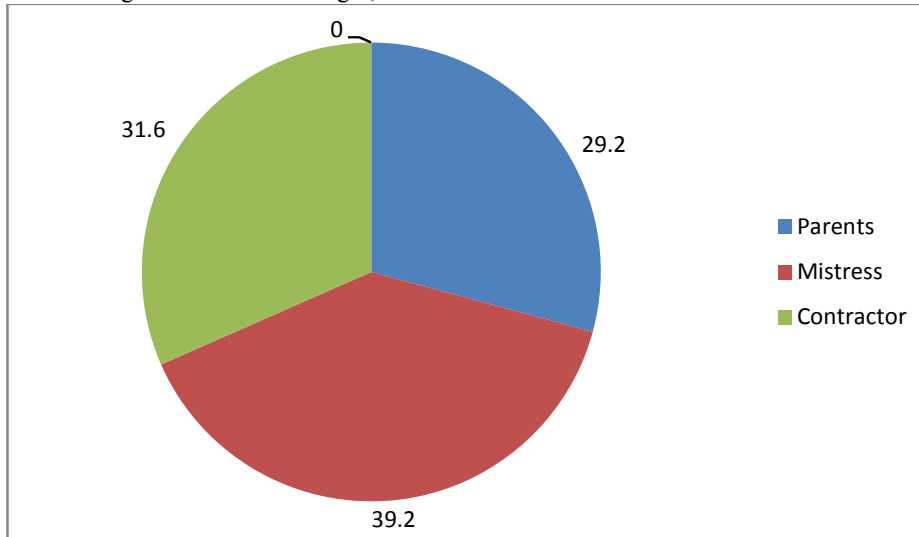


Figure 1: Keeping of trafficking victims' wages

Types and Regularity of Respondents' Remittance

Remittances can be in form of cash (money), materials (clothing, shoes and jewelry) or both (cash and kind). Figure 2 shows that victims remitted both kind and cash on regular basis to their households. This is commonly done once in a year (90.4%) though, 4.8% indicated twice in a year and 4.8% reported monthly remittances. Based on the findings of this research, regularity of remittance could be a function of victims' contact

with households that is; monthly, twice a year or once in a year. Visiting households once a year was the commonest means of contact with households as indicated by respondents (Table 3). This means that if victims have the opportunity to visit/contact their family more often their remittance level could be higher. They will also have better/higher perception of change in their households' socioeconomic status.

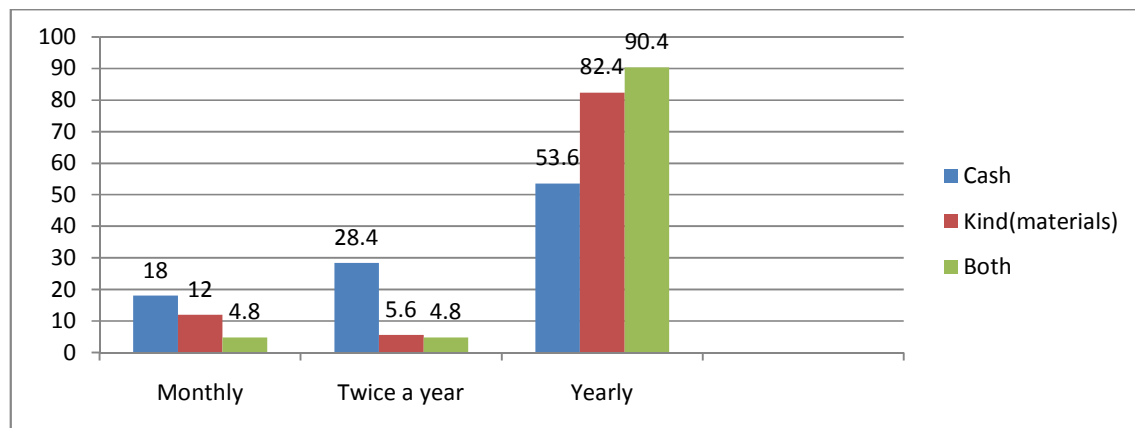


Figure 2: Regularity of trafficking victims' remittance

Trafficked Victims' average Monthly Remittance

Result of analysis on Table 5 shows that almost half (46.4%) of the respondents sent an average monthly remittance of ₦4,000-₦6,000 to

their households. 31.6% remit ₦1,000 -₦3,000, 11.6% remit ₦7,000, ₦9,000 while 4.4% remit above ₦10,000. Remittance being a means of victims' contribution to household wellbeing is a very important issue in considering trafficking

activities. This is also a function of victims' income at trafficking destination. People engage in trafficking with the hope of better income than what is available in their communities so that they will be able to send remittances to their households for improved wellbeing. This corroborates the

finding of Osezua, (2011) that women who have been successful in trans-border sexual transaction, despite their sex or age in the family, are now the centre of authority and pivot of important family decisions. This is as a result of the huge sum of money they remit to their families.

Table 5: Distribution of Trafficked Victims' average Monthly Remittance (n=250)

Average Monthly Remittance (₦)	Frequency	Percentage
1,000-3,000	79	31.6
4,000-6,000	116	46.4
7,000-9,000	29	11.6
9,000-10,000	15	6.0
Above 10,000	11	4.4

Source: Field survey 2014

Household items acquired from respondents' remittance

Household items acquired through victims' remittances are presented in Table 6; Radio (50.8%), handset (mobile phone) (55.6%), wall clock (50.4%), television (38.0%), video

(33.6%) and motorcycle (32.4%) were among the commonest items that households usually acquire from victims' remittances. These are items considered necessary for the wellbeing of the family particularly at the community level. Households that possess these items are rated as high in socioeconomic status.

Table 6: Household items acquired from Trafficking victims' income

Household items	Yes	No
Television	95(38.0)	155(62.0)
Video/VCD	84 (33.6)	166 (66.4)
Refrigerator	44 (17.6)	206 (82.4)
Ceiling/table fan	81 (32.4)	169 (67.6)
Satellite	10 (4.0)	240 (96.0)
Bicycle	40 (16.0)	210 (84.0)
Generator	65 (26.0)	185 (74.0)
Motorcycle	81 (32.4)	169 (67.6)
Hand set	139 (55.6)	111 (44.4)
Furniture	64 (25.6)	186 (74.4)
Wall clock	126 (50.4)	124 (49.6)
Washing machine	17 (6.8)	233 (93.2)
Stabilizer	32 (12.8)	218 (87.2)
Deep freezer	22 (8.8)	228 (91.2)
Gas cooker	4 (1.6)	246 (98.4)
Electric stove	20 (8.0)	230 (92.0)
Electric iron	52 (20.8)	198 (79.2)
Electric kettle	29 (11.6)	221 (88.4)
Computer	34 (13.6)	216 (86.4)
Radio	127 (50.8)	123 (49.2)

Source: Field survey 2014

Percentages in parenthesis

Level of Change in Household socioeconomic Status

Result in Table 7 shows that, 64.0% of victims indicated a high level of change in household socioeconomic status. This means that there is an improvement in the wellbeing of the victims' household as a result of their involvement in human trafficking. Most people get involved in trafficking with the view of a better life for

themselves and their households. The families expect remittances from their wards to assist in improving their standard of living. This result is an indication that involvement in human trafficking has led to changes in the socioeconomic status of victims' households. Improvement in household socioeconomic status and standard of living will further result in improvement of the community leading to community development.

**Table 7: Level of change in household socioeconomic status**

Levels of change	Frequency	Percent
Low	90	36.0
High	160	64.0

Source: Field survey 2014

Mean=71.09; SD=9.41; Min=37.00; Max=106.00

Victims Perception of the Contribution of Human Trafficking to Household Wellbeing

Level of victims' perception of the contribution of involvement in human trafficking to their household wellbeing is presented in Table 8. It could be observed that more than half (52.0%) of

the respondents had low perception of their contribution to household wellbeing. This could be as a result of inadequate contact with their households during the trafficking period. It could also be due to the fact that a high percentage of victims' income were being collected and kept by contractors and mistresses.

Table 8: Level of victims' perception of contribution of human trafficking to their household wellbeing

Levels of Perception	Frequency	Percent
Low	130	52.0
high	120	48.0

Source: Field survey 2014

Mean=36.70; SD=24.62; Min=0.00; Max=130.00

Research Hypothesis 1: There is no significant relationship between trafficked victims' frequency of contact with household and change in their household wellbeing.

The result shows a significant relationship between victims' frequency of contact with parents

and change in household wellbeing. This could mean that victims that have opportunity to visit their household more frequently will likely bring more remittance to their household, thereby leading to improved household wellbeing.

Table 9: PPMC table showing analysis of relationship between victims' frequency of contact with parents and change in household wellbeing

Variable	r-value	p-value	Decision
Frequency of contact	0.520	0.000*	S

*Significant at $p < 0.05$

Research Hypothesis 2: There is no significant difference in perception of trafficked victims about change in their households' socioeconomic status across Oyo, Ogun and Lagos States.

Table 10 reveals that the calculated F-value (4.565) is higher than the critical F-value (3.00) at 0.05 alpha level. This implies there is significant difference between Oyo, Ogun and

Lagos states in perception of victims on change in their households' socioeconomic status. The difference in victims' perception across the states could be as a result of differences in victims' contact with households. It could also be due to difference in level of victims' remittances across the states.

Table 10: Analysis of variance of respondents across Oyo, Ogun and Lagos states on perception of victims about change in the households' socioeconomic status

Socioeconomic Perception	status	Sum of squares	df	Mean Square	Calculated F-value	Critical F-value	p-value 2-tailed	Decision
Between Groups		817.948	2		408.974	4.565	3.00*	Reject
Within Groups		22130.676	247		89.598			
Total		22948.624	249					

*Significant, $P < 0.05$

CONCLUSION AND RECOMMENDATIONS

From the findings of this research the following conclusions can be made:

1. Victims of human trafficking are mostly from poor educational and financial backgrounds

2. They help improve the wellbeing of their households by sending all or a percentage of their income (wages) for their families' upkeep



3. Perception of trafficking victims about change in their households' socioeconomic status is low
4. This could result from less frequent contact with households or level of victims' remittance during the trafficking period.

Based on the above conclusions the following recommendations are hereby suggested:

1. A social assistance/security system should be established to cater for vulnerable members of the society particularly women.
2. Advocacy and awareness aimed at stressing the illegality of human trafficking must be combined with efforts that promote economic stability and offer solutions for families mostly 'at-risk' or vulnerable groups (women and girls in particular)
3. There should also be increased efforts towards the arrest and prosecution of human traffickers.

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SOCIOLOGICAL EXAMINATION OF ETHNIC CONFLICTS IN OBI LOCAL GOVERNMENT AREA OF NASARAWA STATE, NIGERIA

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ABSTRACT

This paper looked at sociological examination of ethnic conflicts in Obi Local Government Area of Nasarawa state to find out the causes of ethnic conflicts and assess effectiveness of government intervention in curbing conflicts in the study area. One hundred and two (102) respondents were drawn from three (3) purposively selected wards in study area. The study reveals that majority of respondents sampled were between the ages of 20-30 years (84.3%), male (81.5%) and single (51%). Majority (56.6%) of them also had tertiary education and worked as artisans (38.2%). The findings further reveals that 52 % of respondents were of the opinion that poverty contributed to the crisis in their area and 41.18% of them believed that land dispute was the major cause of conflict in the study area. Again, 52.9% of the respondents indicated that government intervention in resolving crisis was not effective while 71.6% of respondents indicated that traditional and religious leaders interventions in resolving conflict was effective. The study concludes that poverty, unemployment and illiteracy were sociological conditions that caused conflict in the study area. It is recommended that government must learn to intervene early enough in conflicts at the rumor stage and involved traditional heads and religious leader in any negotiations between conflicting groups as means of resolving disputes and differences.

Keywords: Sociological, examination, ethnic, conflict and Obi Local Government

INTRODUCTION

Conflict may mean different things to different people all over the world; some people view it as existence of dispute or disagreement between two actors which may be individuals, groups, or organisations over issues of interests such as: values, beliefs, emotions, goals, space, positions, and scarce resources. But Dokun (2005), view it as “non negotiable issues that relate to ontological human needs that cannot be resolved or compromised”.

Conflicts have become so pervasive that there is hardly any nation in the world that has not been affected by one or two. In Nigeria, ethnicity and religious bigotry has become a fulcrum of various forms of nationalism, ranging from assertion of language, cultural autonomy, religious superiority and self-determination. All these result in to some forms of contextual discrimination characterized by lack of cordiality and mutual suspicion as it is among the ethnic and religious groups in Nigeria. In fact, this mutual suspicion and lack of cordiality among the various ethnic components explains why ethnic conflicts have become a permanent feature of Nigeria as a nation since 1980s to date as posited by Mohammed, (2004).

Undoubtedly Nigeria has experienced many disastrous ethnic conflicts, which have not only undermined and threatened the corporate existence of the pan-Nigeria agenda, but they have also frustrated efforts made towards achieving national development. Notable among such crises are the Maitatsine religious disturbances in parts of Kano and Maiduguri in the early 1980s; Kafanchan

College of Education Muslim-Christian riots; Kaduna Polytechnic Muslim-Christian skirmishes (1981-1982); The Cross vs. The Crescent conflict at the University of Ibadan (1981-1985), Jimeta-Yola religious disturbances (1984), and ZangoKataf crises in Kaduna State (1992). Yet other early ethno-religious conflicts include the Bulumkutu Christian-Muslim riots (1982); Usman Danfodio University Sokoto (1982); and the Muslim-Christian Clash during a Christian procession at Easter in Ilorin, Kwara State (1986).

The first leg of ethnic and religious riots in Nigeria in the democratic era was in July 1999, when some Oro cultists in Sagamu of Ogun State accused Hausa woman of coming out when the cultists were outside holding their service. This led to some altercations, which eventually led to full-blown crisis. Many people, majorly Hausa and Yoruba tribes lost their lives (Albert, 1999). The infamy was temporarily put on check only when a dusk to dawn curfew was imposed on the sleepy town of Sagamu. Unfortunately, as the infamy was put off in Sagamu, reprisal killings started in Kano, a major Hausa city which results into the death of many people and property worth billions of Naira were destroyed. When Kano city was settling down for peace, Lagos erupted with another orgy of violence, visibly as a mark of vengeance over the Kano mass killing of the Yoruba tribe. This time, the O'dua People Congress moved against the Hausa/Fulani traders in the popular 'Mile 12 markets' and for two days, the area was turned to a killing field (Mohammed, 2004).

At different levels and times people experience ethnic discrimination, people complain

of past and present ethnic discrimination, people demand for ethnic rights in their state particularly the conflicts in Jos, Ife/Modakeke saga, Fulani herdsmen crises in Benue and Ekiti state and Niger-Delta crises. Nasarawa state and particularly Obi local government is not spared from ethnic conflict which has become a cancer to meaningful development in most parts of this country. Alubo (2006) noted crisis in southern Nasarawa state in year 2001 where thousands of lives were lost and many houses belonging to Eggon and other tribes were razed down. This he said brought setbacks on the economic development of the people as returnees had to make fresh efforts rebuild their burnt houses. The rate of ethnic conflicts in Nigeria as examined above is so rampant such that the effects are said to be so great and can damp the spirit of unity, peace and harmony for meaningful national development.

It is based on this background that this study was carried out on a sociological examination of ethnic conflict in Obi Local Government Area of Nasarawa state to find out the causes of ethnic conflict and assess the effectiveness of government intervention in curbing conflict in Obi Local Government of Nasarawa state.

METHODOLOGY

This study was conducted in Nasarawa state of Nigeria with her capital located in Lafia. Nasarawa state has diverse ethnic groups such as Koro, Eggon, Alago, Tiv, Mada, just to mention a few.

The sampling techniques used for this study were cluster sampling, purposive sampling and a simple random sampling technique to captured; male, female, youth and aged people in the conflicts areas of Obi Local Government of Nasarawa state. In doing so, the population was first of all clustered into wards after which three (3) wards were purposively selected which were: Duduguru ward, Daddere ward, and Tudun- Adabu ward. These wards were selected to ensure representation of every ethnic group and also based on conflict recurrence in the area, followed by a simple random sampling technique which was used in selecting one hundred and twenty respondents which supposed to be the sample size for this study but unfortunately, one hundred and two (102) questionnaires were retrieved at the end of the study which made the study sample size one hundred and two (102). Data collected were analysed using descriptive statistic.

RESULTS AND DISCUSSION

The finding of this study presented in Table 1 reveals that majority (84.3%) of respondents sampled were between the ages of 20 and 30 years. Similarly, 81.5% of the respondents were male and 51.0% were single. Table 1 again reveals that majority of respondents sampled had tertiary education (56.9%) and 38.2% worked as artisans.

Table 1: Distribution of Respondents based on Socioeconomic Characteristics n=102

Socioeconomic Characteristics	Frequency	Percentage
Age		
20-30 years	86	84.3
31-40 years	15	14.7
41-50 years	1	1.0
Gender		
Male	83	81.4
Female	19	18.6
Marital status		
Single	52	51.0
Married	41	40.2
Widowed	9	8.8
Level of education		
Primary	12	11.7
Secondary	32	31.4
Tertiary	58	56.9
Occupation		
Farming	22	21.6
Trading	19	18.6
Civil Servant	22	21.6
Artisan	39	38.2

Source: Field Survey, 2015



Moreover, the information in Table 2 shows that about 52% of the respondents were of the opinion that poverty contributed to the crisis in their area while 23.5% were of the view that unemployment contributed to the crisis in their area and 24.5% of the respondents believed that illiteracy was the cause of the crisis in the study area. This implies that abject poverty can make people violent and commit several forms of

atrocities as a way of providing solution to their poverty. This finding follows the assertion of Elaigwu (2004) who also looked at poverty as causes of conflict reported that; "condition of life are currently very hard for the average Nigerian. Breaking and looting of shops during religious crises, armed robbery, political violence, banditry and other forms of crime have virtually been legitimized by the logic of imperatives of survival.

Table 2: Distribution of Respondents based on Sociological Conditions that Contributed to Crisis n=102

Sociological Conditions	Frequency	Percentage
Poverty	53	52.0
Unemployment	24	23.5
Illiteracy	25	24.5
Total	102	100

Source: Field Survey, 2015

The data in Table 3 reveals that 41.2% of the respondents were of the view that land dispute was the cause of the conflict in the study area, 30.4 of the respondents believed it is political dominance from other tribes that causes the conflict, 23.5% of the respondents were of the view that ethnicity was the cause of the conflict. Similarly, 3.9% of the respondents believed that chieftaincy tussle was the causes of the conflict,

while 1% of the respondents view the conflict from the religion perspective. This implies that land is the major factor that causes dispute in the study area which may be attributed to importance people attached to land. This corroborates the findings of Nwankwo (2015) that land is the driver of conflict because land is a resource that means a lot to the people.

Table 3: Distribution of Respondents based on causes conflict n=102

Causes Conflict	Frequency	Percentage
Land dispute	42	41.2
Politics	31	30.4
Ethnicity	24	23.5
Chieftaincy	4	3.9
Religion	1	1.0
Total	102	100

Source: Field Survey, 2015

The data in Table 4 shows a large percentage (37.3%) of the respondents who believed that their farming activities were disrupted during the crisis, 29.4% opined that education was disrupted while 21.6% of the respondents also said that market was disrupted during the crisis, and 11.8% said that medical services were disrupted. This finding is in line with statement of former Nigeria president, Olusegun Obasanjo in 2004 that

"violence has reached unprecedented levels and hundreds have been killed with much more wounded or displaced from their homes on account of ethnic identification. Schooling for children has been disrupted and interrupted; business lost billions of naira and property worth much more destroyed".

Table 4: Distribution of Respondents based on Activities Disrupted during Crisis n=102

Activities Disrupted during Crisis	Frequency	Percentage
Farming	38	37.2
Education	30	29.4
Market	22	21.6
Medical services	12	11.8
Total	102	100

Source: Field Survey, 2015



Data presented in Table 5 show clearly the respondents' assessment of government intervention in resolving crisis. Forty-seven percent of the respondents sampled indicated that

government intervention was effective while 52.9% of the respondents indicated that government intervention in resolving crisis was not effective.

Table 5: Distribution of Respondents based on Assessment of Government Intervention in Resolving Crisis n=102

Assessment of Government Intervention	Frequency	Percentage
Effective	48	47.1
Not effective	54	52.9
Total	102	100.0

Source: Field Survey, 2015

Information in Table 6 reveals the respondents assessment of the traditional and religious leaders in resolving conflict in the study area. Seventy-one percent of the respondents sampled indicated that traditional and religious

leaders interventions in resolving the conflict was effective while 28.4% of the respondents indicated that traditional and religious leaders intervention in resolving crisis in the study area was not effective.

Table 6: Distribution of Respondents based on Assessment of Traditional and Religious Leaders Intervention in Resolving Conflict n=102

Assessment of Traditional Rulers and Religion Leaders	Frequency	Percentage
Effective	73	71.6
Not effective	29	28.4
Total	102	100.0

Source: Field Survey, 2015

CONCLUSION AND RECOMMENDATIONS

The study concludes that poverty, unemployment and illiteracy were sociological conditions that caused conflict in the study area which disrupted farming activities, system of education, market and medical services. And these have caused a lot of suffering and hardship for the people due to ineffective of government effort in resolving conflicts in Obi Local Government of Nasarawa state.

Based on the findings of this study the following recommendations were made;

1. Government should encourage dialogue and involved traditional heads and religious leader in any negotiations between conflicting groups as means of resolving disputes and differences.
2. Government must learn to intervene early enough in conflicts at the rumor stage.

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DETERMINANTS OF INSTITUTIONAL CONFLICTS RESOLUTION ACHIEVEMENT AMONG CROP FARMERS IN OYO STATE, NIGERIA

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ABSTRACTS

This study investigated with the determinants of institutional involvements in conflicts resolution in Oyo state. Multistage sampling procedure was used to select 120 farmers. Variables measured were farmers' enterprise characteristics, institutional involvement, conflicts resolution strategies employed, constraints to conflicts resolution and extent of conflicts resolution achievement. Data were collected using interview schedule and analysed with the use of descriptive and inferential (PPMC and linear regression) statistics. Results revealed that 44.2% of the respondents were large scale farmers with 28.0 mean years of farming experience. Institutions mostly involved in conflicts resolution were traditional rulers (weighted score=262.7), crop farmer groups (192.3) and local government committee (188.4). Strategies mostly employed for conflicts resolution were prayer for peace (284.8), appeased the other parties involved (266.6) and educating farmers on their interdependence with the herdsman (265). Language barrier (291.7), lack of funds for farmers' association to intervene (291.7), hostility (289.8) were the mostly identified constraints to conflicts resolution achievement. More (56.7%) respondents held that there was low level of conflict resolution achievement. Significant relationship existed between conflict resolution achievement and institutional involvement ($r=0.98$) as well as conflicts resolution strategy employed ($r=0.73$). Factors associated with conflicts resolution achievement were resolution strategy ($\beta=0.11$) and institutional involvement ($\beta=0.90$). Therefore, effective involvement of institutions in conflicts resolution is highly recommended to resolving disputes and ameliorating the different interests of the farmers and herdsman.

Keywords: Conflicts resolution, traditional rulers, institutions, police force, resolution strategy, herdsman

INTRODUCTION

Conflict can be described as all forms of opposition, disagreement or friction between two or more parties and it manifests in the forms of arguments, protests, demonstration, aggression and other destructive behaviours. While conflict occurrence has been observed to be inevitable and ubiquitous in human organisations, the strategies for managing it have remained topical issues and matters of concern to individuals, groups and scholars (International Crisis Group 2009). Efficient and effective management of conflicts is fundamental to the development of any society, but the prevailing situations in Nigeria constitute a reversal of this reality.

The Nigerian success story of amalgamation of diverse groups in 1914 has radically shifted from a platform for peaceful coexistence to an arena of violence and gradual disintegration. The popular explanations for this unexpected situation include colonialism, corruption and political instability. The matrix of social inequality and the state's attempts to undermine the power of traditional social control systems are also potent factors, but there is inadequate research on this subject matter. The spate of insecurity and threats to lives and properties in Nigeria has reached alarming proportions despite the increasing visibility of the Nigerian state mobile police and military in the management of internal conflicts (The US Department of State 2008; Erinoshio 2007; Falola 1998). About 50 episodes of violent conflict, which

culminated in the death of over 10 000 persons and internal displacement of over 300 000 people, were recorded in Nigeria between 1999 and 2003 (International Crisis Group 2009). The recent (28–29 November 2008) violent conflict in Jos (a city in the north-central) resulted in the death of over 380 persons and destruction of properties worth millions of naira (Balogun 2009; Eya 2009; USAID 2005).

To respond to the day to day conflicts between crop farmers and nomadic herdsman in Nigeria, some institutions have been identified to prevent its exacerbation. Those institutions include: traditional rulers, police force, law court, state security services, civil defence corps, local government committee, state government committee, crop farmers groups and veterinary practitioners. Literatures have shown that traditional rulers and crop farmers groups are the most effective so far as conflict between crop farmers and nomadic herdsman is concerned (Umar, 2015 and Williams, 1998).

Several authorities have established the fact that conflicts between crop farmers and Nomadic Fulani are as a result of growing pressure on natural resources and a stiff competition for available resources such as land and water (Ingawa, Ega and Erhabor, 1999; Breusers, Suzanne and van Rheenen, 1998; Adebayo, 1997). For instance, some states such as Kwara, Jigawa, Ekiti, Ogun, Delta and Oyo state just to mention a few, have experienced conflict between crop farmers and nomadic Fulani which resulted in reduction in

output and income of farmers/nomads, displacement of farmers, erosion, loss of lives, gun running, loss of houses and properties, loss of produce in storage and so on. Furthermore, Farmer-herder conflicts are known to constitute threat to peace and national stability. Such conflicts affect crop production and availability of beef for consumption. The foregoing established the effects of the competition for the scarce resources between the crop farmers and the Nomadic Fulani herdsman. The management of such conflicts needed to be researched into so as to serve as a guide to the all stakeholders involved in advisory roles to the agriculture and community development in the country. Therefore, there is need to fill the existing gap of identifying both formal and informal institutional conflicts resolution achievement in the study area. It is against this backdrop that this study was set to identify those factors that determine the achievements of institutions in conflicts resolution in Oyo state, Nigeria.

The specific objectives were to:

1. identify the crop farmers' enterprise characteristics
2. determine the level of involvement of institutions in conflicts resolution between pastoralist and crop farmers.
3. examine conflicts resolution strategies employed by the institutions involved.
4. ascertain constraints to institutional conflicts resolution achievement.
5. determine the level of institutional achievement in conflicts resolution.
6. assess factors limiting institutional conflicts resolution achievement

Hypotheses of the study, stated in null form, are as given below;

H₀₁: There is no significant relationship between institutions' involvement in conflicts resolution and institutional achievement of conflicts resolution.

H₀₂: There is no significant relationship between conflicts resolution strategies employed by the institutions and institutional achievement of conflicts resolution.

H₀₃: There is no significant relationship between constraints to institutional achievement and institutional achievement of conflicts resolution.

METHODOLOGY

Study was carried out among crop farmers in Oyo state, Nigeria. A multistage sampling procedure was used to select respondents for this study. The first stage involved the use of purposive sampling procedure to select Saki west, Oyo west and Iseyin/Itesiwaju local governments within the Oyo Agricultural zone of Oyo state, using the ADP

structure. The purposive selection is based on the fact that there are more report of farmer-herder conflict in Oyo State, the selected agricultural zone is more prone to farmers/ pastoralist conflicts among other zones within the state, this according to Adebayo and Olaniyi, (2008); Adelakun, Adurogbangba and Akinbile, (2015). The second stage involved the use of simple random sampling procedure to select fifteen percent of blocks in each of the selected zones to have three blocks in all. Then from the three selected blocks, 50% of the cells within Saki, Oyo west and Iseyin/Itesiwaju local government areas to amount to 8, 5 and 6 cells respectively. There were 535 registered farmers in the three selected cells from Saki (250), Oyo west (159) and Iseyin/Itesiwaju (126) local government areas. At the last stage, a proportionate to sample size sampling procedure was used to select 20%, registered farmers from Saki (50) and 25% each from Oyo west (39) and Iseyin/Itesiwaju (31) local government areas. In all 120 registered crop farmers were interviewed using an interview schedule.

Data were collected on enterprise characteristic of respondents, conflicts resolution strategies employed, institutional involvement in conflicts resolution, constraints to conflicts resolution and extent of conflicts resolution achievement. They were analysed with both descriptive and inferential (Pearson Product Moment Correlation and Linear Regression) statistics.

Extent of conflicts resolution achievement by institutions was measured by compiling a list of institutions involved in conflicts resolution such as traditional rulers, crop farmers' group, local government committee and police force among others. Then respondents were provided with the response options of "to a large extent", "to a lesser extent" and "not all" to indicate to what extent the institution involved achieved in terms of resolving conflicts. The response options were scored 2, 1 and 0 respectively with a maximum score of 18. Thereafter, resolution achievement index was generated and with the mean the scores were categorised into high and low. Crop farmers' enterprise characteristics such as crop grown, animals reared, farm size, stock size, sources of labour, sources of finance and years of farming experience were measured at nominal, ordinal and interval level of measurement as the situation demanded.

Conflicts resolution strategies employed by respondents were measured by providing them with a list of conflicts resolution strategies like prayed for peace, appeased the other party, educating farmers on their interdependence with the herdsman and punishment of offender among others. Response options of "a large extent", "to a



lesser extent” and “not all” were provided for the respondents in order to indicate to what extent each of those strategies employed worked. A score of 2 was assigned to “a large extent”, 1 was assigned to “to a lesser extent” and 0 was assigned to “not all”. After which, an index was generated and using mean as the benchmark scores were categorised as low and high level of use of conflict resolution strategies. Institutional involvement in conflicts resolution was measured by asking farmers to choose from a response options “a large extent”, “to a lesser extent” and “not all” to indicate to what extent various institutions listed such as traditional rulers, crop farmers’ group, local government committee and police force among others, have been involved in resolving conflicts. The response options were scored 2, 1 and 0 respectively, thereafter, institutional involvement index was generated and with the mean the scores were categorised into high and low level of involvement.

Similarly to measure constraints to involvement, a list of constraints that could affect conflicts resolutions were generated such as language barrier, lack of funds for farmers’ association to intervene, hostility and so on. Then respondents were asked to choose from response options of “to a large extent”, “to a lesser extent” and “not all” so as to indicate to what extent each of those items affected the institutions involved. A score of 2 was assigned to “a large extent”, 1 was assigned to “to a lesser extent” and 0 was assigned to “not all”. Then, the scores were categorised to mild and severe using mean as the benchmark.

RESULTS AND DISCUSSION

On crop farmers’ enterprise characteristics, Table 1 shows a multiple response of the respondents as 91.7% of them cultivated

maize and cassava respectively, 76.7% cultivated yam, and 67.5% cultivated vegetable. In addition, 59.2% of the respondents raised poultry, 43.3% reared goat while just a few (2.5%) reared rabbit. Majority of the farmers (44.2%) had 5.1-22 hectares of farm size while, 15.8% had 0.1 – 2 hectares. This implies that a higher proportion of the farmers were large scale farmer as they cultivated more than 5 hectares of land in line with Okuneye *et al.*, (2001) that the average farm size in arable crop production was 4.58 ha. Furthermore, among farmers that are into animal rearing, 37.5% of them had a stock size of 1 – 100 while 1.7% had 600 – 1000 stock size. The livestock farmers can be considered as small scale livestock farmers because they reared less than a hundred ruminant animals. On sources of labour, 49.2% of the respondents relied on both family and hired labour, 29.2% indicated hired labour and 21.7% indicated family labour. Meanwhile, on sources of finance, multiple responses on Table 1 reveal that 85.8% of the respondents indicated personal contribution, 35.0% indicated loan from cooperative and bank while, 21.7% indicated loan from family and friends as their source of finance. The implication is that farmers get money mostly from personal contribution rather than from formal institutions such as cooperative and banks probably because of lack of collateral and high interest rate associated with bank loans. Finally, 34.8% of the respondents had 36-55 years of farming experience, 33.3% indicated 21 – 35 years while 31.6% indicated 5 – 20 years farming experience. The inference is that crop farmers have a large years of farming experience and it is expected that they used their wealth of experience in managing the farmer-herder conflict in the study area.

Table 1: Distribution of respondents by their enterprise characteristics

Variables	Frequency	Percent	Mean
Crops grown:			
Maize	110	91.7	
Cassava	110	91.7	
Yam and cocoyam	99	82.5	
Vegetable	81	67.5	
Cowpea	58	48.3	
Banana/Plantain	59	49.2	
Sorghum	51	42.5	
Fruit (Mango, Cashew, Pineapple and water melon)	71	59.2	
Animals reared:			
Goat	52	43.3	
Pig	7	5.8	
Poultry	71	59.2	
Rabbit	3	2.5	
Farm size in hectare:			
0.1-2	19	15.8	

Variables	Frequency	Percent	Mean
2.1-5	48	40.0	
5.1-22	53	44.2	12.6
Stock size:			
None	70	58.3	
1- 100	45	37.5	
100-500	3	2.4	29.8
600-1000	2	1.7	
Sources of labour			
Family	26	21.7	
Hire	35	29.2	
Both	59	49.2	
Sources of finance:			
Personal contribution	103	85.8	
Loan from family and friends	26	21.7	
Loan from cooperative and bank	41	35.0	
Years of experience			
5-20	38	31.6	
21-35	40	33.3	28.2
36-55	42	34.8	

Table 2 reveals that among the list of conflicts resolution strategies identified by the respondents, prayed for peace was ranked first with a weighted score of 284.8 followed by appeased the

other party (266.6), educating farmers on their interdependence with the herdsmen (265), sought help from relations (264.2) and formation of local community farmers association (259.8).

Table 2: Distribution of respondents on the basis of conflicts resolution strategies employed by the institutions

Resolution strategies	To a large extent	To a lesser extent	Not at all	Weighted score
Prayed for peace	85.8	13.3	0.8	284.8
Appeased the other party	73.3	20.0	6.7	266.6
Educating farmers on their interdependence with the herdsmen	67.5	30.0	2.5	265.0
Sought help from relations	71.7	20.8	7.5	264.2
Formation of local community farmers association	63.3	33.3	3.3	259.8
Sought help from local leaders	37.5	55.0	7.5	230.0
Sought help from local government	32.5	14.2	53.3	179.2
Punishment of offender	31.7	8.3	60.0	171.7
Compensation of affected farmers by the farmers' association	30.0	6.7	63.3	166.7
Sought litigation	25.0	16.7	58.3	166.7

Meanwhile, Table 3 shows that there is a low (63.3%) level of use of these strategies. This implies that prayed for peace, appeased the other party and educating farmers on their interdependence with herdsmen among others were the conflicts resolution strategies identified although their use was low. This is against what Ladipo (1997; Hodge and Anthony (1991) found in

a similar study that forcing, structural changes, avoidance, compromise and smoothing. suppression, smoothing, avoiding, compromise, third-party intervention, cooperation, democratic process, job rotation as well as confrontation were the identified conflict management strategies.

**Table 3: Distribution of respondents based on the level of use of conflicts resolution strategies**

Level of use of resolution strategies	Frequency	Percentage
Low	76	63.3
High	44	36.7
Total	120	100.0

Table 4 reveals that all institutions listed were involved in conflicts resolution as indicated by the respondents to some extent, although the use of traditional rulers was ranked first with a

weighted score 262.7. This was followed by crop farmer groups (192.3), local government committee (188.4), police force (175.8) and state government committee (167.5).

Table 4: Distribution of respondents on the institutional involvement in conflicts resolution

Institutions involved	To a large extent	To a lesser extent	Not at all	Weighted score
Traditional rulers	71.7	19.2	9.2	262.7
Crop farmer groups	43.3	5.8	50.8	192.3
Local government committee	39.2	10.0	50.8	188.4
Police force	32.5	10.8	56.7	175.8
State government committee	27.5	12.5	60.0	167.5
State security services	25.0	14.2	60.8	164.2
Veterinary practitioners	30.0	3.3	66.7	163.3
Law court	20.0	22.5	57.5	162.5
Civil defence corps	20.0	15.0	65.0	155.0

Meanwhile, Table 5 shows a tie results on level of institutional involvement in conflicts resolution. The implication is that traditional rulers, crop farmer groups, local government committee

and police force among others were institutions involved in conflicts resolution in the study area.

Table 5: Distribution of respondent on level of institutional involvement of conflicts resolution

Level of institutional involvement	Frequency	Percent
Low	60	50.0
High	60	50.0
Total	120	100.0

Table 6 reveals that that almost all institutions involved in conflicts resolution were able to achieve their conflict resolution objectives in one way or the other but nevertheless traditional rulers were ranked first with a weighted score 238.3. It

was followed by crop farmer groups (186.7), local government committee (179.2), police force (169.2), veterinary practitioners (164.8) and state government committee (163.3).

Table 6: Distribution of respondents on the extent of achievement of resolution institutions

Extent of achievement	To a large extent	To a lesser extent	Not at all	Weighted score
Traditional ruler	47.5	43.3	9.2	238.3
Police force	27.5	14.2	58.3	169.2
Law court	18.3	15.8	65.8	152.3
State security services	20.0	11.7	68.3	151.7
Civil defence corps	20.0	10.0	70.0	150.0
Local government committee	35.0	9.2	55.8	179.2
State government committee	25.8	11.7	62.5	163.3
Crop farmer groups	40.0	6.7	53.3	186.7
Veterinary practitioners	30.8	3.3	65.8	164.8

However, Table 7 reveals that there was a low (56.7%) level of institutional achievement of conflicts resolution. This implies that institutions involved in conflicts resolution were only able to

achieve very little in resolving conflicts in the study area. This is in against the findings of Albert, (2009) which found that the non- formal institution in conflicts management such as Local Community

Farmers Association (LCFA) recorded a high level of credibility among the population in the rural farming system. Therefore, since formal institutions employed did not work effectively, non-formal institutions should be engaged.

Table 7: Distribution of respondent on level of institutional achievement of conflicts resolution

Level of resolution achievement	Frequency	Percent
Low	68	56.7
High	52	43.3
Total	120	100.0

On constraints to conflicts resolution, Table 8 shows that language barrier and lack of funds for farmers association to intervene were ranked first with a weighted score of 291.7 respectively, then hostility (289.8), lack of

adequate support from the government (289.2), nomadic system of the herdsmen (287.3) and incompetence of the conflict resolution officials (280.8).

Table 8: Distribution of respondents on the basis of constraints to conflict resolution (n= 120)

Constraints	To a large extent	To a lesser extent	Not at all	Weighted score
Language barrier	92.5	6.7	0.8	291.7
Lack of funds for farmers association to intervene	92.5	6.7	0.8	291.7
Hostility	90.8	8.3	0.8	289.8
Lack of adequate support from the government	90.0	9.2	0.8	289.2
Nomadic system of the herdsmen	88.3	10.8	0.8	287.3
Incompetence of the conflict resolution officials	88.3	4.2	7.5	280.8
Illiteracy of the farmers	20.8	14.2	65.8	156.6

However, Table 9 reveals that 79.2% of the respondents indicated that the constraints identified were severe. This implies that, these constraints could go a long way to affecting both

institutions involvement and their achievement to conflicts resolution.

Table 9: Distribution of respondents by their level of constraints to conflict resolution (n=120)

Level of constraints	Frequency	Percent
Mild	25	20.8
Severe	95	79.2
Total	120	100.0

Table 10 presents the regression analysis of factors limiting institution achievement to conflicts resolution. Among factors isolated only farm size ($t = 3.54$; $p = 0.00$), conflict resolution strategy ($t = 3.43$; $p = 0.00$), and institutional involvement ($t = 30.21$; $p = 0.00$) were found to be

significant at $\alpha_{0.05}$. This implies that the main factors that affected institutions achievement were farm size, conflicts resolution strategies employed and institutional involvement. These factors in one way or the other contributed to the low level of institutional conflict resolution achievement.

Table 10: Regression analysis of factors limiting institutional conflicts resolution achievement

Variables	β - value	t-value	p-value	Decision
Years of farming experience	0.03	1.45	0.15	Not significant
Farm size in hectare	0.07	3.54	0.00**	Significant
Conflict resolution strategy	0.11	3.43	0.00**	Significant
Institutional involvement	0.90	30.21	0.00**	Significant
Constraints to resolution achievement	0.00	-0.00	0.99	Not significant



Table 11 shows that institutional involvement ($r = 0.98$; $p = 0.00$) and conflicts resolution strategies ($r = 0.73$; $p = 0.00$) were positively correlated with institutional conflicts resolution achievement. This implies that both institutional involvement and conflicts resolution

strategies positively contributed to the level of institutional conflicts resolution achieved in the study area. However, constraints to conflict resolution ($r = 0.08$; $p = 0.42$) was not correlated with institutional conflicts resolution achievement.

Table 11: PPMC analysis of relationship between constraints, institutional involvement, conflicts resolution strategy and institutional conflicts resolution achievement

Variables	r- value	p-value	Inference
Institutional achievement index * constraints	0.08	0.42	Not significant
Institutional achievement index * institutional involvement	0.98	0.00	Significant
Institutional achievement index * resolution strategy	0.73	0.00	Significant

CONCLUSION AND RECOMMENDATION

Conflict resolution strategies employed, institutional involvement and farm size are the major factors that limited the achievement of institution involved in conflict resolution. Therefore, effective involvement of institutions in conflicts resolution is highly recommended to resolving disputes and ameliorating the different interests of the farmers and herdsman, while other factors are checkmated so as to enhance a greater achievement in conflicts resolution.

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